

## ‘MOVING AHEAD’

### ACD Hears of Progress on Several Fronts

BY CARLA GARNETT

Nearly a year to the day that NIH’s 16th director stepped down, interim leader Dr. Lawrence Tabak presided over the 125th meeting of the advisory committee to the director (ACD) on Dec. 8-9. He presented a packed agenda and a strong message.

“At some point we will have a permanent director,” noted Tabak, who is performing the duties of NIH director. “But until that time, understand this: The institution is in great shape due to the efforts of the remarkable team of people we have...We are moving ahead...because the science can’t wait. Our patients can’t wait.”

## CUSTOMS AMID CRISES

### Historian Explores India’s Cultural Responses in Pandemic Times

BY DANA TALESNIK

People in different parts of the world often view the same global event in different ways. A population’s unique outlook stems from a distinct national history and shared experiences as a people. In India, responses to past pandemics have been shaped by common beliefs, practices and traditions and



Dr. John Mathew

PHOTO: ANTEN JESU

SEE INDIA, PAGE 6



Business magnate Bill Gates (c) speaks at the recent ACD meeting, held in a hybrid format in Bldg. 1’s Wilson Hall for the first time since December 2021—pre-Covid-19 global pandemic.

PHOTO: MARLEEN VAN DEN NESTE

The twice-yearly meeting—conducted both in person in Bldg. 1’s Wilson Hall and virtually, due to continuing Covid-19 safety precautions—proceeded as usual with a summary of activities over the past 6 months, announcements of top-level appointments and departures as well as updates on the NIH budget and legislative outlook.

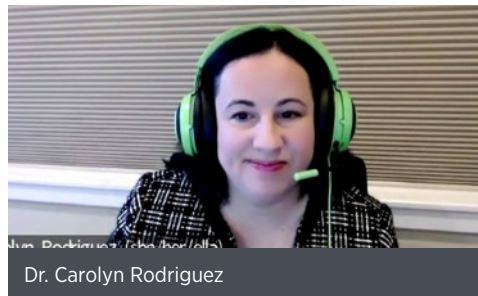
### Guest Speaker Gates Discusses Global Health

Business magnate and philanthropist Bill Gates, visiting campus for an annual NIH-Bill & Melinda Gates Foundation workshop on global health (see story, p. 5), made a brief guest appearance on day one.

“The Gates Foundation is a little different than NIH,” he pointed out. “We have overlapping missions but with slightly different

emphases. Our focus is on the inequities of global health. We look at what people die of, or what causes their life to be unhealthy, in poor countries. Malnutrition, HIV, malaria—we’re very disease-specific. Our metric is, are we doing things that reduce those deaths.”

SEE ACD, PAGE 4



Dr. Carolyn Rodriguez

### New Treatments for OCD Show Promise

BY ERIC BOCK

Dr. Carolyn Rodriguez spoke about novel treatments for obsessive compulsive disorder (OCD) that are in development, during a recent CC Grand Rounds lecture.

“I’m really excited for what’s on the horizon and have hope for the field,” said Rodriguez, associate dean at Stanford University and professor of psychiatry and behavioral sciences.

OCD is characterized by intrusive

SEE RODRIGUEZ, PAGE 8



NIEHS’s week-long fellow appreciation event features fun competitions. See story, p. 12.

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### NIDA To Host Seminar on Stimulant Use and HIV

Join NIDA's HIV Research Program for a virtual seminar, "Outside In and Inside Out: Neuroimmune Mechanisms Linking Stimulant Use and HIV," on Wednesday, Jan. 25 from 1 to 2 p.m. ET.

The talk features Dr. Adam Carrico, director, division of prevention science and community health, and a professor at the University of Miami.



Dr. Adam Carrico

Carrico is a leading clinical health psychologist with expertise in the interdisciplinary field of psychoneuroimmunology. His presentation will review a variety of findings related to the connection between stimulant use and HIV, including results from NIDA-funded studies.

To register, visit [bit.ly/3VeTa9B](https://bit.ly/3VeTa9B).

### NIH Exceeds CFC Goal

Let's Keep It Going

NIH has once again surpassed its goal in the annual Combined Federal Campaign (CFC).

"I am proud to announce that we exceeded our goal by raising more than \$1 million for charities," said Dr. Lawrence Tabak, who is performing the duties of NIH director, in a Dec. 19 all-staff email. "Your contributions will benefit thousands of CFC charities to support people and causes in great need."

Every year, NIH is asked to meet a specific dollar goal in raising funds for the CFC, the annual workplace fundraising drive among federal employees that serves more than 5,000 charities. For the past 17 campaigns, employees raised more than \$2 million, even though the target was \$1 million. Tabak believes NIH can accomplish the feat once again.

"I want to extend my sincere thanks to the NIH CFC Co-Chair and NIMHD Director Dr. Eliseo J. Pérez-Stable for his leadership in this effort," Tabak said. "We could not have achieved our goal without the dedication of all our key workers, coordinators, and campaign managers who devoted their time, creativity, and resourcefulness to making this year's campaign a success."

The CFC deadline is Jan. 14. Those who have not made a pledge can visit the NIH CFC website (<https://cfc.nih.gov/>) and search through a list of charities participating in this year's campaign.

### NIH To Host 'Conversations on Racial and Ethnic Equity'

NIH will host, "Conversations on Racial and Ethnic Equity," a virtual event about the first UNITE progress report, on Wednesday, Jan. 11 from 1 to 2 p.m. ET. Released in October, the report describes



Santa Claus along with his motor officer "elves" visit the Children's Inn at NIH as part of the annual Santa Ride coordinated by Montgomery County Police.

### Santa Visits Inn on Motorcycle

Santa Claus and his motor officer "elves" returned to the Children's Inn at NIH during the Montgomery County Police Department's annual Santa Ride on Dec. 7.

He took time out of his busy schedule to stop by Germantown, Md. There, he traded in his sleigh and reindeer for a Harley-Davidson motorcycle for the trip.

Before arriving at the Inn, Santa and his elves made several stops along Rockville Pike, where they collected toys and other gifts from local businesses and organizations to drop off at the inn.

Once they arrived on campus, Santa and his elves were greeted by grateful youngsters and their families.



the agency's progress in fiscal year 2021-2022 to identify and address structural racism within NIH and in the larger biomedical research enterprise.

Dr. Lawrence Tabak, who is performing the duties of NIH director, will begin the event with an overview of the progress report. Then, Dr. Kenneth Gibbs of NIGMS will moderate two panel discussions.

The first panel will feature staff volunteers who have been integral in shaping UNITE. They will discuss their experiences and hopes for the future. Three of the UNITE co-chairs will reflect on the earlier discussion and share their views on future directions of the initiative in the second panel. All staff are invited to participate in pulse surveys throughout the event and share views about the effort.

For details and how to participate, visit: <https://bit.ly/3Vx5r9f>.

### Sweet Suite for the Season

A gingerbread house on a pediatric unit at the Clinical Center features a well-known guest—NIAID Director Dr. Anthony Fauci, wearing a Santa hat!

PHOTO: EMMA GROARKE





NIH's podcaster community includes (from l) Megan Columbus, Dr. Beth Jaworski, Dr. Marguerite Matthews and Dr. Lauren Ullrich.

## PASS THE MIC

### NIH Podcaster Provides Glimpse of Community, Voices Within It

BY DAVID KOSUB

Podcasts are seemingly ubiquitous today, touching on nearly every facet of our lives. NIH is no stranger to this medium when communicating to the public, with several podcasts streaming today and others under development. How did these shows come about? Who are the voices you hear? What's next?

NIH started dabbling in this concept when the platform was still in its infancy.

*Pinn Point on Women's Health*, an early pioneer, released shows beginning in 2007. Dr. Vivian Pinn, then-director of NIH's Office of Research on Women's Health, hosted the podcast. As the concept was still fairly young then, podcasting was described at the time as "a relatively new method of distributing audio...information via the Internet to...portable media players on demand, so that it can be listened to at the user's convenience."

The idea that complex biomedical information could be distilled into simple conversations, able to be listened to anywhere, was a consideration for developing NIH's *All About Grants* podcast (<https://grants.nih.gov/news/virtual-learning/podcasts.htm>). Megan Columbus, who directs communication in the Office of Extramural Research, launched the series in 2010 to demystify the NIH grants process through brief, lively and informal conversations.

"Podcasting allows us to bring a human voice and perspective, which can be so important when discussing topics that can be a bit dry, like policy," she notes. "Done well, they can make listeners feel like they are privy to insider information."

I embraced this philosophy for *All About Grants* after she passed the hosting duties on to me in 2018. I appreciate hearing how the show engages various audiences—as on Twitter, for example—learning what information was helpful and what else is needed. The reach of our show never ceases to amaze me, reiterating how broad NIH-funded research can be. Data from Spotify (one of three ways our content is distributed) notes listeners came from 21 countries in 2022 and is in the service provider's top 15 percent of most followed podcasts.

Other podcasts also give honest, easy-to-understand and comprehensive insight into the world of NIH funding.

Drs. Lauren Ullrich and Marguerite Matthews are program officers turned NIH podcasters. They have experienced the grants process firsthand and know what it is like to try and get that initial NIH grant. That was an underlying reason they launched the *Building Up the Nerve* (<https://ninds.buzzsprout.com/>) podcast with the National Institute of Neurological Disorders and Stroke.

"We've been where our audience has been," Ullrich says. "And it hasn't been so long that I've forgotten how daunting that first NIH application can be. Even now, as an NIH employee, I encounter situations where policy or instructions aren't clear, so of course it is challenging to applicants!" Matthews adds that "podcasting can be a great way for NINDS to be more approachable to the extramural research training community."

Currently planning their fourth season, they say the conversations keep them going. "Whether it's our NINDS colleagues, grantees or other subject-matter experts, there is always so much to gain from other's wisdom and perspectives," Matthews points out.

Talking about the grants process is one thing, but delving into NIH-supported research is another.

Diego Arenas, a communicator in the Office of Intramural Research, hosts and produces *Speaking of Science* (<https://irp.nih.gov/podcast>). Podcasting, he notes, allows OIR to "cast a wider net and capture different audiences who might like to listen on their commute or while they're pipetting away in the lab."

As the show discusses cutting-edge research in NIH labs, Arenas adds, "intramural investigators are leading the charge in all areas of biomedicine, and we really want to showcase that in a way that is accessible to everyone, in and out of NIH."

With new topics coming in the near future and others being conceptualized, the medium is destined to continue growing at NIH.

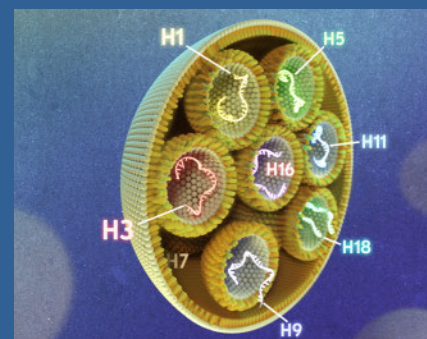
The Office of Behavioral and Social Sciences Research, for one, anticipates releasing its podcast next fall. Dr. Beth Jaworski, a program administrator, will speak with researchers and community members, exploring the social issues that impact

health and shape communities. She says she's "thrilled for the opportunity to weave evidence with storytelling to share more about how behavioral and social sciences are critical to understanding health."

And, because podcasters do not stop talking even when the mics are off, we gather regularly as a community of practice to share ideas, best practices and lessons learned to continue bringing the best shows possible to your earbuds.

To join NIH's podcast community, email [david.kosub@nih.gov](mailto:david.kosub@nih.gov).

*The author, Dr. David Kosub, is senior advisor for legislative and media affairs, Office of Extramural Research, Office of the Director, NIH. R*



ON THE COVER: Messenger RNA (mRNA)-nanoparticle vaccine encoding hemagglutinin antigens (H with number) from all 20 known influenza subtypes

IMAGE: DONNY BLISS/NIH OCPL

## The NIH Record

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At day one's session are (from l) Tabak, Dr. Renee Wegrzyn and Dr. Shelley Berge.

## ACD

CONTINUED FROM PAGE 1

The foundation averages about \$6 billion in grants per year, he said, “and that’s a mix of upstream work where NIH—particularly NIAID—is our most important partner, and downstream or delivery-related work, which is going into these countries and trying to help their primary health care system.”

In response to questions, Gates also discussed building research capacity, the promise of gene therapy and mRNA vaccines, and best practices from the foundation’s global endeavors that could succeed in U.S. regions similarly affected by health disparities.

### First & Final Insights

The first day also heard from Dr. Renee Wegrzyn, inaugural director of the Advanced Research Projects Agency for Health (ARPA-H), who addressed the ACD for the first time. In contrast, Dr. Anthony Fauci spoke to the group for the last time as director of the National Institute of Allergy and Infectious Diseases; he retired at the end of 2022.

“Think of [the ARPA process] almost as a transaction,” Wegrzyn said, explaining how ARPA-H will work to solve high-risk, high-reward health problems. The new component is unique—it operates as an HHS entity, independent of but structurally

located at NIH to take advantage of well-established administrative and scientific infrastructure.

ARPA-H program managers—essen-

tially principal investigators gifted with remarkable agility, limited bureaucratic constraints and short tenure—drive the new component.

“We’re here to buy down the risk, show that something is possible and then it should leave the organization,” said Wegrzyn. “That’s why keeping those [partnership] relationships with NIH is so important... Program managers will be here for only a short period of time. They bring their ideas and pass them on. That’s the model. We’re constantly adding new program manager energy.”

Giving a presentation on lessons learned from pandemic preparedness and response, Fauci replied to an ACD member’s question about how to combat the rampant misinformation, which has become an enemy nearly as large as the virus.

“One thing we can do is to be very energetic about countering misinformation by flooding the system with correct information,” Fauci urged. “If there is anything we need to put a larger effort into it is to get the public to realize that the nature of science is self-correcting. The virus in January 2020 was different than the virus in July 2020 and is different than the virus we are dealing with today.”

Other reports that day included follow-up on several previous recommendations: a

proposed framework for changes to peer review criteria and launch of two new ACD working groups—one on NIH’s investment in developing novel alternative methods and one on reimagining efforts to attract and expand biomedical research’s postdoc population.

“There are multiple forces that are affecting the decline in postdocs,” said Dr. Tara Schwetz, acting NIH principal deputy director, who presented data collected by the National Science Foundation. “We’re seeing lower numbers overall of postdocs, lower numbers of international postdocs in particular and fewer international grad students, which has an effect down the line.”

### Progress Reports

On day two, the ACD heard an assessment of the public health threat of post-acute sequelae of SARS-CoV-2 infection and an update on the NIH Researching Covid to Enhance Recovery (RECOVER) Initiative. The group also received reports on the status of the ACD working group on diversity’s subgroup on individuals with disabilities and on NIH efforts to support open data.

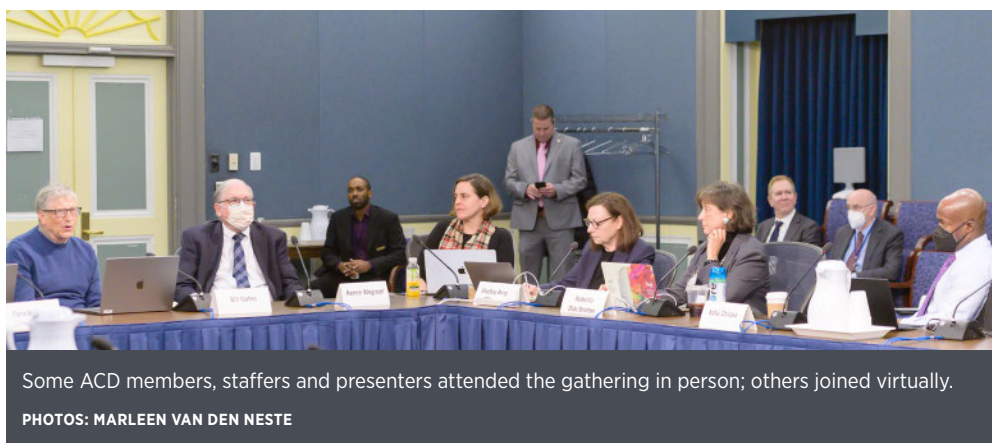
“As scientists we know that data are the catalysts for all we do, but this has really been brought into focus by the Covid-19 pandemic,” said Dr. Lyric Jorgenson, acting NIH director of science policy, putting the issue into perspective.

Vaccine development for polio took almost 20 years, she recalled, but the mRNA vaccines against Covid-19 were developed in less than a year—a crucial advance made possible largely because of 21st century leaps forward in global scientific data sharing.

A progress report by UNITE co-chairs concluded the second day’s deliberations.

“I think what [NIH has] executed with the UNITE initiative is a blueprint for cultural, structural, organizational transformation,” said ACD member Dr. Roberta Brinton of the University of Arizona Health Sciences. “I’ve been involved in these kinds of issues before and they’ve never been like this—a well-conceived, well-executed, highly intelligent, science-based approach...I have to sing your praises.”

To view the full meeting recordings, go to <https://bit.ly/3WCWEDU> for day 1 and <https://bit.ly/3WpTBPC> for day 2. **R**



Some ACD members, staffers and presenters attended the gathering in person; others joined virtually.

PHOTOS: MARLEEN VAN DEN NESTE

## Ninth Global Health Workshop Held with Gates Foundation

NIH hosted the 9th annual NIH-Bill & Melinda Gates Foundation Leadership Workshop on Dec. 8.

NIAID Director Dr. Anthony Fauci, who was set to retire at year's end, co-chaired the morning session. Tributes to Fauci, who has spent the last 50-plus years at NIH fighting infectious diseases around the world, closed the morning.

President Bill Clinton, WHO Director General Tedros Adhanom Ghebreyesus and prominent HIV scientists Dr. Salim Abdool and Dr. Quarraisha Karim of the Centre for the AIDS Programme of Research in South Africa in Durban praised Fauci in pre-recorded remarks.

Foundation co-chair Gates attended the workshop and added his own remarks of appreciation for Fauci's leadership.

NIH and the Gates Foundation have pursued a working partnership since 2003, when the foundation created its Grand Challenges in Global Health Initiative. The venture engaged scientists to work on 14 identified challenges that could lead to breakthrough advances in medicine.

Major current collaborative projects include:

- Novel potent broadly neutralizing monoclonal antibodies against HIV
- Single-dose protection of licensed HPV vaccines to prevent cervical cancers and substantively increase HPV vaccination coverage worldwide by reducing cost and simplifying administration
- Multi-country efforts to test intrapartum use of azithromycin to improve maternal and neonatal outcomes



Dr. Ruth Hunegnaw, scientific advisor in the VRC biodefense research section, speaks at the morning session of the workshop.

- A novel tuberculosis vaccine designed to stop latent TB from becoming active and causing disease
- Gene-based cures for HIV and sickle cell disease, using an in vivo gene-based approach that can be accomplished in a single or very few interventions

Notable achievements made possible through the



Bill Gates (r) addresses the workshop assembly in the Porter Neuroscience Research Center. The annual gathering focuses on global health issues.

PHOTOS: MARLEEN VAN DEN NESTE

partnership include a meningitis vaccine resulting in the lowest seasonal incidence recorded in the African meningitis belt, and a rapid molecular diagnostic test for drug-resistant tuberculosis that has reduced the time of diagnosis from three months to less than two hours. The same platform is used as one of several diagnostics for infection of SARS-CoV-2, the virus that causes Covid-19.



NIAID Director Dr. Anthony Fauci co-chairs the morning session, which featured several pre-recorded tributes to his leadership over the last half century. He retired from NIH at the end of 2022.

Based on annual surveys of financial flows, NIH and the Gates Foundation consistently contribute an estimated 60% of identified global health research and development spending. That estimate highlights the usefulness and influence of the annual meeting in framing global health priorities.

Leaders at NIH and the foundation have valued the yearly sessions to gain insights on pioneering and deliverable innovations to advance global health.

About 200 people attended the day-long event, which was held on campus in the Porter Neuroscience Research Center.

JAN. 11

## Cooper Set for WALs Talk

The NIH Director's Wednesday Afternoon Lecture Series (WALS) kicks off 2023 by hosting Dr. Rory Cooper of the University of Pittsburgh on Jan. 11 at 2 p.m. in Lipsett Amphitheater. It will be videocast at <https://videocast.nih.gov/watch=46052>.

Cooper's lecture is "The Power of Assistive Technology to Transform Lives." He is founding director of the Human Engineering Research Laboratories, a Department of Veterans Affairs Rehabilitation Research and Development Center of Excellence in partnership with Pitt. Cooper also serves as co-director of the National Science Foundation's Quality of Life Technology Engineering Research Center, a joint Pitt-Carnegie Mellon University venture.



Dr. Rory Cooper of the University of Pittsburgh

He has authored or co-authored more than 250 peer-reviewed journal publications and two books, including the award-winning "Care of the Combat Amputee." Cooper is an avid wheelchair athlete and past world/national record holder at various distances in wheelchair racing.

He will present on technologies and research that he and members of the team at the Human Engineering Research Laboratories are working on ranging from apps, cushions, homes, robots and wheelchairs.

He will also speak about innovative education programs to build research and development capacity among people with disabilities and veterans.

Colleagues—particularly NIH's trainee population—are encouraged to subscribe to the WALs listserv at: <https://bit.ly/3vkfOTj>.

Also, speaker nominations for the 2023–2024 WALs season are open until Monday, Jan. 16. More information about nominating a speaker can be found at: <https://bit.ly/3C4jin8>.

## India

CONTINUED FROM PAGE 1

sometimes even superstition.

Dr. John Mathew, associate professor of the history of science at Krea University in India, along with postgraduate students Ishita Pradeep, Karthika Satyanarayan, Lipi Savita and Rutuja Rokade, have been mining the National Library of Medicine's archives, among other sources, to uncover how Indian culture has informed the experience of pandemics from cholera, plague and influenza to Covid-19.

Articles, memoirs and archival records from NLM's collections help tell the history of cholera in India—one of the first meticulously recorded pandemics in the country—which began in 1817 and had successive waves until 1920. Rooted in unsanitary conditions that tainted tap water, “cholera provoked tremendous fear in the local populace,” said Mathew. Symptoms ranged from mild to severe.

“Infectious diseases were widespread in villages, particularly in untouchable dwellings. Cholera was one such disease,” said Mathew. “Each house had at least a couple of deaths due to cholera and people were afraid of touching the dead body of a person who had died of the disease. Only the inhabitants of the house could carry the dead body for cremation.”

An estimated 8 million people died in India from cholera from 1817 to 1920.

“What is staggering is the number of deaths across the 19th and early 20th centuries [from] a disease where India was seen as the source,” he said. “Cholera touched a considerable number of places in the world through much of the 19th century and, in some ways, foreshadowed what would come through other diseases.”

In the 1890s, a bubonic plague epidemic hit the city of Bombay, part of a global pandemic that began in China in 1894. Over the following several decades, the plague killed 12 million people in India and millions more worldwide.

In response, the British colonial

government came down with a heavy hand.

Concerned about the impact on trade, officials ratified the Epidemic Diseases Act of 1897, which authorized health officials to confiscate or destroy property, enforced quarantines for suspected plague victims and instituted systematic inspection and detention of travelers by land and sea.

The Epidemic Diseases Act was again invoked during Covid-19. “Some laws have long shadows,” noted Mathew.

The plague had embittered the population against the colonial government. Mathew said, “The already embattled populace in the wake of previous and competing diseases, including cholera and malaria—and in the context of a more global cataclysm [the first World War]—had developed its own sense of entitlement to yet another disruptive force.”

Before India had recovered from the plague, an even more destructive pandemic swept through the country from 1918 to 1919. Influenza—which arrived largely from soldiers returning after World War I—killed 20 million people in India alone.

“Suddenly, [that figure] made sense when Covid hit, which really brings to the fore what the sense of staggering loss was at that point in time,” noted Mathew.

And yet, while the plague caused panic and riots, public response to the flu was much different.

“Even as daily mortalities [exceeded] the normal rate of death



Carrying victims of bubonic plague through the streets of Bombay, circa 1899

PHOTO: NLM HISTORY OF MEDICINE

at a proportion of 18 to 1 on occasion—figures that have become frighteningly familiar in our recent crisis—the ravages of influenza and the waning days of the Great War [prompted] a fairly muted societal response,” he said.

Mathew attributed the muted response in part to growing public apathy in the postwar period. The flu hit hard and swiftly, whereas the plague lingered for many years.

Local attitudes about pandemics in India were rooted in religion. Some outbreaks evoked deities, such as Sitala, goddess of smallpox.

“Many of the deities preceded the European colonial movement,” Mathew added, “even if some were exapted [had a different function from its original] to pandemic purposes during [colonial times].”

Sitala's counterpart in southern India, Mariamman, was associated with cholera as well as chicken pox and plague. More recently, since smallpox was eradicated,



Shown here, Coronavirus Mardini draws upon the earliest signs of veneration, particularly the goddess Sitala.

PHOTO: SANDHYA KUMARI/GALLERIST.IN

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*“Cholera [afflicted] millions through much of the 19th century and, in some ways, foreshadowed what would come through other diseases.”*

—DR. JOHN MATHEW

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Sitala Mata, goddess of smallpox

PHOTO: NLM HISTORY OF MEDICINE

Sitala has been worshiped for another disease.

“The spread of HIV/AIDS was perceived as a form of spirit possession, and belief in Sitala is seen as protective of the disease,” said Mathew.

In the late 19<sup>th</sup> century, Dr. Edgar Thurston, superintendent of the Madras Museum, wrote a book about omens and superstitions in India, from animal superstition and snake worship to the evil eye. One such story involved a ceremony that occurred in Travancore when disease prevailed. The people drew an image of the goddess Bhadrakali on the ground in five colors, sang songs and role-played a fictitious murder of the demon Darika, waving a torch to ward off the evil eye.

Mathew concluded with a personal reflection. To help put superstition and culture related to disease and death in context, he recalled an encounter he once had in Virginia—where he was studying for his doctorate in ecological sciences. Upon hearing Mathew was from India, the man he was chatting with said, “That’s where they worship rats, right?”

While offended at the time, Mathew said such an account is part of the national heritage, but should not stand alone, “much like the picking up of venomous snakes in parts of Appalachia in a particular religious context does not define the culture of the whole United States.” Collecting many diverse narratives can provide better context and perspective on public health crises.

“As we wrestle with issues of rationality and ideology, magic and science, nationalism and devotion and always history,” he concluded, “we could do worse than to call to mind the insight of Nigerian-American author Chimamanda Ngozi Adichie...who [spoke] about the danger of the single story. As we reflect upon cultural practice, may we remember that.” **R**

## Study Finds Hair-Straightening Chemicals Raised Uterine Cancer Risk

Women who used chemical hair-straightening products were at higher risk for uterine cancer compared to women who did not report using these products, according to a new NIH study. The researchers found no associations with uterine cancer for other hair products that the women reported using, including hair dyes, bleach, highlights or perms.

The study data includes 33,497 U.S. women ages 35-74 participating in the NIEHS-led Sister Study that seeks to identify risk factors for breast cancer and other health conditions. The women were followed for almost 11 years. During that time 378, uterine cancer cases were diagnosed.

The researchers found that women who reported frequent use of hair-straightening products, defined as more than four times in the previous year, were more than twice as likely to develop uterine cancer.

“We estimated that 1.64 percent of women who never used hair straighteners would go on to develop uterine cancer by the age of 70; but for frequent users, that risk goes up to 4.05 percent,” said Dr. Alexandra White, head of the NIEHS environment and cancer epidemiology group and lead author on the new study. “This doubling rate is concerning. However, it is important to put this information into context; uterine cancer is a relatively rare type of cancer.”

Uterine cancer accounts for about 3 percent of all new cancer cases but is the most common cancer of the female reproductive system, with 65,950 estimated new cases in 2022.

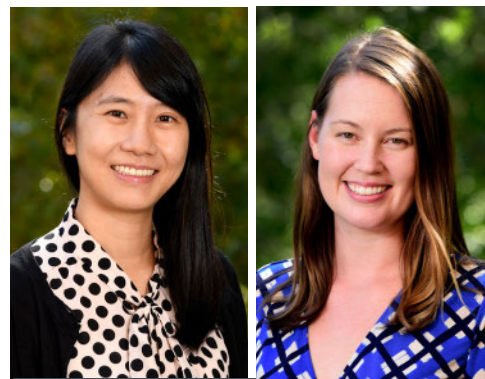
Studies show that incidence rates of uterine cancer have been rising in the U.S., particularly among Black women.

Approximately 60 percent of participants who reported using straighteners in the previous year were self-identified Black women, according to the study published in the *Journal of the National Cancer Institute*.

“Because Black women use hair-straightening or relaxer products more frequently and tend to initiate use at earlier ages than other races and ethnicities, these findings may be even more relevant for them,” said Dr. Che-Jung Chang, a study author and research fellow in the NIEHS Epidemiology Branch.

The researchers did not collect information on brands or ingredients in the hair products the women used. However, in the paper they note that several chemicals found in straighteners (such as parabens, bisphenol A, metals and formaldehyde) could be contributing to the increased uterine cancer risk observed.

Chemical exposure from hair product use,



Dr. Che-Jung Chang (l) and Dr. Alexandra White of NIEHS’s environment and cancer epidemiology group

especially straighteners, could be more concerning than other personal care products due to increased absorption through the scalp, which may be exacerbated by burns and lesions caused by straighteners.

“More research is needed to confirm these findings in different populations to determine if hair products contribute to health disparities in uterine cancer and to identify the specific chemicals that may be increasing the risk of cancers in women,” said White. **R**

## VOLUNTEERS

### Arthritis Study Recruits Participants

Did you know there are some genetic factors related to how much pain you experience with arthritis? When arthritis is managed properly, there is less burden on an individual. Participation in this research study will help develop family-based strategies to improve arthritis outcomes. To learn more, contact the Clinical Center Office of Patient Recruitment at (866) 444-2214 (TTY users dial 711) or [ccopr@nih.gov](mailto:ccopr@nih.gov). Refer to study #000912. Online <http://bit.ly/3iuBHfK>.

### NHGRI Recruits Healthy Children

Researchers at the National Human Genome Research Institute (NHGRI) are seeking healthy children between 2 and 17 years old to participate in a study about the immune system in patients with mitochondrial disease in comparison to their healthy peers. Compensation provided. Contact the Clinical Center Office of Patient Recruitment at (866) 444-2214 (TTY users dial 711) or [ccopr@nih.gov](mailto:ccopr@nih.gov). Refer to study #13-HG-0053 Online: <https://go.usa.gov/xSZ7c>.

## Rodriguez

CONTINUED FROM PAGE 1

thoughts, images or urges that increase anxiety and compulsions (behaviors that can be mental or physical acts that decrease this anxiety).

OCD symptoms are present for 14 years, on average, before they are diagnosed and treated. “It can be a hidden disorder,” she explained. Obsessions often have certain themes, such as contamination and washing, symmetry and ordering, intrusive thoughts of harm, taboo thoughts and/or mental rituals.

Standard treatment for OCD includes selective serotonin reuptake inhibitors (SSRIs) and cognitive behavioral therapy with exposure and response prevention. Patients typically begin taking SSRIs, which decrease the symptoms but don’t end them completely.

Behavioral therapy tries to disrupt the link between the anxiety-causing intrusive thought and the compulsion.

“Together, these two first-line treatments can help approximately half of individuals with OCD, but half of those individuals will not be helped,” Rodriguez noted. “That’s where the focus of my research is.”

Around the time she started her research, ketamine had been shown to relieve symptoms of depression within hours. Based on animal models of repetitive behaviors and emerging understanding of OCD, Rodriguez thought there was a mechanistic rationale to test the drug in OCD patients as well.

Ketamine is an FDA-approved anesthetic. Its side effects include hallucinations and out-of-body experiences, nausea and headaches. It’s best known as an illicit party drug because of its hallucinogenic effect.

Ketamine affects the brain’s glutamate system, which is involved in important brain functions such as learning and memory. Glutamate is the brain’s most common excitatory neurotransmitter. The drug blocks the NMDA receptor, which receives glutamate signals.

In a small pilot study, patients with OCD received a low dose of ketamine or saline via infusion. Those who received the ketamine reported a rapid decrease in OCD symptoms compared to those who received saline. One patient who received ketamine felt he had a vacation from his symptoms. Others



After her talk, Rodriguez participates in a question and answer session with Dr. Thomas Burklow of the Clinical Center’s Office of Clinical Research Training and Medical Education.

reported they tried to have OCD thoughts but couldn’t.

“Those effects, amazingly, persisted past ketamine’s very rapid metabolism in the body,” Rodriguez noted.

In another study, she partnered with a team to study ketamine’s effect on brain activity in people with OCD. They wanted to determine whether ketamine changed levels of glutamate in an area of the brain called the prefrontal cortex.



*OCD symptoms are present for 14 years, on average, before they are diagnosed and treated. “It can be a hidden disorder.”*

-DR. CAROLYN RODRIGUEZ



Researchers gave patients a dose of ketamine and imaged their brains using magnetic resonance spectroscopy. After an hour, they didn’t see any changes in glutamate. They did, however, see elevated levels of an inhibitory neurotransmitter called Gamma-aminobutyric acid. It blocks chemical messages in the brain and decreases the stimulation of nerve cells.

“There may be a unique neurochemical signature in ketamine’s effects on OCD,” Rodriguez said. “This needs replication in a larger sample.”

Animal models suggest the drug increases activity in the frontal-striatal circuit, which is the part of the brain that controls compulsive grooming behavior. This circuit might be important in understanding ketamine’s therapeutic effects in OCD.

In addition, Rodriguez’s research has revealed ketamine’s antidepressive effects

are tied to the brain’s opioid system. More research is needed to understand how the drug affects the opioid and glutamate system.

One hypothesis is that ketamine’s effect on the opioid system is responsible for the drug’s short-term depression relief, while the drug’s effect on the glutamate system is responsible for what makes the relief last a little while longer.

Rodriguez is also studying the potential of accelerated theta burst stimulation, a type of neuromodulation therapy. Neuromodulation refers to the alteration of nerve activity through electrical or chemical stimulation. Theta burst stimulation is a form of transcranial magnetic stimulation, a noninvasive treatment that uses magnetic fields to stimulate the brain.

To test whether accelerated theta burst stimulation could be a potential OCD treatment, she conducted an open-label study in seven patients. They received five consecutive days of accelerated stimulation. Ten sessions were applied per day (18,000 pulses/day, hourly) or 90,000 total pulses.

After the five-day protocol, her team saw patients experience a robust and rapid response in five of the seven (71%), with at least a 50% reduction in OCD symptoms within seven to 14 days.

“It was very dramatic,” Rodriguez said. Three patients sustained a reduction up to four weeks later. Some patients didn’t respond to the treatment. There were very few side effects (headache and fatigue that ended within a few days) from the treatment. More research is needed to understand why some patients respond and others don’t.

Rodriguez concluded, “There is a lot of pioneering research out there and a lot of hope,” both for patients who have been recently diagnosed with OCD and those who have struggled with it for a long time. **R**



## Ebola Vaccine Regimens Found Safe, Immunogenic in Adults, Children

Two randomized, placebo-controlled trials evaluating three Ebola vaccine administration strategies found that all the regimens were safe in adults and children, according to results published in the *New England Journal of Medicine*.

Antibodies were produced in response to the vaccine regimens beginning at 14 days after the first vaccination and continued to be detectable at varying levels—depending on the vaccine and regimen used—in both children and adults for one year. The study enrolled volunteers at sites in Guinea, Liberia, Sierra Leone and Mali to identify optimal vaccination strategies to curtail outbreaks of Ebola virus disease.

The trials were conducted under the Partnership for Research on Ebola Vaccination (PREVAC) international consortium. PREVAC's partner organizations include NIH, the French National Institute of Health and Medical Research and the London School of Hygiene & Tropical Medicine.

NIAID sponsored the trials in Liberia in collaboration with the Liberia Ministry of Health and in Mali, in partnership with the University Clinical Research Center and the Center for Vaccine Development-Mali.

The trials were conducted simultaneously, with enrollment beginning in 2017. A total of 1,400 adults and 1,401 children ages 1 year to 17 years old were randomized to receive two injections of either placebo or Ebola vaccine in one of three regimens.

Antibody responses were observed by day 14 after the first injection of vaccine, which is notable because vaccines against Ebola virus are typically administered during an outbreak so information about how rapidly a vaccine produces an antibody effect is useful in efforts to protect at-risk populations.

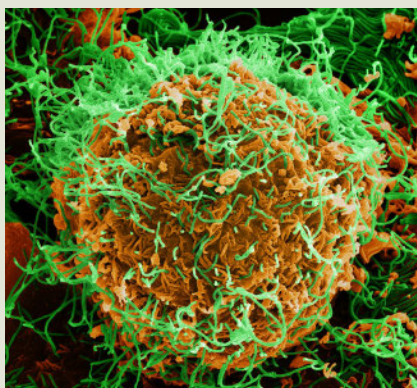
## Endocarditis Increases in Covid Times Among People with Substance Use Disorders

The incidence rate of endocarditis—a rare but often fatal inflammation of the heart valves—among patients with cocaine use disorder or opioid use disorder increased from 2011 to 2022, with the steepest increase occurring from 2021 to 2022, a new study reports.

Study findings, published in *Molecular Psychiatry*, contribute to expanding evidence of endocarditis as a significant and growing health concern for people who inject drugs, a risk exacerbated during the Covid-19 pandemic. The study, led by NIDA, was funded by multiple NIH institutes and centers.

Among patients with either substance use disorder, those who were clinically diagnosed with Covid-19 faced a higher risk of a new endocarditis diagnosis as well as hospitalization following this diagnosis than those who did not have Covid-19. Over the full 12-year period, the rate of endocarditis was three to eight times greater in patients with opioid and cocaine use disorder.

The findings also showed that Black and Hispanic people faced a lower risk of Covid-19-associated endocarditis than non-Hispanic white people. The



Colorized scanning electron micrograph of Ebola virus particles (green) both budding and attached to the surface of infected VERO E6 cells (orange)

IMAGE: NIAID

authors noted this is consistent with higher prevalence of injection drug use in non-Hispanic white populations.

One in 10 hospitalizations for endocarditis is associated with injection drug use, and these numbers continue to rise. Use of unsterile injection equipment dramatically increases risk of infection in people who use drugs.

NIDA Director Dr. Nora Volkow and a team of scientists at Case Western Reserve University analyzed electronic health record data of more than 109 million unique patients collected from January 2011 through August 2022. Patient data were derived from 77 hospitals nationwide, covering diverse geographic locations, age groups, racial and ethnic groups, income levels and insurance types.

A clinical diagnosis of Covid-19 more than doubled the risk for new diagnosis of endocarditis in patients with either cocaine or opioid use disorder. Among these patients, the risk of hospitalization within 180 days following diagnosis of endocarditis was about 68% in patients with Covid-19, compared to 59% in those without.

"As the scientific understanding of long Covid develops, we can now include endocarditis as one long-term effect on key organ systems for people who inject drugs," said Dr. Rong Xu of Case Western University and co-corresponding author of this study. "It's critical that we continue to monitor long-term, broad impacts of Covid-19 on people who use drugs."

## Wireless Smart Bandage Improves Wound Healing in Mice

After injury, the skin has the amazing ability to regenerate. But wounds can get infected and some diseases impair its ability to heal. Nonhealing wounds can lead to pain, loss of function and more serious complications.

An NIH-funded team at Stanford designed a smart bandage to actively assist the healing process. The research was published recently in *Nature Biotechnology*.

The smart bandage consists of a thin, flexible printed circuit. A small, coiled antenna draws power wirelessly from a nearby source allowing the bandage to provide electrical stimulation to injured tissue. Such stimulation has been shown to boost wound healing.

The wireless power also allows the bandage to measure temperature and monitor the skin underneath for signs of healing or infection.

To attach the bandage, the researchers developed an adhesive gel that loosens when heated above body temperature. This allows it to be removed without causing damage to vulnerable skin.

Healthy mice wearing the bandage moved normally, and the bandage was able to capture information about their skin during movement. No skin irritation was observed over a period of about two weeks.

Skin wounds on mice wearing the smart bandage healed about 25% more quickly than those covered with a standard sterile dressing, and the new skin showed an increase in new blood vessels. Similar results were seen in mouse models of burn healing and diabetic wounds.

Before the proof-of-concept bandage can be tested in people, it must be enlarged to a human-sized version and tested further.—adapted from *NIH Research Matters*



Freely moving mice wearing the wireless smart bandages

PHOTO: JIANG ET AL., NATURE BIOTECHNOLOGY

## A GLOWING CAREER DPSAC Access Control Chief Retires After 42 Years

BY DANA TALESNIK

Late at night on Nov. 27, when a small plane got entangled in power lines in Gaithersburg causing widespread power outages, Alex Salah was immediately notified



Alex Salah with his daughter Kathleena

by some of his customers that they lost power and went to their homes to connect their generators. The much sought-after electrician gets called for all kinds of electrical work across the

Washington, D.C. area. He also has been a longtime asset at NIH, where he recently retired after 42 years of federal service.

Salah first came to NIH in 1977 on a part-time job in the fund management and cost analysis section of the Office of the Director's Division of Financial Management. He had seen an ad for the job in the student newspaper at Montgomery College, where he was majoring in computer science and accounting. Three years later, he officially became a federal employee.

One day, a colleague was talking excitedly about his apprenticeship as a maintenance mechanic with NIH's Division of Engineering Services (DES), which is now the Office of Research Facilities (ORF). That sparked Salah's interest and got the wheels turning.

"My dad used to say, 'I don't care how much college education you have; you should learn a trade,'" said Salah.



Salah in NIH's electric shop in the early 1990s

In 1983, Salah began a 4-year electrical apprenticeship at NIH, studying electrical engineering at Montgomery College to become an electrician while getting on-the-job training in DES.

Salah graduated top of his class in 1987. Two years later, NIH promoted him to electrician leader. A year after that, he became assistant chief of the electrical department.

"From the moment I met Alex, I knew he would move up the ladder and excel, which he did," said John Hollingsworth, a retired NIH project officer who was Salah's supervisor at that time. "He became one of the best electricians in that shop."

When ORF created the automated systems unit to oversee elevators, fire alarms, generators and badge access, Salah became its first chief.

While in charge of fire alarm systems, Salah recalled getting summoned frequently by the fire or police department to work on jobs well into the night. Sometimes he'd finish up at 3 or 4 a.m., bunk at the firehouse for a few hours, then head to his office that morning.

In 2003, NIH Police hired him as a security specialist. For the next two decades, Salah would help keep NIH secure—from security access to safeguarding NIH's personally identifiable information. One of his major projects was managing electronic security during construction of NIH's perimeter fence.



Salah is joined by DPSAC's Barbara McMullen (l) and DPSAC Director T'Nae Brown at his retirement party in December.

There'd be more restructuring and beefed-up security after the Department of Homeland Security was created, including a mandate that established the Division of Personnel Security and Access Control (DPSAC). Salah became chief of its Access Control Branch in 2007.

He and his team have top clearances to do their jobs.

"It's basically a chain with many links," Salah said. "If you break one link, everything is broken. Everything has to work together like clockwork—from background investigations to access control to systems being up and running to people having the right credentials, and making sure staff have correct access rights to open certain doors. We all have to play together to make this finely tuned machine work."

Salah's fondest memories at NIH came from volunteering. Originally from Amman, Jordan, he arrived in the States at age 13 fluent in Arabic, English and French. His multilingual ability led him to be a translator for patients for nearly 20 years, often with NCI and NHLBI's bone marrow transplant unit.

"I got to talk to patients firsthand," he said. "What NIH stood for and could do is amazing. My best memories are getting to know patients and see them get cured and be able to go home."

During his official duties, there were many adventures.

"I'm always here," even through furloughs, Salah said. "I've been here many, many times when there were electrical explosions or electrical failures."

One year, Salah got called in on Superbowl Sunday. Bldg. 30 had lost power. He came in to hook up a generator to restore electricity.

"But it doesn't power up everything in the building and there was a huge concern about the animals," said Salah, who helped transport them elsewhere to safety. "It felt like I'm part of a very important function, making sure the animals are taken care of and [the outage] didn't affect research."

In retirement, Salah hopes to travel and spend more time with family, including his wife of 38 years, Denise, and their daughter Kathleena who—he beamed—wed his best friend's son, Eyal, in December.

Electrical work remains his passion and, though he's retiring from NIH, Salah plans to continue working as a master electrician, running the small business he started in 1989. In fact, Salah Electric was voted best local electrician in *Washington Jewish Week* in 2021 and made the list again in 2022.

"What I remember most about working with Alex," added Hollingsworth, "is he had a desire to achieve and he worked hard. And, he's always smiling."

## NINDS's Hallett Retires After 40 Years of Federal Service

BY SHANNON E. GARNETT

For several decades, Dr. Mark Hallett, chief of the Medical Neurology Branch (MNB) at the National Institute of Neurological Disorders and Stroke (NINDS), has built his research career in neuroscience—expanding knowledge of how the brain



Dr. Mark Hallett

controls movement, increasing understanding of movement disorders, motor learning and neuroplasticity, and making groundbreaking contributions to the field of brain stimulation. On Dec. 31, he officially retired

after 40 years of federal service, 38 with NINDS.

"NIH has been good to me," said Hallett. "Having a free hand to pursue whatever ideas I had is an unusual opportunity. I will miss having a laboratory to answer questions that might cross my mind."

A native of Philadelphia, Hallett developed an early interest in science. "I have really always been interested in science," he said. "I first became interested in the brain in a high school psychology class."

He earned his undergraduate degree in biology in 1965 and his medical degree in 1969, both from Harvard University. He interned at Peter Bent Brigham Hospital in Boston, received neurology training at Massachusetts General Hospital and in 1970, had a fellowship in neurophysiology and biophysics in the Laboratory of Neurobiology at the National Institute of Mental Health.

“My coming to NIH in 1970 as a fellow was not unique,” Hallett said. “I was one of the so-called Yellow Berets that came during the Vietnam era.” He was a clinical associate in the NIH Associate Training Program—a 2-year research program under the Commissioned Corps of the U.S. Public Health Service. It was during this NIH fellowship that he developed his interest in motor control.

Before coming to NINDS, in 1975 Hallett served as a Harvard University William C. Moseley Jr. traveling fellow at the Institute of Psychiatry in London. In 1976, he was chief of the Clinical Neurophysiology Laboratory at Brigham and Women’s Hospital in Boston and rose to associate professor of neurology at Harvard Medical School. In 1984, he joined NINCDS (now NINDS) as clinical director and chief of MNB’s human motor control section.

“I came back to NIH as the NINDS clinical director with a plan to continue studies in motor control,” he said. “I was interested in research as a major part of my professional activities and I knew from my experience as a fellow that NIH would be a good place to do research. And I had to find a job at that time in the Washington area, since my wife had just taken a job at the University of Maryland, and it was her turn to decide where we would be living.”

At NINDS, Hallett’s research centered on the principles of normal human voluntary movement, understanding the motor system and movement disorders including dystonia, parkinsonism and myoclonus, and the use of transcranial magnetic stimulation (TMS) and botulinum toxin to treat movement disorders. His laboratory has studied motor learning, brain reorganization in various disorders, the effects of fatigue on corticospinal excitability, the ability for fine finger control and, more recently, volition (decision-making) and its disorders, including tic and functional movement disorders.

During his time at NIH, Hallett received numerous awards and accolades, including many outside of NIH. He received a doctor of medicine honoris causa degree from the University of Hamburg, Germany, in 2017, and was made an honorary member of the European Academy of Neurology in 2018.

In 2019, Hallett received the WFN Medal for Contribution to Neuroscience from the World Federation of Neurology and the International

Brain Stimulation Award from the *Brain Stimulation Journal* for his groundbreaking contributions to enhance the understanding of the physiological principles of brain stimulation.

Most recently, Hallett received the International Association of Parkinsonism and Related Disorders Lifetime Achievement Award and a 2022 Best Scientist Award from Research.com, a leading online academic research portal for scientists. According to the platform, Hallett is ranked as the



Hallett and a colleague demonstrate the TMS technique in 2012.

96th best scientist in the United States and the 138th best scientist in the world. The rankings are based on the H-index data from Microsoft Academic Graph. “A high H-index doesn’t mean you are a great scientist, but it does require publishing for a long time,” Hallett explained.

Of all of his scientific achievements, Hallett is most proud of those that relate to understanding motor control, motor learning and the pathophysiology of different movement disorders.

“Our lab’s demonstration of trans-modal plasticity in humans was another milestone,” he said. “And, of course, I am particularly proud of the fellows that I have trained and their accomplishments.”

In fact, through the years, Hallett has mentored more than 150 fellows. His laboratory pioneered the use of TMS, EEG (electroencephalogram) and neuroimaging to understand movement disorders, and many former fellows are leaders in neurology and human neuroscience around the world.

Hallett has been active in the national and international societies of clinical neurophysiology throughout his career. He is a past president of the International Federation of Clinical Neurophysiology, the American Association of Neuromuscular and Electrodiagnostic Medicine and the International Parkinson and Movement Disorder Society, and past vice-president of the American Academy of Neurology. He is a past editor-in-chief of *Clinical Neurophysiology* and a past associate editor of *Brain*. He was the founding president of the Functional Neurological Disorder Society and is now its past president.

In retirement, Hallett plans to relax and travel for enjoyment in addition to continuing in an emeritus position at NIH. “I have decided to retire because I am the right age for it. I just turned 79 and I don’t think I should be working when I am 80. I have received much advice over the years that says one should not wait to retire until you cannot do anything. If you do that you can’t enjoy your retirement, and I would like to enjoy my retirement,” he said. “And at least, for the next few years, I still will have many manuscripts to publish.”

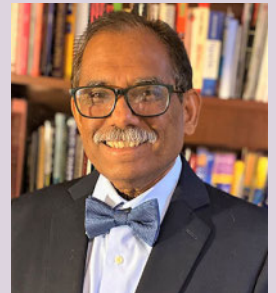
In December, NINDS held a scientific symposium to pay tribute to Hallett and his career and to provide an overview of the current state of research in

human motor control. The on-campus meeting, “From Action Potential to Free Will: Celebrating the Scientific Contributions of Mark Hallett, MD,” featured talks by leading educators and researchers in the fields of motor control and movement disorders as well as in volition and free will. Speakers discussed the wide reach and impact of Hallett’s team over the past 40 years. To view the recording, visit <https://videocast.nih.gov/watch=46497>.

## NCI’s Srivastava Receives Listwin Award

Dr. Sudhir Srivastava received the 2022 Don Listwin Award for Outstanding Contributions to Cancer Early Detection.

Srivastava is senior scientific officer and chief of the Cancer Biomarkers Research Branch in the Division of Cancer Prevention, National Cancer Institute (NCI).



Dr. Sudhir Srivastava

He established several transformative programs on translational research in cancer screening, early detection, risk assessment and enabling technologies including artificial intelligence (<https://prevention.cancer.gov/research-groups/cancer-biomarkers/about-cancer-biomarkers/>) with a network of leading experts in medicine, science and computational biology that has advanced discoveries and revolutionized diagnostics.

Srivastava developed and implemented a novel approach to collaborative clinical research on cancer biomarkers through the establishment of the Early Detection Research Network (EDRN; [www.cancer.gov/edrn](http://www.cancer.gov/edrn)), a flagship NCI program that has begun translating biomarkers into clinical tests. The network has been a pioneer in applying innovative technologies in the validation of cancer biomarkers as well as in the development of a national informatics infrastructure to support the research.

The award is named in honor of Listwin, founder and chair of the nonprofit Canary Foundation, which he established in 2004 after losing his mother to misdiagnosed ovarian cancer. He envisioned a world of simple and safe tests that could identify cancer at its earliest, most curable stage. In 2009, he partnered with Stanford to establish the Canary Center at Stanford—the first center in the world dedicated to cancer early detection.

Since its start, the foundation has raised more than \$75 million to support early detection research. For details, visit <https://www.earlydetectionresearch.com/award/>.



The overall trivia challenge winner and the team crowned with the most environmental team name was Generation Next. Members included Dr. Ciro Amato, Dr. Barbara Nicol, Dr. Adriana Alexander, Dr. Martin Estermann, Dr. Karina Rodriguez, Dr. Humphrey Yao, and Dr. Yu-Ying Chen of the reproductive developmental biology group.

PHOTOS: STEVE MCCAUW/NIEHS

## NIEHS 'Fellow Appreciation Week' Honors Trainees

BY JENNIFER HARKER

The National Institute of Environmental Health Sciences recently held the 13th annual Fellow Appreciation Week to recognize trainees for their contributions to scientific discovery. Honorees include postbaccalaureate, predoctoral, postdoctoral and visiting researchers who are exploring the biomedical and environmental health sciences alongside NIEHS intramural investigators.

The Office of Fellows' Career Development (OFCD) hosted the celebratory events.

"NIEHS Fellow Appreciation Week is an opportunity for all of us to acknowledge the hard work and dedication of our outstanding trainees," said NIEHS Scientific Director Dr. Darryl Zeldin. "NIEHS trainees are our future scientific leaders and perhaps the most critical component of our workforce. On behalf of NIEHS leadership, we extend our thanks to them and acknowledge the contributions of all our trainees to the success of our institute."

The week is NIEHS's version of National Postdoc Appreciation Week. Both began in 2009 as Postdoctoral Appreciation Day, then expanded to a week-long celebration in 2010. In 2017, NIEHS began including all levels of trainees. This year's events were held in person after being held virtually in 2020 and in a hybrid format in 2021 due to the Covid-19 pandemic.

"I started just a few months before the shutdown," said Dr. Aylund Letsinger, a postdoctoral researcher in the ion channel physiology group. "The social distancing was especially hard knowing we were all missing out on potential friendships and collaborations. Having so many trainees in one spot laughing together during the events of Fellow Appreciation Week represented a brilliant return to what we have been missing."

Dr. Katie Headley, a postdoctoral fellow in the eukaryotic transcriptional regulation group, said,



Dr. Gary Bird, staff scientist in the Signal Transduction Laboratory, is one of the organizers of the annual Big Picture, Small Talk competition. For this spin on that event, Bird wrote "Human Studies" and drew a giant microscope. He demonstrated how people could interact with the display by putting their head on the microscope stage.

"Over 80 people signed up for the event, and not only trainees, but also a lot of scientific principal investigators who seemed to be having just as much fun as the trainees."

"We had a big turnout," said Dr. Mercedes Arana, OFCD acting director. "We were excited to see all the trainees, scientists and staff enjoying themselves. I am grateful to the OFCD team for making the event so successful."

A postbaccalaureate fellow in the mutagenesis and DNA repair regulation group, Daniel Nguyen noted, "[OFCD] helped to create a supportive and enriching community and Fellow Appreciation Week certainly showcased that. I cannot thank them enough."



Above, the award for Most Scientific Team Name went to CA2 Fast 2 Furious, which included Erin Harris, Dr. Serena Dudek, Madeleine Ross, Preston Siegler, Dr. Priyanka Singh, Stephanie Jones and Dr. Georgia Alexander of the synaptic and developmental plasticity group.

At right, a group photo on the NIEHS campus of the 2022 trainees who attended Fellow Appreciation Week

