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National Institutes of Health



HHS Secretary Xavier Becerra (l) ceremonially swears in new NIH Director Dr. Monica Bertagnolli, as her husband Alex observes.

Bertagnolli Formally Sworn In, Outlines Agenda

BY CARLA GARNETT

Close to a month after taking the helm, Dr. Monica Bertagnolli was formally sworn in on Dec. 6 as 17th NIH director by Secretary of Health and Human Services Xavier Becerra.

On the same day, she assisted in a surgical procedure at the Clinical Center with a former postdoc in her lab, Dr. Stephanie Goff, now a surgical oncologist at the National Cancer Institute's Center for Cancer Research, and held her first media briefing virtually, during which she outlined her priorities leading NIH.

"It is an incredible honor to lead the world's largest funder of biomedical research," Bertagnolli said, opening the media session. "I've always admired NIH and all that it does to advance fundamental research and to improve clinical care. Now that I've been given this opportunity to serve as director, I believe my experiences and the perspective they have given me will help me in this role."

Bertagnolli officially began her term as director on Nov. 9, after bipartisan confirmation by the U.S. Senate.

Recalling her upbringing on a sheep and cattle ranch in central Wyoming, she described contrasts with metropolitan areas

SEE BERTAGNOLLI, PAGE 6



President Joe Biden stopped by a pharmacy at the Clinical Center on Dec. 14 to discuss his administration's efforts to reduce the costs of prescription drugs. NIH Director Dr. Monica Bertagnolli (l) and several NIH pharmacists and leaders accompanied the President during his brief visit. He also addressed the media. See story on p. 7.

PHOTO: CHIA-CHI CHARLIE CHANG



Beloved gingerbread creation challenge returns to the Clinical Center. See p. 12.

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Newly Renovated Clinical Center E Wing Opens

BY AMBER SNYDER

The first major ribbon-cutting ceremony since the Covid-19 pandemic celebrated a long-awaited makeover: the completion of the Bldg. 10 E Wing renovation project. Originally slated to be finished in 2021, the completion was pushed back to 2023 due to

SEE RIBBON-CUTTING, PAGE 8



Attendees gather outside Bldg. 10 for the ribbon-cutting ceremony.

PHOTO: CHARLIE CHIA-CHI CHANG

INNOVATING FOR INCLUSION NIA Panel Discusses How to Diversify Dementia Trials

BY DANA TALESNIK

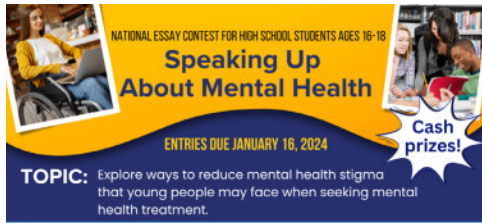
Be genuine. Listen. Engage with the community. These are among the ways clinical trial coordinators and investigators can build trust and recruit more underrepresented groups into their studies.

The National Institute on Aging (NIA) recently hosted a webinar to explore how to make Alzheimer's disease and related



Jimmie Harris (r) with his "shero" patient advocate Deb Burcombe

SEE DIVERSIFY, PAGE 4



Essay Contest Opens for High School Students

The “Speaking Up About Mental Health” national essay challenge is open until Jan. 16. The contest encourages teens to start conversations about mental health and the stigma people may face when seeking mental health treatment. The National Institute of Mental Health, the National Institute on Minority Health and Health Disparities and the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development are co-sponsors.

U.S. high school students ages 16-18 are invited to submit short essays (not exceeding 1,000 words) on topics that may include stigma and barriers, resilience and coping strategies, school policies or practices, the impact of social media and technology and more. Multiple winners will be chosen to receive cash prizes.

Winners will be announced on May 31.

For details, visit <https://nimhd.nih.gov/EssayContest>.

Read the winning 2022 essays at go.nih.gov/DIODqdX.

NIH Hosts First Industry Day Jan. 18

NIH is hosting the first annual Industry Day, a one-day virtual conference designed to encourage greater public-private collaboration, on Jan. 18 from 8 a.m. to 5 p.m.

The conference will feature speakers from across NIH including NIH Director Dr. Monica Bertagnoli, Deputy Director for Intramural Research Dr. Nina Schor and Deputy Chief of the National Cancer Institute Lab of Cellular Oncology Dr. John Schiller.

While many companies have partnered successfully with NIH, many others may not appreciate the many benefits that an NIH collaboration can provide or understand how to work with NIH. Because of its complex structure, the diversity of its research as well as the many federal rules and regulations that must be followed, NIH can be difficult to navigate.

The event will focus on six subject areas: vaccines, therapeutics (including gene therapy), novel target identification/validation, drug repurposing, diagnostics and biomarkers.

Register by Jan. 8 at <https://go.nih.gov/MdRveCL>.

Santa Visits Children’s Inn

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. 13.

Santa and his elves first stopped by the 5th District Police Station in Germantown, where they traded a sleigh and reindeer for motorcycles.

Before their final stop at the inn, Santa and the elves visited Damascus, Olney, Kentlands, Rockville, Silver Spring and Bethesda.

Once they arrived on NIH’s campus, Santa and his elves were greeted by appreciative kids and their families.

Top, children awaiting Santa’s arrival decorate at the Children’s Inn. At right, a child shares her holiday wish list with Santa and Mrs. Claus.



Santa, escorted by Montgomery County Police, visits downtown Silver Spring on the annual Santa Ride en route to the Children’s Inn. PHOTOS: MATTHEW MCGINNITY/CHILDREN’S INN

MLP-10 Parking Garage Renovations Begin

MLP-10, the 1,143-space parking garage (shown below) located behind Bldgs. 31 and 33, has begun major renovations to address structural and plumbing repairs and waterproofing.

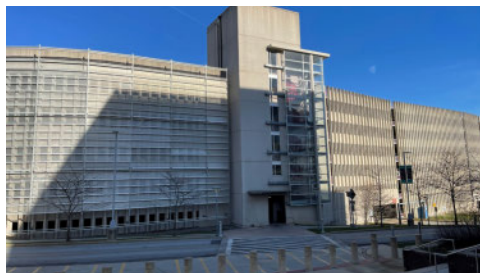
The urgent repairs are taking place in phases to minimize impact to employees, starting on levels 5 and 6. The garage itself will not close.

No more than 241 spaces will be unavailable at any one time; most often approximately 150 spaces will be affected at one time. Even with the temporary

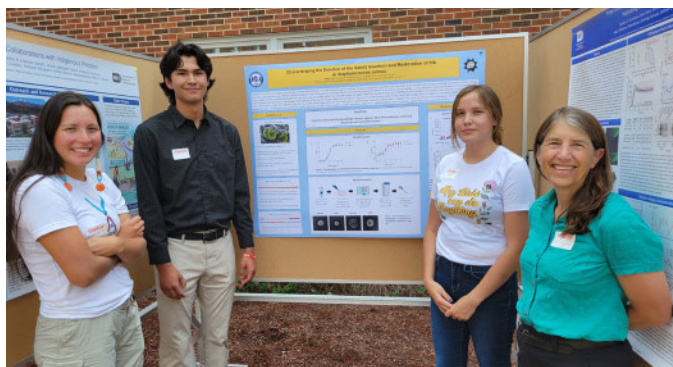
removal of slots, there should still be ample parking available in the garage.

Inside MLP-10, construction areas will be clearly marked. Signage will assist vehicles navigating around work zones during the beginning of each phase. Alternative handicap and reserved parking spaces will be provided within MLP-10 once existing slots come under repair.

To determine alternative routes and parking areas, visit <https://go.nih.gov/XFvwl36>. For more resources and commuting choices, visit <https://traffic.nih.gov/Pages/default.aspx>.



PHOTOS: ERIC BOCK



Students and Crow Nation members (from l) Madisan Chavez and Kody Gust of Montana State University and Xada Little Wolf of Little Big Horn College gather with MSU faculty member Dr. Mari Eggers among research posters on the RML campus.

‘RIVERS OF KNOWLEDGE’ American Indian Conference at RML Explores Research Potential

A two-day conference, “Rivers of Knowledge,” was hosted by the science, technology, engineering, art and mathematics (STEAM) collaborations with Indigenous Peoples (SCIP) committee at Rocky Mountain Laboratories (RML), National Institute of Allergy and Infectious Diseases (NIAID). The event brought together more than 60 members of American Indian tribes, researchers and university colleagues to share information and spark research partnerships between Indigenous peoples and RML scientists.

Along with fostering new research alliances with American Indian and Alaska Native communities, the conference featured presentations designed to build research capacity at Tribal colleges, highlight training opportunities and promote novel approaches to STEAM educational curriculum development.

Faculty and students from Blackfeet Community College, Little Big Horn College on the Crow Nation and Confederated Salish Kootenai College interacted with RML researchers and committee members for seminars,



John Doyle, water quality director at Little Big Horn College

poster sessions and breakout discussion groups.

Participants toured the campus, learning about the century-long evolution of RML from its beginnings in field tents and an old schoolhouse studying Rocky Mountain Spotted Fever to its current state with BSL-2 and -3 labs,

state-of-the-art microscopy and sequencing facilities, and BSL-4 high-containment laboratories. In addition, NIAID Training Director Katie Soucy gave a presentation about the variety of RML training opportunities.

Former RML trainee Dr. Moses Leavens, a member of the Chippewa Cree Tribe of Rocky Boy, Mont., and an assistant professor at McLaughlin Research Institute, shared personal experiences about growing up outside of a reservation. He described his path to studying prion diseases at RML.

John Doyle, a member of the Crow Nation and water quality director at Little Big Horn College, spoke about the long struggle to provide clean water to the reservation.

Dr. Josh Marceau, who grew up on the Confederated Salish Kootenai or Flathead Indian reservation and now works at Fred Hutchison Cancer Research Center, was another former student who conducted research at RML. Marceau, whose younger brother also was a RML trainee, commented on the knowledge he gained at RML during a video interview recorded for the conference.

Native American Heritage Month

Join us for a virtual introduction and overview of the Rocky Mountain Laboratories (RML) Science Technology Engineering Art and Mathematics (STEAM) Collaboration with Indigenous Peoples (SCIP)

Guest Speakers

Dr. Sarah Anzick, Chair SCIP Committee, RML/NIAID

Dr. Moses Leavens, Assistant Professor, McLaughlin Research Institute for Biomedical Sciences. Member of the Chippewa Cree Tribe of Rocky Boy, Montana

Dr. Crystal Richards, Founding Member of the SCIP Committee, RML/NIAID

Wednesday November 15, 2023
12-1 pm ET via Zoom

Members of the RML committee also helped celebrate Native American Heritage Month virtually.

“Being able to understand how viruses are transmitted, how to contain viruses, how to avoid becoming infected by viruses, helped me navigate the global pandemic in a lot of ways,” he said. “I had a lot more experience to draw upon when I was giving advice to my friends and family, a lot of times still on the reservation.”

RML has research collaborations planned or underway with members of the Crow Nation.

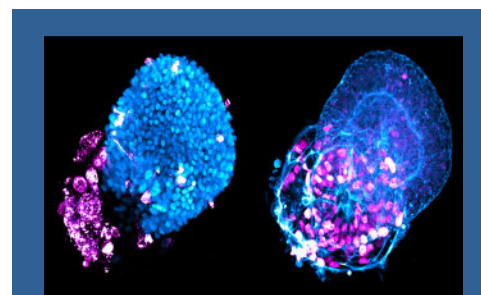
For example, the Long and Groshong research groups are working with a multidisciplinary, collaborative team to study microbial pathogens in drinking and source water on the Apsáalooke/Crow Reservation in Montana.

Led by the Crow environmental health steering committee (Crow Agency, MT), research partners include those at Little Big Horn College, United

States Geological Survey, NIAID Groshong Laboratory and Montana State University. All are working together to characterize pathogenic amoebae and bacteria in environmental and domestic water sources. The project is founded on community-based participatory research principles, with partnerships ranging from Tribal youth (Guardians of the Living Water Program) to Elders (Crow environmental health steering committee). **R**



Dr. Moses Leavens of McLaughlin Research Institute



ON THE COVER: SARS-CoV-2 (magenta) infects alveolar and airway tissues (blue) of human mini-lungs derived in vitro from human pluripotent stem cells.

IMAGE: LABORATORY OF STEM CELL BIOLOGY AND MOLECULAR EMBRYOLOGY/THE ROCKEFELLER UNIVERSITY

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National Institutes of Health
Turning Discovery Into Health

Diversify

CONTINUED FROM PAGE 1

dementia clinical trials more inclusive. Black/African-American and Hispanic/Latino populations have a higher risk of developing Alzheimer's disease and other dementias than non-Hispanic Whites but are consistently underrepresented in dementia studies.

Traditionally, underrepresented populations have faced many challenges to participating in clinical trials. The hurdles can be daunting: Strict eligibility criteria. Time commitment. Inconvenient trial locations. Mistrust.

Yet their potential contributions are vast and critical to developing treatments and prevention strategies that work for all people. At the webinar, two investigators, a clinical trials coordinator and a study participant shared experiences and resources toward building more diverse cohorts.

Forging AHEAD

Two principal investigators working on diversity and inclusion for the NIH-funded AHEAD study discussed strategies for diversifying enrollment. Both PIs work with the University of Wisconsin's Alzheimer's Disease Research Center (WI-ADRC), a site for AHEAD—a multi-center prevention study aimed at delaying memory decline.

One of those PIs, Dr. Taryn James said most Black Americans recruited to WI-ADRC are in the African Americans Fighting Alzheimer's in Midlife Study (AA-FAiM), a biomarker trial assessing Alzheimer's disease risk reduction and treatment for African Americans. ADRC strategies to recruit and retain participants in AA-FAiM include brain health fairs, newsletters and social media, skills-based classes and other community events.

In addition, ADRC staff went inside the community, opening a field office equipped to do medical testing in a diverse neighborhood.

"To identify and remove barriers, we have to understand the needs of a community by forming relationships with them," James said. Deep engagement involves developing

community partnerships, such as the Black Leaders for Brain Health community advisory board consisting of local Black American leaders who understand community needs. "We listen to their feedback and incorporate that in our approaches."

Building Bridges

Another AHEAD study PI, Dr. Shenikqua Bouges, is developing strategies to improve trust in research among Black Americans.

"Trust is a subjective term with a multitude of definitions and values, which significantly impacts an individual's willingness to participate in a study," said Bouges, an assistant professor at UW-Madison who specializes in dementia and geriatric medicine.

• • •

"We're working so hard to reach, to connect, to embrace a population that may not have been invited, or hesitated, to be a part [of research] before."

-DEB BURCOMBE

• • •

Building trust takes time. Their focus groups have shown that African Americans prefer interacting with doctors and staff of the same race. But, most importantly, the community wants to feel valued for their participation and seeks transparency from scientists.

Following up on the community's request, Bouges said her team provides treats as a token of appreciation at community events, while sharing dementia and clinical trial information. They bring brain-healthy snacks and brain-stimulating activities such

as culturally sensitive puzzles.

Bouges suggested clinical trials could become more inclusive by adjusting the exclusion criteria and providing genotyping for people at a higher risk for dementia.

A Champion and a 'Shero'

"Being a person of color, we have stigma in the back of our minds," said Jimmie Harris, a clinical trial participant at the Wake Forest Sticht Center for Healthy Aging

and Alzheimer's Prevention in North Carolina. "We do not trust research, because so many things have happened to people of color in research."

Harris first discovered the Sticht Center several years ago when a friend invited him to participate in a brain study. "I enjoyed every minute of it," he said, "and from that point on, I've been going for every brain study they've had." He began sharing this positive experience with others and has become a passionate advocate in his community.

His recruitment tool? "I brought my 'shero,'" he said of Deb Burcombe, who directs outreach programs at Sticht and helps bring programs to his community.



Dr. Taryn James (l) and Dr. Shenikqua Bouges



NIA Health Communications Specialist Jeanne Jarvis-Gibson (r), who moderated the virtual discussion, talks with Burcombe and Harris.

“Even though she doesn’t look like [others in] my community, she was accepted because I told them ‘this is my angel.’”

Burcombe said she connects with diverse communities by being transparent and creating opportunities to share meaningful information. She created a monthly event on aging well focused on brain and body health. The now-virtual event includes fun prerecorded features, such as chefs sharing recipes and virtual road trips, and has expanded well beyond her state, with many more asking how to get involved.

In North Carolina, about 22% of the population is Black or African American. The Sticht Center’s clinical trials, with a 23.8% Black-American participation rate, exceeds the state average.

“I’m so proud of that,” said Burcombe, “not to check a box, but to say I feel like we’re working so hard to reach, to connect, to embrace a population that may not have been invited, or hesitated, to be a part before. I feel like we’re having an impact.”

Harris encourages Black Americans to join studies to help foster targeted research. He tells his friends that doctors “cannot design a medicine for a person of color if you’re not in the study. To get medication for your bloodline...you have to make sure you’re in there with that study.”

Further Outreach

NIA developed a free tool to help researchers generate recruitment materials for dementia trials. OutreachPro—available at <https://outreachpro.nia.nih.gov/>—offers customizable templates for developing locally targeted, culturally sensitive print and online materials such as handouts, posters and social media assets.

The tool was developed after gathering community input and conducting formative research such as expert listening sessions, national surveys and focus groups.

“We learned a lot from focus groups,” said NIA’s Jeanne Jarvis-Gibson, who moderated the webinar. “We got to see how terminology and imagery created an impact and how different audiences viewed a message or concept.”

The first step toward diversifying enrollment, though, is speaking with individual communities to discern their needs. Bouges said, “Then you’re able to provide a service to them, first and foremost, to help you build that trust.” **R**



NIH leaders and staff from the Office of the Director who served dinner at the inn include (from l) Nate Brought, director of the Office of the Executive Secretariat; Dr. Marie Bernard, chief officer for scientific workforce diversity; Renate Myles, acting associate director for communications and public liaison; Dr. Alfred Johnson, NIH deputy director for management; Kate Klimczak, associate director for legislative policy and analysis; Neil Shapiro, associate director for budget; Dr. Tara Schwetz, NIH deputy director for program coordination, planning and strategic initiatives; Dr. Brittany Chao, special assistant to the principal deputy director; Dr. Lauren Brodd, special assistant to the chief of staff; and Dr. Robert Eisinger, senior advisor to the NIH principal deputy director.

NIH Leaders, OD Staff Serve Dinner at the Children’s Inn

Several NIH leaders and staff from the Office of the Director served dinner on Nov. 29 for patients and families at the Children’s Inn at NIH. The cuisine for the night was Italian and the menu featured pizza, lasagna, baked ziti, salad and cookies. The guest servers volunteered as part of the inn’s Family Dinner Program, a resident favorite. Volunteer-hosted family dinners typically take place twice a week between Monday and Thursday. Individuals as well as community groups of up to 12 people ages 18 and older are invited to participate in the program. For details, visit <https://childrensinn.org/get-involved/family-meals-program/> or email kalli.mays@nih.gov.



The guest servers volunteer as part of the inn’s Family Dinner Program.



Becerra and Bertagnolli shake hands at her ceremonial swearing-in, with Bertagnolli's husband Alex at her side. On the same day, in a CC surgical suite, the NIH director (r) consults with one of her former postdocs, NCI's Dr. Stephanie Goff, now a senior surgeon at NIH.

PHOTOS: CHIA-CHI CHARLIE CHANG

Bertagnolli

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such as Boston and Bethesda, where she lived during her medical training and surgery career, and where NIH is headquartered. She recounted her father's long commute for

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“...Our job is not done when scientific discoveries are made. Our job is done when all people are living long and healthy lives.”

-NIH DIRECTOR DR. MONICA BERTAGNOLLI

• • •

surgery and radiation after his diagnosis with cancer when she was a youngster, and her own recent breast cancer treatment that was informed at every step by NIH research.

Bertagnolli said as director she intends to draw on such personal insights to do the job, speaking of her husband and their two



Bertagnolli (r) assists Goff (second from r) in removing a tumor from the thigh muscle of a woman with metastatic melanoma. “We will be looking at the tumor cells and the white blood cells that are in the tumor to better understand the relationship between her tumor and her immune system,” explained Goff, whose fellowship with Bertagnolli at the Brigham and Women’s Hospital started in January 2013. “I spent time on her clinical service, assisting with complex sarcoma operations, and was a member of her lab for 18 months,” Goff recalled. Also shown above are surgical fellow Dr. Abraham Hakim (second from l) and scrub nurse Phuong “Flower” Nguyen.

adult children and mentioning that a son has autism.

“Equity will guide my approach to leading NIH,” she emphasized. “I know by direct experience the transforming power of research to save lives, but I also know that I am a person of privilege. And we need the biomedical research enterprise and its discoveries to be more inclusive and accessible to people from every walk of life.”

Several of her goals are clear already, Bertagnolli said, and are likely to stay constant throughout her tenure.

With an unprecedented opportunity to embrace and increase access to innovation, she said she wants “to focus on what NIH can do as a biomedical research institution to ensure that our advances reach the people who need them.”

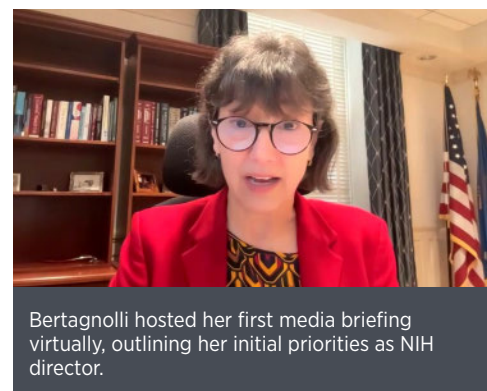
In addition, she said fundamental science is critical. So much about human biology is learned in basic science laboratories and NIH must be even more effective in linking what we learn to the human experience.

Another aim is to ensure that the biological insights identified in labs are pursued aggressively in ways that speed their application to improve the circumstances of real people.

“This means we need to make sure that our clinical research is also robust and comprehensive and that the results of clinical trials benefit everyone,” Bertagnolli

pointed out. “That means making [clinical studies] more efficient, more inclusive and more responsive to the actual needs of patients.”

The new director also wants NIH to concentrate on health care delivery research and implementation science to improve access to care, to best ensure the already available life-saving tools are getting to clinicians and helping patients.



Bertagnolli hosted her first media briefing virtually, outlining her initial priorities as NIH director.

Another Bertagnolli priority involves capitalizing on learning-based analytical tools so data can be harnessed into advances that benefit providers and patients. Artificial intelligence, she observed, is already revolutionizing what is possible for biomedical research and clinical care. NIH needs to invest in secure and sustainable data-sharing infrastructures and in highly sophisticated tools to speed progress.

Finally, she said she intends to be at the forefront to address a concern brought to light by the global pandemic: Encouraging people to believe and rely on science again.

“I aim to do everything that I can to help restore trust in science and achieve equity in access to the benefits that arise from biomedical research,” Bertagnolli concluded. “[That will be a] guiding principle underlying everything that NIH does—the mandate that our job is not done when scientific discoveries are made. Our job is done when all people are living long and healthy lives.” **B**



On hand for Biden's visit are (front row, from l): Dr. Sadhana Jackson, head, Developmental Therapeutics and Pharmacology, Surgical Neurology Branch, NINDS; Dr. James Gilman, CEO of the Clinical Center; Dr. Monica Bertagnolli, director of NIH; David Mitchell, president and CEO of Patients for Affordable Drugs. Back row (from l): Capt. Richard DeCederfelt, acting chief, CC pharmacy department; Cdr. Fortin Georges, section chief, pharmaceutical procurement; Dr. Marilyn Farinre, chief of pharmacy operations; Dr. Nadia Guirguis, section chief, outpatient pharmacy; and Christina Martin, section chief, intravenous admixture unit (IV room).

PHOTO: CHIA-CHI CHARLIE CHANG

President Visits NIH Pharmacy, Discusses Efforts to Reduce Prescription Drug Prices

President Joe Biden visited a pharmacy at NIH's Clinical Center on Dec. 14 to discuss efforts to reduce the costs of prescription drugs.

"We're here at a pharmacy today at the National Institutes of Health to talk about my administration's work to crack down on price-gouging, to lower prescription drug costs, to put money back in the pockets of hardworking families and to reduce government spending on prescription drugs at the same time," Biden said, flanked by NIH leaders and pharmacists.

The president discussed the inflation reduction legislation he signed as well as other initiatives to urge Big Pharma to lower the prices they charge for drugs developed using federal research funds.

"We're going to keep fighting to lower prescription drug costs—not just for seniors, but for everyone—to expand health care coverage, to keep building an economy from the bottom up," Biden concluded. "Our health care is a right, not a privilege and patients come before profits. I know we can do this.

"...In this area, we're not only working to cut costs for people needing the drugs, [but also] are cutting the cost for the average taxpayer, so they don't have to pay as much to fund Medicare. This is a doubleheader to save the taxpayer money." **R**

Graduate Student Research Symposium Set, Feb. 15

The 20th annual NIH Graduate Student Research Symposium will be held in-person on Thursday, Feb. 15 at the Natcher Conference Center. The symposium is the premier event for NIH graduate students to showcase their research to the NIH community.

All graduate students performing their Ph.D. dissertation research within the Intramural Research Program are highly encouraged to present, and all members of the NIH community are invited to attend.

Find details at <https://go.nih.gov/baOkpFl>.



'GIVE HAPPY' NIH Meets CFC Goal

NIH has reached its goal in the annual Combined Federal Campaign (CFC).

"Although we have reached our \$1.2M goal, your support is still needed," said National Institute of Nursing Research (NINR) Director and CFC co-chair Dr. Shannon Zenk. "Let's continue to 'Give Happy' and keep up with our CFC tradition by raising more than \$2M for charities that need our support, as we've done so generously for the past 18 campaigns."



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. NINR serves as this year's lead institute.

"Behind every dollar donated and every hour of volunteer service pledged is the heart of a federal employee who cares," said Zenk. "Once again, the NIH community has shown a willingness to go beyond the call to public service by contributing to the thousands of charities that work to improve the quality of life for all—and I'm proud to be part of such a generous, dedicated team."

The CFC doesn't officially end until Monday, Jan. 15.

To make a pledge, visit <https://cfcgiving.opm.gov/welcome>. If you've already donated, consider increasing your payroll deduction, adding a one-time gift or pledging volunteer hours with participating charities.

Ribbon-Cutting

CONTINUED FROM PAGE 1

pandemic-related delays and supply-chain issues.

This facility will house critical programs from the Clinical Center (CC) and eight institutes: the National Institute of Allergy and Infectious Diseases; National Heart, Lung and Blood Institute; National Institute

renovated, from level B3 all the way to the 15th floor. As Bldg. 10 enters into its seventh decade, the renovation team had the opportunity to breathe new life into the E wing with numerous updated spaces for the 1,500-plus research and administrative staffers it will house.

For the CC's department of transfusion medicine (DTM), this marks a significant



of Diabetes and Digestive and Kidney Diseases; National Institute of Mental Health; National Institute of Neurological Disorders and Stroke; National Institute on Minority Health and Health Disparities; National Human Genome Research Institute and the Office of the Director (OD).

Nearly 250,000 square feet were

milestone for a journey that began in 2009, when planning for DTM began.

The remodeled area will include the Blood Bank (located on the first floor) and a new cGMP (current good management practices) laboratory on the 12th floor.

Approximately 150 attendees were present at the ribbon-cutting ceremony on



At the ribbon-cutting are (from l): CIT's Jeff Jenkins; Jeff Welter, Miriam Rivero and Keegan of OD's Clinical Design and Construction Branch; CC CEO Dr. James Gilman; and Rick Robey, director of OD's Division of Design and Construction Management. At right, a view of the E wing from the southeast courtyard



Project Officer Jeanne Keegan addresses the group. About 150 people attended the ceremony.

Nov. 15 including Dr. James Gilman, CC chief executive officer, other institute, center and office representatives and members of the project team.

Participants celebrated the spirit of collaboration that brought the vision for the renovation to fruition. "In construction, each person has their own [specialty] and you have to combine everyone's talents," said Project Officer Jeanne Keegan. "This was a huge team effort."

The Office of Research Facilities management team for the complicated project included Keegan, Miriam Rivero, Tim Biggins, Keegan Kinney, Chris Postek and Thuy Le.

For details on the makeover, see a 2017 *NIH Record* article about the then-yet-to-be-started E wing renovation: <https://go.nih.gov/HB9SMlq>.



Trial To Test New Drug Regimen for TBM

A trial of a new drug regimen to treat tuberculous meningitis (TBM) has started enrolling adults and adolescents in several countries where tuberculosis (TB) is prevalent. The Improved Management with Antimicrobial Agents Isoniazid Rifampicin Linezolid for TBM (IMAGINE-TBM) trial will compare a six-month regimen of four drugs with the nine-month, standard-of-care regimen for TBM.

IMAGINE-TBM is sponsored by NIAID and implemented through the NIAID-funded Advancing Clinical Therapeutics Globally for HIV/AIDS and Other Infections (ACTG).



Mycobacterium tuberculosis bacteria, the cause of TB

IMAGE: NIAID

TBM is fatal in about 25-50% of adults who develop the disease and often results in permanent disabilities in survivors. It is caused by *Mycobacterium tuberculosis* that more commonly attacks the lungs and causes pulmonary TB. In TBM, the bacteria infect the membranes surrounding the brain and spinal cord called the meninges, causing inflammation known as meningitis. This can lead to neurological disability or death.

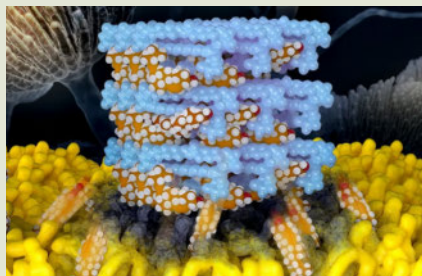
An estimated quarter of the world's population is living with latent TB—during which *M. tuberculosis* bacteria remain alive in the body, but inactive—and 10% of people with latent TB become ill from the infection. People living with HIV have a higher risk of death from TBM, with fatalities exceeding 50%.

Participants in the IMAGINE-TBM trial will be given either the investigational six-month regimen or a nine-month standard regimen.

The trial will include 330 participants ages 15 years and older who have or are likely to have TBM based on signs and symptoms, including people living with and without HIV. The study will shed light on a potentially shorter, better treatment for TBM and could result in improved outcomes for patients with this dangerous disease.

Designing a Safer Antifungal Drug

Every year, more than 1.5 million people worldwide die of a fungal infection.



AmB (blue) molecules form a molecular "sponge" that captures sterols like cholesterol and ergosterol (dotted) from cell membranes.

IMAGE: JOSE VAZQUEZ/UNIVERSITY OF ILLINOIS

Fungi tend not to harm healthy people, but individuals with a suppressed immune system are vulnerable to serious fungal infections.

Some currently available antifungal drugs are becoming less effective as fungi develop resistance to them. Many of the remaining drugs are highly toxic.

One of these drugs, amphotericin B (AmB), is based on a natural product produced by bacteria. AmB

may be given as a last option when other antifungal drugs have failed. But it damages cells in the kidneys, limiting the dose that can be used.

For several years, a research team led by Dr. Martin Burke at the University of Illinois Urbana-Champaign has been studying AmB toward finding a way to reduce its toxicity. Burke and his team discovered that AmB works

by drawing a fungal molecule similar to cholesterol, called ergosterol, out of the membranes, which results in cellular damage and death. The team discovered that AmB does the same thing to cholesterol in human cells, causing the damage observed in kidneys.

In a new study, funded in part by NIH, scientists altered AmB to better grab ergosterol while leaving cholesterol intact. Results were published in *Nature*.

The new compound was virtually nontoxic when tested in cells and mice, but it was less potent than AmB because it removed ergosterol from fungal cell membranes less rapidly. This gave the fungal cells time to produce enough extra ergosterol to survive.

To improve efficacy, the researchers made another tweak to the structure. The resulting compound, called AM-2-19, drew ergosterol from fungal cells rapidly but left cholesterol unaffected.

AM-2-19 proved to be safe when given in high doses to human cells and mice. Crucially, it was also as or more effective than AmB against more than 500 strains of pathogenic fungi. When tested against several potentially deadly fungal pathogens in mice, including members of the *Candida*, *Aspergillus*, and *Rhizopus* families, AM-2-19 eradicated several strains entirely at high doses.

AM-2-19 has been licensed to Sfunga Therapeutics and recently entered a phase 1 clinical trial.—Sharon Reynolds, adapted from *NIH Research Matters*

Decades After Hypertensive Pregnancy Complications, Effects Linger in Hispanic Women

Hispanic/Latina women with a history of hypertensive disorders of pregnancy (HDP)—conditions marked by high blood pressure during pregnancy—are more likely to have abnormalities in their heart structure and function decades later, compared with women without a history of HDP. Findings from this NIH-supported study were published in *Hypertension*.

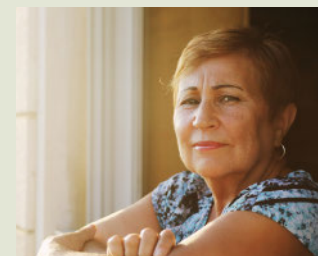
"The changes in cardiac structure and function that this study uncovers are known predictors of cardiovascular events such as heart failure and even death," said Dr. Jasmina Varagic of NHLBI.

The rates of HDP—which include preeclampsia, eclampsia and gestational hypertension—more than doubled between 2007-2019 in the U.S., with Hispanic/Latina women having the highest rate of over 60 cases per 1,000 live births. Previous studies have shown that among women who have HDP, up to 20% will continue to have high blood pressure six months after giving birth and will also have up to a 10-fold lifetime risk of chronic hypertension.

For the study, the researchers used participants in the NHLBI-funded Hispanic Community Health Study/Study of Latinos, a multi-center community-based cohort of Hispanic/Latino adults. The cohort included 5,168 women who had at least one prior pregnancy and whose average age was 58.7 years at the time of the study.

Participants underwent ultrasound scans to look for alterations in the structure and function of the heart, in the thickness and shape of the left ventricle—which pumps blood throughout the body—and how well the heart squeezes and relaxes. These abnormalities, particularly in the geometry of the left ventricle, are known to predict future cardiovascular events.

The findings highlight the importance of early monitoring and management of hypertension during and after pregnancy.



Hispanic/Latina women with a history of HDP are more likely to have heart abnormalities decades later.

PHOTO: DUBOVA/SHUTTERSTOCK

NINDS's Theodore Installed as Epilepsy Society President

Dr. William H. Theodore, senior investigator and chief of the childhood epilepsy section at the National Institute of Neurological Disorders and Stroke, recently began his term as president of the American Epilepsy Society (AES).

A medical and scientific society of 4,700 members, AES is dedicated to advancing research and education for preventing, treating and curing epilepsy.

Theodore received a bachelor's degree from Harvard

College and attended medical school at Columbia University College of Physicians and Surgeons. Board-certified in internal medicine, neurology and epilepsy medicine since 1979, he has conducted clinical and translational research and provided care to patients with epilepsy at the Clinical Center and National Naval Medical Center.

He also serves as professor of neurology at the F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences.

He has vast experience in patients with drug-resistant epilepsy, including in a series of experimental drug trials, fMRI for language and memory mapping, and neurotransmitter receptor imaging. More recently, he has worked on PET imaging of inflammation and viral etiologies of epilepsy. Recognizing his pioneering research contributions, AES awarded him its Clinical Research Award.

In addition, Theodore has trained more than 50 fellows and has served on the board of directors of the Foundation for Advanced Education in the Sciences.

"Dr. Theodore's service in the national and international epilepsy communities uniquely give him a universal understanding of the progress made, but necessity of continued research and education to achieve the goal of improving outcomes for persons with epilepsy," AES noted, in a statement announcing the installation.

Theodore has published more than 250 peer-reviewed papers and several books and has led and participated in practice parameters and advisory panels.

Founded in 1936, AES is an inclusive global forum where professionals from academia, private practice, not-for-profit, government and industry can learn, share and grow to eradicate epilepsy and its consequences.



Dr. William H. Theodore

NCI's McMaster Retires

BY JENNIFER LOUKISSAS

Dr. Mary Lou McMaster, senior clinical specialist in the Clinical Genetics Branch (CGB) of the Division of Cancer Epidemiology and Genetics (DCEG) at the National Cancer Institute (NCI) and captain in the Public Health Service, retired in December.

McMaster devoted nearly 25 years to longitudinal studies of families with rare cancer predisposition syndromes, from Waldenström macroglobulinemia, a rare subtype of non-Hodgkin lymphoma, to familial chronic lymphoproliferative disorders and the epidemiology and familial aspects of chordoma. She was recognized for her teamwork

in familial testicular cancer with the NCI Director's Award and received the Peter S. Bing Humanitarian Award for Waldenström's Macroglobulinemia from the International Workshop on Waldenström's Macroglobulinemia.

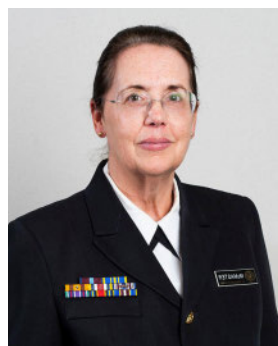
"We have the opportunity to better understand the genetic determinants of inherited cancer predisposition, to identify the role of specific, perhaps modifiable, environmental factors that modulate susceptibility, and to identify patients who may benefit from prevention strategies," she said in 2019, reflecting on the work of DCEG staff clinicians.

McMaster joined NCI as a clinical research fellow in the then-Genetic Epidemiology Branch, DCEG, to pursue clinical research in cancer genetics with an emphasis on familial cancer syndromes. She was promoted to staff clinician in 2002 and transferred to CGB in 2016.

McMaster received her M.D. from the Bowman Gray School of Medicine of Wake Forest University and completed residency training in internal medicine and a fellowship in medical oncology at Vanderbilt University. Following a postdoctoral fellowship in cellular biology at the Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill, she came to NIH, where she completed training in clinical medical genetics. A PHS commissioned officer, she was promoted to captain in 2012.

In her service to the Commissioned Corps, she was deployed twice, as part of the response to Hurricane Dean in San Antonio, Tex., in 2007, and in 2021 as part of the Corps Care Covid-19 Response. She was recognized with the Surgeon General's Exemplary Service Award, the Outstanding Unit Citation and numerous PHS Unit Commendations.

McMaster served for nearly 10 years on the NCI Institutional Review Board, and since 2019, had served as chair of the NCI Ethics Review Panel.



Dr. Mary Lou McMaster

Former NIDDK Program Director Badman Remembered

Dr. David Badman, retired hematology grants program director at the National Institute of Diabetes and Digestive and Kidney Diseases, passed away on Oct. 12 at his home in rural Maryland. He had been in hospice care for a short while due to pancreatic cancer. He was 81 years old.

Although he had officially retired Jan. 1, 2005, after 30-plus years at NIH, Badman continued to work on an NIH Roadmap drug development project until well into 2006. That May, NIDDK held a symposium, "New Insights in Iron Biology," and reception in his honor, hailing him as "a relentless advocate for iron research."

In a career spanning more than three decades, Badman advanced research on iron overload in children with sickle cell anemia, among his many accomplishments in NIDDK's Division of Kidney, Urologic and Hematologic Diseases. He was also proud of his work promoting stem cell research and of innovating the use of zebrafish in research for diabetes and kidney disease.

Colleagues remember Badman for being intellectually curious and his kind and helpful mentorship of new investigators.

"From the earliest days of my career, even before I came to NIH and applied for an NIDDK training grant in David's hematology program, he became a role model in many ways," said NIDDK Director Dr. Griffin Rodgers. "As an exemplary leader, researcher and colleague, he brought compassion, determination and an unrivaled resourcefulness to every role, touching so many lives along the way. The world is surely a better place because of David's legacy."

Badman was born on Dec. 7, 1941. He graduated from the University of Wisconsin-Madison with a B.S. degree in biology. He earned his M.S. and Ph.D. degrees at the University of Florida.



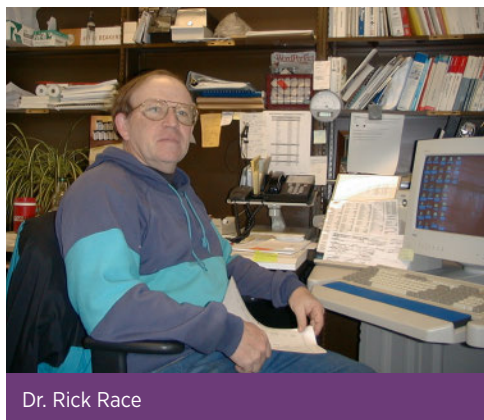
Dr. David Badman and his mentor, Dr. Ruth Kirschstein, at a 2006 symposium celebrating his career

Badman taught biochemistry and physiology at Kalamazoo College in Michigan, before being recruited to NIH for its Grants Associate Program, which trained a select few health scientist administrators. During the internship, he adopted a “can-do” attitude from his mentor, then-NIGMS director Dr. Ruth Kirschstein.

Upon retirement, he oversaw the NIH program Rapid Access to Interventional Development (NIH-RAID), part of then-NIH Director Elias Zerhouni’s Roadmap for Medical Research that aimed to facilitate clinical research in order to develop new therapeutic agents.

During his NIH career, Badman also valued traveling the country, promoting the importance of scientific research and the work of NIH.

Survivors include his wife Paulette, stepdaughter Kristina, grandson Christopher (Carmen) Novel, and great-grandsons Jayden and Christopher; as well as sisters Shirley Flottum and Kathryn (Mark) Dopkins, niece Lynn Cornell and nephew Wesley Dopkins.



Dr. Rick Race

RML Mourns Loss of Prion Disease Researcher Race

Dr. Richard “Rick” Race, a retired research veterinarian who studied infectious neurodegenerative diseases for more than 30 years at NIAID’s Rocky Mountain Laboratories (RML) in Hamilton, Mont., died of metastatic pancreatic cancer on Nov. 13. He was 78.

Born in Pueblo, Colo., he attended Colorado State University where he received a B.S. in 1968 and a doctorate in veterinary medicine in 1970. He found summer employment working for the Public Health Service (PHS) in Poolesville and Rockville, Md. In 1970, Race was recruited to RML and began his 37 year-long NIH career first as a veterinary officer (military captain) for the PHS Commissioned Corps and later as a research veterinarian.

At RML, Race studied prion diseases, infectious neurodegenerative diseases that include Creutzfeldt-Jakob disease in humans and bovine spongiform encephalopathy (BSE or “mad cow disease”) in cattle.

As a veterinarian, he had expertise in animal

models of prion disease. In more than 100 research publications, he made seminal contributions to understanding prion pathogenesis in mink, sheep, cattle, deer and experimental mouse models. He discovered how sub-clinical infection can eventually lead to prions crossing species barriers, helped to derive new approaches to diagnosing prion disease and developed one of the first widely used, cell-based models of prion infection.

Race’s proficiency in prion disease was extensive and he was instrumental in training many current RML prion researchers. His research legacy at RML is substantial and continues through the current prion research program in the Laboratory of Neurological Infections and Immunity.

Following retirement, Race enjoyed weekly lunches with friends from RML, twice-weekly golf games during the summer, catching fish through the ice in winter and watching the daily stock ticker tape.

Survived by wife Sally and children Brent and Lynn, as well as four grandchildren, he will be greatly missed by his family, friends and RML colleagues.

NINDS Remembers Scientist Emeritus Gainer

BY SHANNON E. GARNETT

Dr. Harold “Hal” Gainer, scientist emeritus at the National Institute of Neurological Disorders and Stroke (NINDS), and an esteemed and long-standing leader in the NIH Intramural Research Program, died in November.

Gainer was an internationally recognized figure in the study of peptidergic neurons (brain cells characterized by their expression of neuropeptides) and a leader among researchers focused on the molecular, cellular and integrative biology of magnocellular neurons of the hypothalamus.

Throughout the years, his studies led to a number of scientific “firsts” including the first intracellular recordings of peptide regulation of neural activity, the identification of the oxytocin (Oxt) and vasopressin (Avp) peptide precursor proteins and the demonstration that the post-translational processing mechanisms that lead to the production of the biologically active peptides occur within secretory vesicles.

He will also be remembered for editing the first book on neuropeptides, *Peptides in Neurobiology*, which was subsequently translated and used in China as a graduate-level textbook.



Dr. Harold “Hal” Gainer

“Hal’s scientific achievements, mentoring legacy and contributions to NINDS and NIH are described as outstanding by those who knew him,” said NINDS Director Dr. Walter Koroshetz. “He was a great supporter of the institute and a champion of diversity. The NIH community mourns his passing. We all will miss him.”

Gainer earned his undergraduate degree in chemistry from City College of New York and his Ph.D. in physiology and biochemistry from the University of California, Berkeley. While in California, he briefly served as a postdoctoral fellow at Berkeley and as an instructor in physiology at the University of California, San Francisco. He furthered his postdoctoral work on the electrophysiology of muscle and synapses at Columbia University College of Physicians and Surgeons in the laboratory of Dr. Harry Grundfest.

From New York, Gainer moved to a faculty position at the University of Maryland, where his research focused on mechanisms of sound production in marine animals and on the role of calcium in excitation-contraction coupling. He served as an adjunct/visiting professor at UMD., George Washington University and Tel-Aviv University in Israel, and as a summer investigator at the Marine Biological Laboratory in Woods Hole, Mass.

Gainer first joined NIH in 1969 as a research physiologist at the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD). In 1983, he became chief of NICHD’s Laboratory of Neurochemistry and Immunology. He was recruited to NINDS in 1987 to become chief of the Laboratory of Neurochemistry.

At NINDS, he also served as acting scientific director from 1994 to 1995 and as director of the Basic Neuroscience Program from 1990 to 2000. He officially retired in 2012—marking four decades of service at NIH—and was named scientist emeritus.

According to Dr. Binta Jalloh, “Dr. Harold Gainer changed the course of my life after meeting him briefly at a dinner party in Woods Hole. I was a college student attending the Marine Biological Laboratory as an underrepresented summer research student. He looked into my eyes and said the kindest, most powerful words: ‘Binta, from what I can see and have learned about you, you would make a fine scientist one day, just keep going.’ He and the others in attendance all had Ph.D.s and careers in their own respective fields. I walked away from that encounter believing that I too could earn my Ph.D. in the sciences and work at NIH if I just keep going like Dr. Gainer says.”

Jalloh now has a Ph.D. in genetics and molecular biology from Emory University with a F31 fellowship funded by NINDS and is currently a postdoctoral fellow in the Laboratory of Receptor Biology and Gene Expression at the NCI Center for Cancer Research on the NIH campus. [R](#)

Gingerbreads Return to CC

*Castles, trains and gardens, oh my!
And Santa's in the MRI.
Dora the Explorer, and Swiper swipes;
NIH clinics and facility pipes.
Super Mario and pandas at the zoo,
Biblio Barbie and lab mice too.
Such creativity and lots of cheer,
We're thrilled the gingerbreads were back
this year!*

A longstanding, festive tradition returned to NIH this winter as 49 teams vied for top prize at the Clinical Center's Gingerbread House decorating contest.

NIH'ers, patients and visitors voted for their favorites in-person and online. Gingerly assembled, the imaginative creations were on display in the CC's North Atrium through Jan. 4.

View all of the gingerbreads on the CC's Facebook page: bit.ly/3v8ZgkA.



Above, Santa gets a brain scan in NIMH's Social and Cognitive Developmental Neuroscience section's creation.



Below left, Mario triumphs again, as NHGRI's "Mario Building DNA" takes third place in the first-ever Kids' Choice contest. To his right, "Tiki Bar" by CC Pediatric Nursing was kid voters' top pick. Below the bar, NHLBI Pulmonary Branch's "Underwater Wonderland" came in second. Below right corner, CC's 5SWS Day Hospital created "Pandamonium."



At left, first place went to "Dora the Explorer," created by the Clinical Center's 3NE Hematology, Oncology and Transplant Unit. Above, Mario, Sonic and Pac-Man shared second place in "Salute to Retro Gaming," by CC 7SE Adult Behavioral Health Nursing. Below, CC's 3SEDH Oncology Day Hospital came in third with "Little Mermaid."

