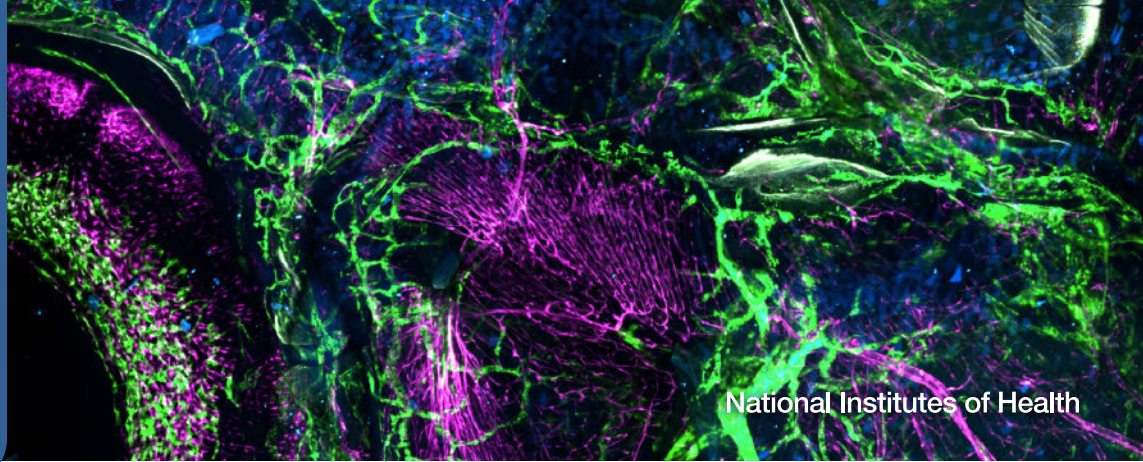




RECORD

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National Institutes of Health

SPACE AND SWISS ARMY TOOLS Astronaut Rubins Visits NIH

BY AMBER SNYDER

Dr. Kate Rubins didn't initially intend to be an astronaut when she applied to NASA in a moment of grant-writing procrastination. And yet, a year later, she found herself part of NASA's 20th astronaut class. The microbiologist-turned-astronaut became the first person to sequence DNA in space, among many other interstellar scientific achievements.

Rubins recently visited NIH for a series of meetings and events with the National Human Genome Research Institute (NHGRI) and the National Center for

Advancing Translational Sciences (NCATS). One featured event was the NCATS Women in Science leadership panel, which featured Rubins in conversation with women leaders from across NIH. Members of the Women in Science Diplomacy Association also



Dr. Kate Rubins holds a custom-dispensed lab plate in an NCATS lab. PHOTO: MEGAN SCHARTNER

participated.

Rubins knew she wanted to be involved in the sciences from a young age, she told NCATS Director Dr. Joni Rutter in a fireside chat. One formative experience came when Rubins was a teenager and attended a scientific conference with her father.

"I understood maybe 10 percent of it," she joked, "but what I did understand was that I was going to work with DNA for the rest of my life."

Rubins conducted undergraduate research on HIV integration, or the mechanism by which the virus incorporates its genome into a host cell's DNA. She earned her Ph.D. from Stanford University and developed the first model of smallpox infection in concert with the U.S. Army Medical Research Institute of Infectious Diseases and the Centers for Disease Control and Prevention.

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Gingerbread house contest winners, see p. 12.

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EDI Forum Seeks to Build Stronger, More Unified NIH



EDI's Kevin Williams

Early in her career, NIH Director Dr. Monica Bertagnolli regularly worked in environments where she was the only woman and the only person from a rural part of the country.

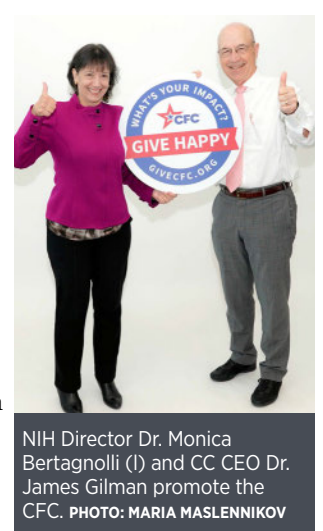
"I remember working really, really hard to fit in and prove that I was worthy of being there," recalled Bertagnolli during the opening plenary session of the inaugural Equity, Diversity, and Inclusion (EDI) Forum. "I know how hard it is when you're an 'odd duck,' when you feel like you're on the fringe and don't necessarily belong."

Over her career, Bertagnolli has learned to embrace different cultural and social perspectives. "It's not about fitting in." Rather,

SEE EDI, PAGE 4

CC Cornhole Throwdown Helps Promote CFC

In November, NIH institute and center directors battled it out in the Clinical Center (CC) atrium in a spirited cornhole competition. The event was the CC's chosen Directors' Challenge aimed to raise awareness and promote the Combined Federal Campaign (CFC), the annual federal workplace fundraising drive.



NIH Director Dr. Monica Bertagnolli (l) and CC CEO Dr. James Gilman promote the CFC. PHOTO: MARIA MASLENNIKOV

SEE CORNHOLE, PAGE 8

DDM Series Launches with “Skip the Drama” Jan. 9

The ever-popular Deputy Director for Management (DDM) seminar series kicks off its 2025 lineup on Jan. 9 with “Skip the Drama and Embrace Healthy Conflict.” The seminar, featuring advisor, workshop facilitator and author Amy Gallo, will take place virtually (<https://videocast.nih.gov>) from 11 a.m. to 12:30 p.m., ET.

In this session, Gallo will discuss improving relationships and driving excellence at work. She advises taking a deeper look at the role biases play in making some of our interactions more difficult than others. Her research-backed frameworks introduce leaders, individuals, teams and organizations to the kind of productive conflict that spurs independent thought, challenges new ideas and yields solutions that are strengthened by collective input.



Amy Gallo will offer tips on healthy conflict.

The engaging DDM seminar series provides insights into leadership and management challenges and solutions. The 2025 series will address conflict, resilience, appreciation and purpose.

Mark your calendars for the remaining three DDM seminars: March 6, May 15 and July 10.

For more information, including how to register in advance to receive learning credits for participating, visit <https://ddmseries.od.nih.gov/>.

The videocasting will include closed captioning. If you have a disability and need reasonable accommodations to participate in this event, please call the NIH Training Center at 301-496-6211 at least five business days in advance.

Demystifying Medicine Series Begins 2025 Season

Prepare to be demystified in learning new advances in biology and their application to major human diseases. Now in its 23rd year, the 2025 Demystifying Medicine series kicks off on Jan. 7 when former NIAID Director Dr. Anthony Fauci discusses the perpetual challenge of emerging and re-emerging infectious diseases.

Lectures will be held virtually via NIH videocast most Tuesdays from Jan. 7 to May 27 from 3:00 to 5:00 p.m., ET. A special in-person event on Jan. 28 at Lipsett Amphitheatre will cover new discoveries from NIH’s Undiagnosed Diseases Program.

The lectures will include presentations on pathology, diagnosis and therapy in the context of major diseases and current research. Primarily directed toward doctoral students, clinicians and program managers, each session includes clinical and basic

Sant Says Thanks, Performs at CC



Caesar Sant, 16, returned for his fourth annual Thanksgiving concert in November, giving thanks to the NIH medical team who cured him of sickle cell disease.

His voice is deeper and he now sports a mustache. And, he continues to fine-tune his dexterity, as witnessed by his fingers flying along his violin fingerboard during his performance in the Clinical Center (CC) atrium.

Sant performed classical pieces—some Bach, Beethoven, Schubert—as well as two pieces he composed, *Aurora* and *Adagio*. He also played *Amazing Grace* as a trio, accompanied by former NIH Director Dr. Francis Collins on guitar and Sahil Malhotra, a postbac at NINDS, making his debut on piano. The trio also performed a verse of Leonard Cohen’s *Hallelujah*, with guests in attendance singing along to the chorus. Further tugging at the heartstrings was seeing Sant hug the head of his clinical team, Dr. John Tisdale.

In 2021, Sant received a matched-sibling bone marrow transplant at the CC. He continues regular physical therapy back home and continues to grow stronger and reap benefits from the healing power of music.

Collins spoke of Sant’s resilience, courage and hope—qualities that elicit gratitude and enable the research taking place every day in the CC. The concert was again an ode to joy. —**Dana Talesnik**

To learn more about Sant’s medical journey, see: go.nih.gov/m7iXCXS.



Above, from l, former NIH Director Dr. Francis Collins, Caesar Sant and introducing postbac Sahil Malhotra. PHOTO: LUCAS SANT

Below, from l, NHLBI Senior Investigator Dr. John Tisdale, Sant, Collins and Dr. Mathew Hsieh, who performed Sant’s bone marrow transplant in 2021.



science components presented by NIH staff and invitees. All trainees, fellows and staff are welcome to participate.

Demystifying Medicine is co-hosted by Drs. Win Arias (CC) and Dan Kastner (NHGRI) and

is co-sponsored by the Clinical Center, Office of Intramural Research, and the Foundation for Advanced Education in the Sciences (FAES).

For the full schedule, visit <https://demystifying-medicine.od.nih.gov>.



Congrats to the Clinical Center for being recognized as a Magnet Hospital with Distinction by the American Nurses Credentialing Center’s (ANCC) Magnet Recognition Program.

NIDA Hosts Film Screening to Highlight Tribe's Healing

To honor Native American Heritage Month, the National Institute on Drug Abuse (NIDA) and the National Institutes of Health's Tribal Health Research Office (THRO) co-hosted a documentary screening on Nov. 13.

Produced in part through the NIDA-funded research collaboration, Native Transformation Project, the film—*Native Transformations in the Pacific Northwest: Stories of Strength in a Public Health Crisis*—delves into the historical strengths and resilience of Coast Salish people. Through

four intimate portraits, viewers trace the tribal members' journey of healing and wellness to overcome the impacts of the opioid overdose epidemic.

At the event, NIH Director Dr. Monica Bertagnolli delivered welcoming remarks. "I grew up in central Wyoming, next to the beautiful Wind River Reservation," she said, adding that her mother's best friend is Eastern Shoshone. "Even though I share no genetics with our native population, I have a deep love of the culture and appreciate the beauty and value of these amazing communities."

After the film, NIDA Director Dr. Nora Volkow and THRO Director Dr. Karina Walters led a panel discussion with

community members featured in the documentary. The panel discussed implications of the documentary for American Indian and Alaska Native-related substance use research, including the value of focusing on the strengths of Native people and communities. Acknowledging the strengths of their ancestors, resiliency is intrinsic to Native people and through community-based participatory research, these strengths—and how they can contribute to recovery—can be realized. **R**



From l, Tahnee Kawakone, Barbara Juarez-Finkbonner, Chairman Anthony Hillaire, Bella James, NIH Director Dr. Monica Bertagnolli, Darrel Hillaire, NIDA Director Dr. Nora Volkow, THRO Director Dr. Karina Walters, Charene Alexander, Dr. Stacy Rasmus and Dr. Kathy Etz

SRLM's Architecture Firm Delivers Thoughtful Treasures to Children's Inn

ZGF Architects, the architect of record for the Clinical Center's (CC) surgery, radiology and laboratory medicine (SRLM) wing, recently delivered gift bags to the Children's Inn at NIH as part of the nonprofit's annual "Thoughtful Treasures" initiative.

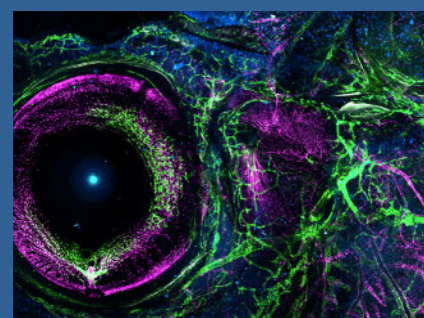
Every child, teen, young adult and their sibling(s) who are staying at the Inn are assigned their own mailboxes. Every morning, they receive a treasure donated by members of the community who want to make a difference in a child's day.

Every bag included a mini-house kit along with magic markers and stickers for decorating the house. ZGF staff custom-made the kits using a laser cutter in the firm's model shop. The kits can be assembled without glue or fasteners, then decorated using the stickers and markers provided.

Each year around the holidays, ZGF organizes a week of activities to support several local charities. They refer to this endeavor as the "Week of Good." This year, the Inn was one of the recipients.



Mailboxes at the Children's Inn stuffed with Thoughtful Treasures for young residents undergoing treatment.



ON THE COVER: This image, taken using a powerful microscope that uses lasers to illuminate the fish, shows blood vessels (magenta) and lymphatic vessels (green) in the eye and head of an anesthetized, 6-week-old, transgenic zebrafish.

IMAGE: DAN CASTRANOVA / NICHD

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National Institutes of Health
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EDI

CONTINUED FROM PAGE 1

“we want you for who you are and the magic you bring.” Everyone plays a critical role in creating a supportive and healthy work environment.

“Building a model workforce with an ongoing commitment to equal employment opportunity (EEO) requires support from agency leadership,” Bertagnolli said. Her predecessors, Dr. Francis Collins and former Acting NIH Director Dr. Lawrence Tabak, were both committed to equal employment opportunities at the agency.

Held in Bldg. 45’s Natcher Conference Center, the two-day forum featured in-person trainings and presentations to foster a deeper understanding of the numerous lines of business that EDI is mandated to perform as the NIH’s Office of EEO.

Department of Health and Human Services (HHS) Secretary Xavier Becerra has said implementing diversity, equity, inclusion, and accessibility (DEIA) programs is the toughest job the Department will have, noted Cheryl Campbell, HHS assistant secretary for administration. Changing culture and mindset are not easy to achieve.

“We learned quickly that it takes unwavering commitment to restructure longstanding policies and instill DEIA principles into our way of working,” she said. “You must have reliable data, stakeholder engagement, leadership, conviction, relevant programming, and a culture of collaboration.”

DEIA-focused initiatives help organizations address unconscious bias, discrimination and unfair treatment that may exist within their teams. Employees who work in an environment that values equity and inclusion will have the best chance to grow, adapt and succeed in their roles.

“Forging a better world doesn’t happen without experiencing challenges,” Campbell said. “It takes intentional and incremental changes. At times, it can feel like you’re moving backwards rather than forward.”

Sixty years ago, President Lyndon Johnson signed the Civil Rights Act of 1964. The law prohibits discrimination in public places, the workplace, schools and federally assisted programs. It also established the Equal Employment Opportunity Commission (EEOC), which enforces laws

that make discrimination illegal in the workplace.

The EEOC required all executive federal agencies to create an EEO office. In 2003, the EEOC released Management Directive-715, a policy guide to help federal agencies establish and maintain model EEO programs.

“Almost every facet of EDI is in service to the requirements laid out in the EEOC regulations and Management Directive-715,” said Kevin Williams, director of NIH’s Office of Equity, Diversity and Inclusion. “The work of EDI will endure.”

While civil rights enforcement is EDI’s charge, “it remains all our responsibility,” said Williams.

Although the EEOC was established in the 1960s, the federal government first recognized a policy of nondiscrimination in 1948. Back then, President Harry Truman signed two executive orders—one desegregated the armed forces; the other desegregated the civilian workforce.

“What we were saying at the time was the federal government should be the model employer,” said Dexter Brooks, director of federal sector programs within the EEOC’s Office of Federal Operations. “If folks come to the federal government, they should expect a transparent, open process that allows them to compete based on their talent, not because of their race or religion.”

In 1978, the EEOC assumed responsibility for enforcing anti-discrimination laws applicable to the civilian federal workforce as well as coordinating all federal EEO programs. The Commission developed uniform enforcement standards to apply throughout government, including standardized data collection and data sharing, joint training programs, investigations and consistent policies.

The Commission prefers to partner with federal agencies to help remove barriers to opportunity, Brooks said. Their approach is to use statistics to identify policies, practices, and procedures that might limit opportunities for groups.

“We’re not confrontational,” Brooks said. “We’re looking for better paths forward.”

More recently, President Joe Biden signed an executive order that said, “we must be mindful of the diversity of our citizens and make sure the services we’re providing



From l, Williams, Dexter Brooks of the EEOC, Dr. Roland Owens, principal deputy director of Intramural Research; Dr. Donna Gunther and NIGMS Director Dr. Jon Lorsch

our citizens reach all our citizens.”

The administration has revised racial and ethnicity categorizations for the federal government. This gives them the ability to make more informed decisions about emerging areas in DEIA, he said.

“This work will continue,” Brooks concluded. “We’ve seen so many challenges over the years. People sometimes say we take two steps forward, one step back. But we always have our eyes forward.” **B**

New NITAAC Acting Director Committed to Innovation

Ricky Clark, a seasoned federal contracting professional, deputy director of NIH’s Information Technology Acquisition and Assessment Center (NITAAC), and a U.S. Navy veteran, was recently appointed acting director of NITAAC.

With years of contracting experience across federal agencies, including the Department of Veterans Affairs, Naval Air Systems Command (NAVAIR) and the Government Publishing Office, Clark brings a deep understanding to his role of the challenges and opportunities in federal IT procurement.

Clark’s leadership is marked by a dedication to innovation and efficiency. Under his guidance, NITAAC administers three best-in-class, government-wide acquisition contracts (GWACs) for IT services, solutions and commodities; an assisted acquisitions program; and a government-wide strategic solutions program under chief information officer-commodities store (CIO-CS). These GWACs and programs empower NIH to acquire cutting-edge IT services to support critical priorities such as health IT, biomedical research infrastructure and advanced analytics for clinical and scientific innovation.

In addition to managing NITAAC’s comprehensive portfolio, Clark is committed to fostering collaboration within NIH and enhancing customer service to ensure the agency has the resources and tools needed to advance groundbreaking medical research and healthcare innovation. To learn more about NITAAC, visit <https://nitaac.nih.gov/>



Ricky Clark

New Cohort of Climate and Health Scholars Bring Expertise to NIH

BY SAMANTHA EBERSOLD

The NIH Climate Change and Health Initiative (CCHI) named 13 researchers to the 2024-2025 cohort of Climate and Health Scholars.

The scholars will work collaboratively with NIH staff to identify critical knowledge gaps in climate and health research and translate findings into actionable interventions for vulnerable communities.

The Climate and Health Scholars Program, a key pillar of the NIH CCHI, is designed to strengthen capacity at NIH for conducting climate and health research through collaborative projects and knowledge-sharing between academia and the federal government. The scholars will share their unique expertise with NIH researchers, program staff, and the broader NIH community through seminars, workshops and innovative research projects.

Now in its third year, the Climate and Health Scholars Program continues to grow in scope and size. This cohort also represents the broadest range of academic disciplines the program has ever seen. This year, the fields of expertise

include epidemiology, social science, environmental health, biomedicine, psychiatry and pharmaco-epidemiology.

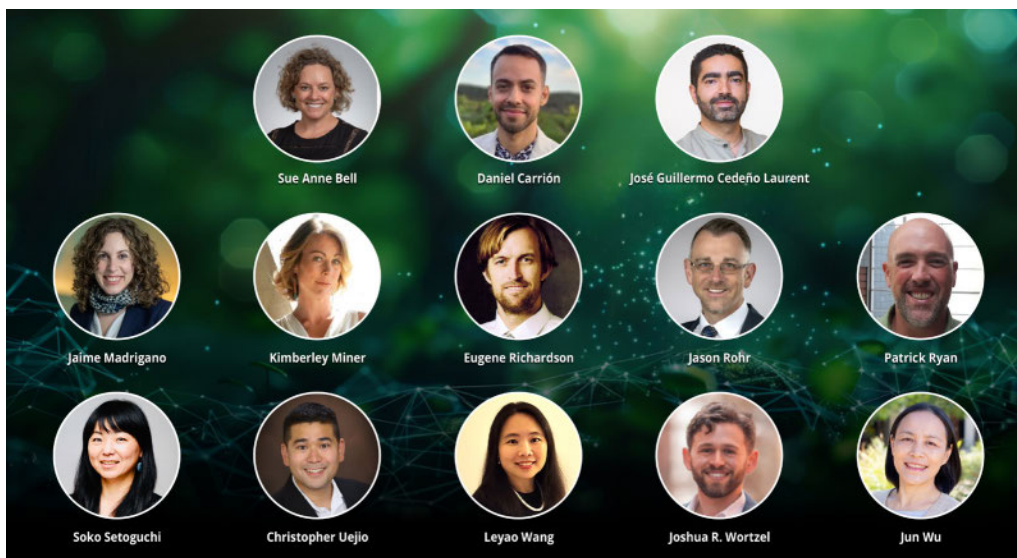
In previous years, scholars organized capacity-building workshops, facilitated webinars, conducted landscape analyses, did outreach to scientific societies, and shared data resources and access strategies with their host institutes and centers. This knowledge proved invaluable, increasing interest across NIH in hosting these scholars. As a result, six new institutes, centers, and the Office

of the Director are now hosting a Climate and Health Scholar for the first time this year.

“The NIH Office of Disease Prevention (ODP) is excited to host our first Climate and Health Scholar, Dr. Jaime Madrigano, who brings a wealth of experience in environmental and social determinants of health, including climate change and extreme weather, environmental pollution and environmental justice,” said Dr. Jacqueline Lloyd, senior advisor for disease prevention and ODP Climate Health Scholar

ambassador. “We recognize that this partnership will be a unique opportunity to be at the forefront of climate-resilient public health.”

By embedding these experts across a greater number of institutes, centers, and offices, NIH is expanding the scope of its research programs, demonstrating support for the next generation of climate and health scientists, and positioning itself as a leader in addressing the far-reaching and complex consequences of a changing climate on human health.



Meet the 2024-2025 Cohort of Climate and Health Scholars

Dr. Sue Anne Bell

Associate Professor of Nursing, University of Michigan School of Nursing
Host: National Institute on Aging

Dr. Daniel Carrión

Assistant Professor of Epidemiology and Director of Education for Climate Change and Health, Yale School of Public Health
Host: National Institute on Minority Health and Health Disparities

Dr. José Guillermo Cedeño Laurent

Assistant Professor of Environmental and Occupational Health and Justice, Rutgers School of Public Health
Host: National Institute of Arthritis and Musculoskeletal and Skin Diseases

Dr. Jaime Madrigano

Associate Professor of American Health, Johns Hopkins Bloomberg School of Public Health
Host: NIH Office of Disease Prevention

Dr. Kimberley Miner

Climate Scientist and Program Manager, NASA Jet Propulsion Labs at the California

Institute of Technology

Host: National Institute of Environmental Health Sciences

Dr. Eugene Richardson

Assistant Professor of Global Health and Social Medicine, Harvard Medical School
Host: NIH Office of Behavioral and Social Sciences Research

Dr. Jason Rohr

Professor of Biological Sciences and Chair of the Department of Biological Sciences, University of Notre Dame
Host: Fogarty International Center

Dr. Patrick Ryan

Professor of Pediatrics and Environmental and Public Health Sciences, University of Cincinnati
Host: National Institute of Allergy and Infectious Diseases

Dr. Soko Setoguchi

Professor of Medicine and Epidemiology, Rutgers University
Host: National Cancer Institute

Dr. Christopher Uejio

Professor of Geography and Public Health, Florida State University
Host: National Institute of Neurological Disorders and Stroke

Dr. Leyao Wang

Assistant Professor of Epidemiology, University of Massachusetts Amherst
Host: National Heart, Lung, and Blood Institute

Dr. Joshua Wortzel

Child and Adolescent Psychiatrist and Clinical Scientist, Institute of Living - Hartford HealthCare; Adjunct Assistant Professor of Psychiatry, Yale School of Medicine
Host: National Institute of Mental Health

Dr. Jun Wu

Professor of Environmental and Occupational Health, University of California, Irvine
Host: NIH Office of Dietary Supplements

More information about each individual scholar and their research interests can be found by visiting go.nih.gov/4vxNO4w.

Rubins

CONTINUED FROM PAGE 1

Post graduation, Rubins worked as a principal investigator in a lab studying viral diseases, with a focus on poxvirus and host-pathogen interaction. These diseases primarily affect Central and West Africa, and so she traveled to the Democratic Republic of Congo to conduct research and supervise study sites.

Unbeknownst to her at the time, her research in Africa prepared her for the conditions she would face in the International Space Station (ISS). Both locations, Rubins said, had “limited power and resources, and there was no guaranteed research infrastructure.”

Rubins emphasized the importance of designing tools that can be used in a variety of environments. “We [often] don’t take into account resource-poor areas when we design medical and research equipment,” she said.

Her lab in the ISS came with its own set of challenges. Microgravity, the sensation of weightlessness caused by a negligible

amount of gravity, does more than just allow astronauts to float. A collaboration between NASA and NCATS has permitted researchers on the ISS (like Rubins) to study the effects of microgravity on the human body.

“The human body adapts quickly to microgravity and then maladapts when it returns back to [Earth],” Rubins explained. Astronauts may experience unwanted side effects such as lightheadedness.

NASA’s partnership with NCATS has produced the Tissue Chips in Space initiative. Tissue chips replicate human organs using organ-specific cells mounted on small devices. In her time at the ISS, Rubins studied the effects of microgravity on tissue chips containing heart cells. These cells even



Above, from l, NIDCD Director Dr. Debara Tucci, Claire Chen, senior executive, NCURA Global Initiatives, and NCATS Director Dr. Joni Rutter; below, from l, Rubins speaks as NICHD Director Dr. Diana Bianchi, Evelina Santa-Kahle, science counselor, Embassy of Germany, and NIDCR Deputy Director Dr. Jennifer Webster-Cyriaque look on. PHOTOS: MEGAN SCHARTNER



have heartbeats, making them an interesting attraction for the other astronauts aboard the ISS, she recalled.

Rubins’ visit also prompted discussions about how women can succeed in science careers and beyond. One important element, panelists agreed, was to build upon infrastructure that allows women to climb faster and higher than their predecessors.

Rutter imagined a Swiss army tool capable of breaking the glass ceiling, with attachments such as: a flashlight to show off early-career employees’ accomplishments; a chisel to widen the cracks made by the people who came before; a hammer and nails to represent training to negotiate for yourself; and a signal booster tool to amplify



Above, from l, NINR Director Dr. Shannon Zenk, Dr. Mirielle Guyader, counselor of science and technology, Embassy of France, and Rubins, NIAID Director Dr. Jeanne Marrazzo



Rubins and Rutter (third and fourth from l) with founding members of the Women in Science Diplomacy Association: from l, Dr. Giusi Condorelli, Guyader, Chen, Santa-Kahle and Kerstin Hildebrandt



During her visit, Rubins toured several NCATS labs including drug screening and antivirals research. Above, from l, Rubins with Dr. Cristina Antich Acedo from the 3-D bioprinting lab and Dr. Kelli Wilson (c) and Sam Michael from the compound management group.

your impact.

However, the panelists emphasized that women should not sacrifice their well-being when striving for success. Dr. Diana Bianchi, director of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), said a benefit of her position is her ability to set new policies. NICHD has a no-email policy over the weekends, and they also set aside four weeks throughout the year where no

“You have to take care of yourself in order to do your work well.”

-DR. KIMRYN RATHMELL

meetings are scheduled, to give employees time to recharge and catch up on work.

It may be easy to normalize overwork, said National Cancer Institute Director Dr. Kimryn Rathmell, but “You have to take care of yourself in order to do your work well.”

In the final panel, participants discussed the next horizon for girls and young women in science, technology, engineering and math (STEM). Rubins offered an example of how increasing inclusivity would be helpful; at NASA, there still are no spacesuits designed to fit people with traditional female proportions.

Dr. Jeanne Marrazzo, director of the National Institute of Allergy and Infectious Diseases, and Dr. Giusi Condorelli, the Embassy of Italy’s science attaché for health, both agreed that new policies or incentives may be needed to encourage current leaders to make room for women at the top.

“Break out your Swiss army tools and get to work,” Rutter encouraged the audience.

A recording of the event can be viewed here: go.nih.gov/5iX3ASu.



Dr. Nirupa Chaudhari (standing), professor from the University of Miami Miller School of Medicine, speaks with workshop participants.

NIDCD Hosts First Diversity Scholar Workshop

Nearly 50 students and early-career scientists from diverse backgrounds, as well as nine established researchers serving as mentors, recently convened for the National Institute on Deafness and Other Communication Disorders’ inaugural Diversity Scholar Workshop.

Promising scholars from populations underrepresented in the biomedical research workforce met with mentors to discuss building career networks, refining research objectives, overcoming challenges in academia and submitting

NIH grant applications. Scholars also networked with NIDCD-supported grantees and toured some of the institute’s intramural research laboratories.

NIDCD Diversity Scholars range from undergraduate students to early-career faculty and are funded under the NIH’s Research Supplements to Promote Diversity in Health-Related Research. The program is among NIDCD’s efforts to broaden perspectives that are crucial to advancing scientific progress and strengthening the research community.



NIDCD Director Dr. Debara Tucci (front row, second from l) and NIDCD Chief Diversity Officer Dr. Cendrine Robinson (second row, second from l) pose with workshop participants.

Cornhole

CONTINUED FROM PAGE 1



Above, NIMHD Director Dr. Eliseo J. Pérez-Stable competes in the CFC Director's Challenge; below, NEI's Hector Reyes (c) joins fellow NEI cheerers (from l) Daniel Molina, Amy Berton, Kevin Chu and Melanie Reagan

PHOTOS: DUSTIN HAYS



The directors or a designated IC representative took turns tossing beanbags, from regulation distance, in their efforts to reign victorious. Eight institutes made it through the preliminary round. The four institutes that advanced to the quarterfinals were: the CC, the National Center for Advancing Translational Sciences, the National Institute of Nursing Research (NINR) and the National Institute of Mental Health. NINR Director Dr. Shannon Zenk won the tournament.



Above, NINR Director Dr. Shannon Zenk (holding beanbag) reigns victorious.

There's still time to contribute to CFC charities. The campaign will run until Jan. 15. To search for CFC-participating charities and donate to your favorite causes, visit: <https://cfc.nih.gov/>.



Above, scrimmage winners celebrate outside NCI-Shady Grove. PHOTO: Patricia Voysest

Below, the view from the second floor, PHOTO: KENNETH VORITSKUL

NCI, NCATS Scrimmage to Support CFC

On Nov. 13, the National Cancer Institute (NCI) and the National Center for Advancing Translational Sciences (NCATS) held their first-ever joint Cornhole Scrimmage at NCI's Shady Grove campus to engage staff in the Combined Federal Campaign (CFC) efforts.

This event offered the opportunity for these two institutes to come together for the CFC and for their staff to connect, especially since approximately 100 NCATS staff moved into the Shady Grove building over the summer. Amber Lowery, NCI's deputy director for management and executive officer, kicked off the event with welcome remarks, and two local charities shared how the CFC supports their impactful work for the community, particularly for furry and feathery friends.

Although this was the first event of its kind for NCI, NCATS hosted this annual cornhole event as a key part of their CFC efforts for several years pre-pandemic. With a competitive spirit in the air, NCATS showcased their well-honed skills, claiming both first and second place in the staff rounds. However, Lowery and cornhole partner Dr. Sanya Springfield, NCI acting deputy director for strategic engagement,

clinched the coveted Cornhole Scrimmage trophy for NCI in the leadership round. They faced tough competition against Bekah Geiger, NCATS acting executive officer, and Andrew Kelly, NCATS acting deputy executive officer.

This event prepared NCI and NCATS leaders to take on other institutes at the CFC Cornhole Throwdown

on November 21. After the scrimmage, Bekah presented the trophy and medals to the winners, capping off a brisk but fantastic afternoon of friendly competition and community spirit. — **Kelly Lawhead, Chris Maurer, Megan Moretz, Patricia Voysest**



Scrimmage organizers, from l, Megan Moretz (NCATS), Patricia Voysest (NCI), Kelly Lawhead (NCI), and Chris Maurer (NCATS)

PHOTO: AMY TRENKLE



NIH-Developed Algorithm Matches Potential Volunteers to Clinical Trials

NIH researchers have developed an artificial intelligence (AI) algorithm to help accelerate the process of matching potential volunteers to relevant clinical research trials listed on ClinicalTrials.gov. The AI algorithm, called



NLM's Dr. Zhiyong Lu

TrialGPT, can successfully identify relevant clinical trials for which a person is eligible and provide a summary that clearly explains how that person meets the criteria for study enrollment.

The researchers concluded this tool could help clinicians navigate the vast and ever-changing range of clinical trials available to their patients, which may lead to

improved clinical trial enrollment and faster progress in medical research. The study was published in *Nature Communications*.

A team of researchers from NIH's National Library of Medicine (NLM) and National Cancer Institute (NCI) harnessed the power of large language models to develop an innovative framework for TrialGPT to streamline the clinical trial matching process. TrialGPT first processes a patient summary, which contains relevant medical and demographic information. The algorithm then identifies relevant clinical trials from ClinicalTrials.gov for which a patient is eligible and excludes trials for which they are ineligible. TrialGPT then explains how the person meets the study enrollment criteria. The final output is an annotated list of clinical trials—ranked by relevance and eligibility—that clinicians can use to discuss clinical trial opportunities with their patient.

To assess how well TrialGPT predicted if a patient met a specific requirement for a clinical trial, the researchers compared TrialGPT's results to those of three human clinicians who assessed more than 1,000 patient-criterion pairs. They found that TrialGPT achieved nearly the same level of accuracy as the clinicians.

Additionally, the researchers conducted a pilot user study, where they asked two human clinicians to review six anonymous patient summaries and match them to six clinical trials. One clinician manually assessed patient eligibility and matched them; the other clinician used TrialGPT. The researchers found that when clinicians use TrialGPT, they spent 40% less time screening patients but maintained the same level of accuracy.

Potential participants often learn about these opportunities through their clinicians. However, finding the right clinical trial for interested participants is a time-consuming and resource-intensive process, which can slow down important medical research.

NLM Senior Investigator and study author Dr. Zhiyong Lu said, "Our study shows that TrialGPT could help clinicians connect their patients to clinical trial opportunities more efficiently and save precious time that can be better spent on harder tasks that require human expertise."

Nivolumab Appears to Boost Cure Rate in Advanced Hodgkin Lymphoma

Results from a large NCI-funded clinical trial found that the immunotherapy drug nivolumab should be part of the initial treatment of teens and adults with advanced forms of classic Hodgkin lymphoma.

In the nearly 1,000-patient trial, treatment with nivolumab and a three-drug chemotherapy regimen called AVD was better at eliminating cancer and keeping it at bay than the current standard initial treatment for the disease, AVD combined with the targeted therapy brentuximab.

Two years after starting treatment, about 92% of trial participants

randomly assigned to the nivolumab-AVD group were alive without their cancer starting to grow again—a measure known as progression-free survival—compared with 83% in the brentuximab-AVD group. People in the nivolumab-AVD group also had fewer side effects overall and fewer serious side effects, according to findings in the *New England Journal of Medicine*.

Although Brentuximab-AVD has been shown to modestly improve progression-free survival, many people stop taking the regimen because of its substantial side effects.

Hodgkin lymphoma is one of the most common cancers diagnosed in adolescents, but adolescents and adults have not generally been included in the same clinical trials and given the same treatments. For this trial, about 240 participants were ages 12 to 17.

Many people in this age group diagnosed with Hodgkin lymphoma get radiation therapy, often as a safeguard to help prevent the cancer from coming back. But the radiation can cause serious long-term health problems. The trial was designed so that radiation therapy would only be used under very strict conditions.

Patients aged 60 and older often have poorer treatment outcomes than younger patients. Study participants aged 60+ had a 2-year progression-free survival rate of 88%.

Epilepsy Medications Taken During Pregnancy Do Not Affect Child's Neurological Development

Children of mothers who took certain antiseizure medications while pregnant do not have worse neurodevelopmental outcomes at age 6, according to a long-running study funded by NIH. The study was published in *JAMA Neurology*.



PHOTO: SHUTTERSTOCK/GROUND PICTURE

Treating epilepsy during pregnancy is challenging, as some antiseizure medications, primarily older drugs such as valproate, are known to cause serious birth defects and cognitive problems in children, including lower IQ and autism spectrum disorders. Newer antiseizure drugs widely used today are generally considered safe, but little is known about whether they affect cognition in children after fetal exposure.

In the study, researchers assessed language abilities in 387 children at age 6 (298 were born to women with epilepsy who took antiseizure medications). Children were tested on a variety of verbal abilities, including vocabulary and matching spoken words to pictures. There were no differences in language scores between children of women who took the medications and those who didn't. Most women were taking lamotrigine, levetiracetam, or a combination of both drugs during and after pregnancy.

Finding the most effective and safest doses during pregnancy is a challenge, and risks tend to vary between antiseizure drugs. Prior studies from the same research team have shown that high doses of levetiracetam could lead to poorer cognitive outcomes at age 2 and 3, and worse adaptive functioning at age 4 and a half, but the overall outcomes for all ages were positive.

The study also found that folate use during the first 12 weeks of pregnancy was associated with better cognitive and behavioral outcomes. Folate is an essential nutrient that can help prevent birth defects in the brain and spine of a developing fetus. This held true for children of women with and without epilepsy. High doses at or above 4 mg per day did not have adverse effects, which contrasts with prior studies that found long-term risks associated with high doses of folic acid.

Additional analyses also revealed no adverse effects of antiseizure medications on breastfeeding.

NIAID's Tartakovsky Receives Presidential Rank Award



Michael Tartakovsky

Michael Tartakovsky has received the 2024 Presidential Rank Award, the highest honor the federal government can bestow upon a career civilian employee.

Tartakovsky, chief information officer and director, Office of Cyber Infrastructure and Computational

Biology at the National Institute of Allergy and Infectious Diseases (NIAID), was among the 236 recipients from 30 federal agencies.

Winners of the award are strong leaders, professionals and scientists who achieve results and consistently demonstrate strength, integrity, industry and a relentless commitment to excellence in public service. These awards recognize extraordinary long-term achievements.

The Civil Service Reform Act of 1978 established the Presidential Rank Awards program to recognize a select group of career members of the Senior Executive Service for exceptional performance over an extended period of time. A complete list of the awards can be found at bit.ly/3CGixNT.

NAM Honors Former NIEHS Director for Outstanding Service



Dr. Linda Birnbaum

The National Academy of Medicine (NAM) recently honored former National Institute of Environmental Health Sciences (NIEHS) Director Dr. Linda Birnbaum with the Adam Yarmolinsky Medal for outstanding service. The award was presented during the academy's annual meeting.

Birnbaum served for 10 years as director of NIEHS and the National Toxicology Program. She is currently a scholar in residence at Duke University. She was acknowledged as being among the most distinguished toxicologists, with extensive leadership and service to the field of environmental and occupational health sciences.

The Yarmolinsky Medal is awarded to a member of the NAM from a discipline outside the health and medical sciences; this may include (but is not limited to) natural, social, computational and behavioral sciences, law, administration, engineering, business, environmental health, data

Collins Receives Exceptional Honor from HHS

Assistant Secretary for Health ADM Rachel Levine presented former NIH Director Dr. Francis Collins with the Exceptional Service Medallion during a small ceremony at NIH on Nov. 21.

"Dr. Collins, you have demonstrated exceptional dedication as the director of NIH over 12 years, truly anchoring the agency, and providing relief and guidance to those you oversaw," said Levine, who also is head of the U.S. Public Health Service Commissioned Corps. She commended Collins for



From l, ADM Rachel Levine, NIH Director Dr. Monica Bertagnoli, former NIH Director Dr. Francis Collins with his wife Diane Baker, and LT Richard Childs, scientific director at NHLBI PHOTO: CHIA-CHI CHARLIE CHANG

being a staunch public health and research leader. "Now I have the honor of bestowing [this] award to you, which is the highest medal I can give."

As read in a statement by LCDR Michele Kerns, Collins was honored "for exceptional and steady

leadership during extraordinary times, a notably impactful career in biomedical research, and outstanding achievements and contributions." He also was recognized for

"his career-long contributions toward advancing, protecting and promoting our nation's key public health programs and initiatives."

sciences and basic life sciences. Eligible nominees do not include those who have a health professional degree, regardless of their scientific field or scholarly contributions. It recognizes distinguished service by a member who, over a significant period of time, has contributed in multiple ways to the mission of the NAM.

Birnbaum has served as president of the Society of Toxicology, the largest professional organization of toxicologists in the world, and in leadership roles for numerous other professional organizations and editorial boards. She was elected to NAM in 2010 and established and provided support for the National Academies' Environmental Health Matters Initiative.

Before NIEHS, Birnbaum directed the National Health and Environmental Effects Research Laboratory at the U.S. Environmental Protection Agency for 10 years.

Two NIH Investigators Receive Salzman Award

In December, two NIH'ers received the Norman P. Salzman Memorial Award in Basic and Clinical Virology and delivered talks about their research during a ceremony in Lipsett Amphitheater.

The Salzman Memorial Awards, presented by the Foundation for the National Institutes of Health (FNIH) and now in their 26th year, recognize outstanding young researchers in the field of basic and/or clinical virology.

Dr. Nagela Ghabdan Zaluqui, the postdoctoral

awardee, works in the viral immunology and intravital imaging section of the National Institute of Neurological Disorders and Stroke (NINDS). Her research uncovered a new lymphoid structure in the dura mater, called the rostral-rhinal venolymphatic hub. Zaluqui showed that this structure helps the central nervous system fight off viruses by producing specialized antibodies. This discovery highlights how the brain has organized defenses at its borders to protect against infection.

The postbaccalaureate awardee, Walker Symonds-Orr, works in the Laboratory of Viral Diseases in the National Institute of Allergy and Infectious Diseases. His research explored how Enterovirus A71 tolerates genetic changes like insertions and deletions, especially in the capsid region. He found that the virus has limited flexibility for such changes, which affects its evolution. He also developed tools to label and study viral proteins, helping to better understand their roles during infection.

These awards honor the 40-year career of Dr. Norman P. Salzman in virology research and his accomplishments in mentoring young scientists.



Dr. Nagela Ghabdan Zaluqui (l) and Walker Symonds-Orr

Gnadt of NINDS Retires

BY SHANNON E. GARNETT

Dr. James Gnadt, a program director in the Neurotechnology and Integrated Systems Cluster of the National Institute of Neurological Disorders and Stroke (NINDS) Division of Extramural Research, retired on December 31. His science career spanned more than four decades and included 16 years of federal service.

“I’ve been doing this ‘science thing’ for almost 45 years. It’s time for others to fill in where I leave off,” Gnadt said. “I will miss working with a great cohort of colleagues across NIH.”

Although his career as a scientist began 45 years ago, Gnadt’s interest in the field goes back even further—to his high school years when he entertained the idea of becoming a high school science teacher. He cultivated that idea in college, where he developed an interest in neuroscience.

“In college, I became interested in the biology of how the brain thinks,” Gnadt explained. “I got my Ph.D. in physiology but specialized in the neurobiology of sleep—a behavior for which the neural mechanisms were unknown at that time. As a postdoc, I switched to recording neurons in high-order parts of the brain (such as the frontal, temporal and parietal lobes) during cognitive behaviors and was one of the early developers of approaches to interpret dynamic neural signals as ‘the brain thinks.’”

Gnadt earned his undergraduate degree in psychology from Rhodes College in Memphis, Tenn., and his Ph.D. in physiology and biophysics from the University of Alabama at Birmingham (UAB). He did postdoctoral training at the Salk Institute and UAB.

Beginning in 1986, he built an NIH-funded benchside research career in systems and quantitative neurophysiology that included an Alfred P. Sloan research fellowship and appointments at Stony Brook University in New York, and at Howard and Georgetown universities—both in Washington, D.C. He joined NINDS in 2008.

“I actually came to NIH by accident,” he recounted. “I was moving my faculty appointment from one medical school to another and the department chair said she did not have sufficient departmental resources to offer a proper start-up package. I said I would seek another job offer and suggested she take that to the dean to argue for resources. The other job offer was to join the NINDS extramural program. So, I had a choice of two quite different paths in neuroscience. The rest is history. The

opportunity to impact neuroscience at a scale larger than one’s own lab convinced me to leave the bench.”

Throughout his NIH career, Gnadt worked in a variety of areas including helping to develop NINDS’s diversity programs, lending his expertise on research with animals, and helping to develop what would later become The BRAIN Initiative®. His work garnered him numerous accolades and honors along the way including NINDS group merit awards; NIH Director’s awards; OD Honor Awards, and a NINDS peer recognition award. He also received an NCCIH Director’s Merit Award in 2021 for helping to develop a research agenda in the field of interoception.

“While I am proud of my impacts in research academics, I think the BRAIN Initiative is my fondest accomplishment. Not too long after joining NINDS, the NIH BRAIN Initiative® came along as an opportunity to promote investigative neuroscience as an experiment in how to fund systems and computational neuroscience in bold and adventurous ways,” Gnadt said. “It has turned out to be a fantastic

opportunity to achieve that aspiration in ways larger than one’s own endeavors.

“With our funding programs for the 10 years of the BRAIN Initiative, we have changed the culture of investigative systems and computational neuroscience. We have promoted discovery with more adventurous approaches, with combined experimental and quantitative approaches, and with multi-discipline approaches at a team-research scale, and we have enabled a human neuroscience discovery program that is unique in clinical research.”

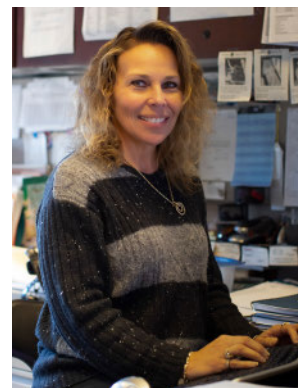
In retirement, Gnadt plans to work on his travel bucket list, pursue his interest in art and drawing and arrange his “new normal” routine to accommodate afternoon naps.

In parting, he shared a few words of wisdom. “If there is one important thing I have learned as a science administrator, it is never let an administrative hurdle get in the way of a good idea,” he said. “At NIH, we sit in a position to truly improve the human condition. We should feel good about that.”

NEI’s Best Retires

Cynthia (“Cindy”) Best—long-time lead administrator for the National Eye Institute’s Office of the Director—retired after more than 39 years of government service.

“Cindy was a calm but persistent force through many changes at NEI,” said NEI Deputy Director Dr. Santa Tumminia. “She kept us organized and on time, and she kept me sane.”



Cindy Best

Best joined NIH in 1982 as a secretary in the Office of Management Assessment. In 1997 she became executive assistant and office manager for Wendy Baldwin, deputy director for extramural research. In 2003, after Baldwin retired, Best joined NEI, managing

administrative operations for two NEI directors: Dr. Paul A. Sieving, who retired in 2019, and current NEI Director Dr. Michael F. Chiang.

Best’s retirement plans include motorcycling and boating. When asked what she liked most about working at NIH, Best said, “the people.”

VOLUNTEERS

Study to Test Topical Cream in Kids

The itch kids want to ditch! In this study, researchers are testing a topical product containing probiotic R mucosa and natural itch blockers to see if it can improve you or your child’s atopic dermatitis (AD). Your participation will help researchers determine the best relief for children with AD.

For more information, see <https://go.nih.gov/g3voOCV>. If interested, contact the NIH Clinical Center Office of Patient Recruitment at 866-444-2214 (TTY users dial 7-1-1) or ccopr@nih.gov. Refer to study #001677.

Alcohol Study Seeks Volunteers

Researchers at the National Institute on Alcohol Abuse and Alcoholism are enrolling healthy volunteers 18-75 years old in a study examining the effects of Suvorexant on brain dopamine receptors in individuals with alcohol use disorder (AUD). Monetary compensation is provided upon study completion.

To learn more and get enrolled, contact the Office of Patient Recruitment at 866-444-8810, ccopr@nih.gov. Refer to study #001561-AA. Protocol details can be found at <https://go.nih.gov/zLiiSMI>.



Clockwise from above, NIAID's *Home Alone* house takes second place; NINDS' Harry Potter and the Chamber of Neuroscience comes in third; NHLBI's *Wicked* "Surprise Surprise" claims first place; the CC's Busy Bees at NIH and Paradise Isle were kid favorites; the Grinch goes in for a cardiac MRI.



Gingerbread Houses Bring Camaraderie, Cheer to the CC

PHOTOS: MARIA MASLENNIKOV

It's the sweetest time of the year, when creating gingerbread houses fosters team spirit across NIH and the colorful houses bring smiles to staff, patients and visitors of all ages who view them in the Clinical Center's atrium.

It's collegial until it's competitive. This year, more than 60 teams decorated and submitted a confectionary creation for the annual contest.

They were clever, magical and a few were *Wicked*. There were gnomes, dwarves and busy bees. They ran hot to cold, from beaches to ski lodges. Some depicted movie scenes. A few paid homage to the Olympics. Other teams created science scenes: "North Polarized" cells; a vitamin sea; a clinical lab.

But as he sometimes does this time of year, the Grinch tried to steal the spotlight. One

house showed him getting a check-up; another showed him getting a MRI scan, under the care of Dr. Santa.

And the winners are...

Kids' choice: CC pediatrics "Paradise Isle"; CC social work department's Busy Bees and Moana by NCI's Pediatric Oncology Branch.

General vote: NINDS' Harry Potter and the Chamber of Neuroscience; NIAID's Home Alone house and "Surprise, Surprise" by NHLBI's Office of Research Nursing.

Contestants were grateful to the Foundation for the NIH for donating the kits. The houses were on display until Jan. 2.

To view all of this year's creations, see this post on the CC's Facebook page: bit.ly/3BoNvd0.



Above l, colleagues from NCI's Pediatric Oncology Branch celebrate kids' choice first place for Moana; at right, Moana closer up.