

## HHS Assistant Secretary for Health Levine Visits NIH

BY AMBER SNYDER

The 17th HHS assistant secretary for health Adm. Rachel Levine paid NIH a visit on June 22 in honor of Pride Month. She is the first openly transgender individual to serve in a Senate-confirmed position and the first ASH who is transgender. In addition, she is the first openly transgender 4-star officer across any of the uniformed services and the first female 4-star officer to lead the U.S. Public Health Service Commissioned Corps.

As part of her visit, Levine provided opening remarks for a panel discussion titled “Together Towards Discovery: How Our Intersecting LGBTQIA+ Identities Impact Our NIH Work.”

Levine toured portions of the Clinical Center and met with NIH leadership to discuss the ongoing RECOVER (Researching Covid to Enhance Recovery) Initiative.

She also heard updates from several senior leaders on strategic plans and other research efforts at some of the institutes and centers.

In tours of both the CC pediatric unit and

rehabilitation medicine department, Levine expressed wonder at advances made possible by NIH research.

A pediatrician by training, she recalled how conditions such as cerebral palsy were once considered to be static and unlikely to improve. Thanks to ongoing research, including major work at NIH, physical therapies and other interventions are improving quality of life for very young



Adm. Rachel Levine, assistant secretary for health at the Department of Health and Human Services and head of the Public Health Service Commissioned Corps, with NIH acting director Dr. Lawrence Tabak, tours a Clinical Center pediatric unit during a visit to NIH on June 22.

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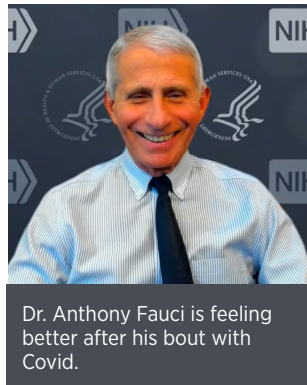
NIEHS campus lake gets virtual guide. See p. 12.

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## ‘THE BELL-SHAPED CURVE OF LIFE’ Fauci Discusses Covid Control, Recovery

BY DANA TALESNIK



Dr. Anthony Fauci is feeling better after his bout with Covid.

It was almost inevitable. Despite being vaccinated, double-boosted and cautious, NIAID director Dr. Anthony Fauci got infected with SARS-CoV-2, the virus he has

incessantly battled with science, guidance and counsel for the last 30 months.

“The thing that is so perplexing is the extraordinary degree of tenacity of the virus,” said Fauci, who had a lingering,

SEE FAUCI, PAGE 4

## ‘DIVERSITY FUELS CREATIVITY’ NIH Leaders Talk About DEIA Efforts at Town Hall

BY ERIC BOCK

NIH is a talented, productive and resilient agency because of its diversity, said NIH acting director Dr. Lawrence Tabak, during a June 29 virtual Town Hall on Diversity, Equity, Inclusion and Accessibility (DEIA). More than 4,200 NIH’ers tuned in live.

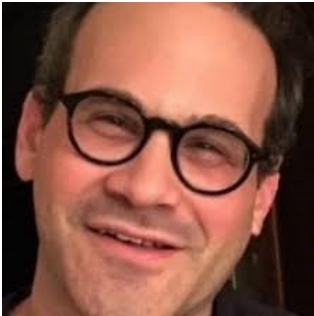
“Diversity fuels our creativity and drives our innovation,” said Tabak. “Ultimately, it enables us to work together to make scientific discoveries that improve human health.”

Last year, Congress directed NIH to develop an agency-wide strategic plan to identify and address racial, ethnic and gender disparities as well as barriers to NIH funding by investigators researching health disparities, said Dr. Shelma Little, advisor to the director of the Office of Equity, Diversity and Inclusion (EDI). Fortunately, NIH had

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**NIH To Celebrate Disability Pride Month**

Join EDI in celebrating Disability Pride Month, which commemorates the passing of the Americans with Disabilities Act (ADA). The ADA is a human rights law that prohibits discrimination against people with disabilities. Passing the ADA on July 26, 1990, was a landmark event in the fight for disability rights.



Dr. Jonathan Kaufman

To celebrate the anniversary, NIH will host a virtual lecture, “Reimagining Disability for the 21<sup>st</sup> Century: From Ableism to Innovation” by Dr. Jonathan Kaufman, on Tuesday, July 26 from noon to 1 p.m. ET. Kaufman is a consultant, psychotherapist and *Forbes* columnist who previously worked as a White House policy advisor on diversity and disability.

Access the talk at <https://nih.zoomgov.com/j/1612000873>. American Sign Language and Communication Access Real-time Translation (CART) will be provided. Individuals who need other reasonable accommodation to participate should email Adam Politis at [adam.politis@nih.gov](mailto:adam.politis@nih.gov).

**OD Marks 2<sup>nd</sup> Civility Month**

**Open NIH-Wide**

In August, for the second straight year, the Office of the Director will observe OD Civility Month, which celebrates a collective commitment to fostering a workplace that is safe, respectful and civil. Throughout August, all NIH staff are encouraged to take a moment to reflect on the quality of our interactions within the organization and with our customers. It is our vision that each of us will do our part to ensure that NIH embodies a civil work environment where all feel welcome, safe and respected. Find details on OD Civility Month at: <https://employees.nih.gov/pages/od-civility/>.

**COVID-19 AT-HOME TEST FACTS**

**FACT:**

Current COVID-19 at-home tests can **successfully detect the Omicron variant**. Those that do not have been removed from the market.



**‘Feds Feed Families’ Virtual Campaign Underway**

NIH is again participating in “Feds Feed Families,” the annual federal government summer food drive. The 2022 virtual campaign will run through Friday, Sept. 30.

Many families are still feeling the effects of the pandemic and are facing food insecurity and hunger. The NIH community has always given generously through this campaign to support those in need. Once again the drive is operating virtually. There will be no food collections at physical locations. Instead, donate online to fight hunger. You can send food via your favorite virtual grocer, designate a food pantry or even volunteer your time. Visit <https://ors.od.nih.gov/FedsFeedFamilies/Pages/default.aspx> for details.



Remember to record your donation, so NIH gets credit. Select “U.S. Department of Health and Human Services” as your department and the “National Institutes of Health” as your agency. All donations will be tracked by pounds of food. For monetary donations, the site will use a national conversion rate from dollars to pounds.

If you have any questions about recording your donation, please reach out to [FedsFeedFamiliesNIH@nih.gov](mailto:FedsFeedFamiliesNIH@nih.gov).

**Nominations Open for Champions, Allies of Disability**

Nominations for the NIH Champions and Allies of Disability Awards are now open.

Nominate individuals or groups who have made significant contributions toward the advancement of people with disabilities in the NIH community. Only NIH employees are eligible for these awards.

Nominations are due by Monday, Aug. 1. Submit nominations at: <https://bit.ly/3amhPaJ>.

Winners will be announced at the 4th annual NIH Champions and Allies of Disability Awards Ceremony on Wednesday, Oct. 26.

For questions regarding nominations, email Adam Politis at [adam.politis@nih.gov](mailto:adam.politis@nih.gov).



July is Disability Pride Month. NIH is hosting an event and soliciting nominations for the Champions and Allies of Disability Awards.

PHOTO: ROBERT KNESCHKE/SHUTTERSTOCK

**At-Home Antigen Tests Still Available to Order**

NIH staff have an additional opportunity to participate in the voluntary At-Home Antigen Testing Pilot Program. Rapid Covid-19 tests continue to be in stock for online ordering. As of June 27, an additional 1,000 staff members have joined NIH over the last several months. If this group includes you, or if you have not ordered during the latest round, place your order using the directions below. The focus is staff who are onsite more often and who meet these criteria:

- NIH staff only (employees, contractors, trainees, tenants, etc.)
- Staff in the Return to Physical Workplace (RTPW) groups (except for designations of Remote Worker, To Be Determined and Not Applicable)
- Have not received tests from this program after May 5, 2022

If you meet these criteria, click on <https://safercovid.org/mytest/nihorder.html> to place a one-time online order for 10 tests (5 boxes). If you are unsure of your RTPW group, you can view your designation by logging into the NED Portal (network access or VPN required). Complete the form using your home address. You will need to provide your 10-digit NIH ID number found on the back of your badge (PIV card). This program is part of NIH’s continued efforts to mitigate workplace transmission of Covid-19.

Questions about the testing process or test results? Contact the Occupational Medical Services Call Center at (301) 480-8990 (Monday through Friday from 9 a.m. to 4:30 p.m. ET).

## A CLOSER LOOK AT EYEGENE

## Employee Offers Personal Account of NIH-Supported Clinical Research

BY DAVID KOSUB

To truly understand someone's experience, put yourself in their shoes. No doubt, you have heard this adage and it is certainly the case for the many people who participate in clinical research. Many of us who work at NIH regularly say how invaluable clinical study participants are to improving public health, but have you tried on their shoes yet?

I was first exposed to clinical research as a graduate student. Although financial compensation did provide some motivation (I was a poorly paid grad student after all), the promise of turning clinical research discoveries into public health benefit was the principal driver for my continued participation. As interesting and educational as these opportunities were, they did not study genetic retinal diseases that cause progressive vision loss—something close to home for me.

So, I searched “retinitis pigmentosa” in ClinicalTrials.gov, and inquired about a study. I soon received a response, which to my shock actually came from the then-director of the National Eye Institute. Those types of emails definitely stand out in your inbox.

The study was called the National Ophthalmic Disease Genotyping and Phenotyping Network (eyeGENE). The initiative aims to better understand the genes involved in rare genetic, inherited eye disease—in people with the disorders and in their families. It makes eye examination data and DNA samples, including whole genomes, as widely available as possible to qualified researchers. The goal is for these data to be used in future studies on eye diseases in hopes of accelerating pathways to treatments.

I have now participated in the program at the Clinical Center for more than a decade. Each visit can consist of many hours of tests beyond the traditional eye exam.

Clinicians start with the standard eye chart to assess visual acuity, then conduct a visual field exam to understand how much the eye sees in any direction without moving.

Occasionally, they need to know the electrical activity of the retina to see how that has changed over time. When I am hooked



Dr. David Kosub shares his first-hand experience as a participant in an NIH clinical study.

up to an electroretinogram as part of the procedure, I feel like the main character in *A Clockwork Orange* who undergoes government aversion therapy.

The medical team may next use optical coherence tomography to map and measure distances between the retinal layers. Genetic testing will likely be offered too, which did confirm my earlier diagnosis. It also identified the specific gene mutation causing my progressive vision loss, helping explain the origins of my superhuman mutant power.

I learn something new about my vision loss each time. The staff are always helpful, kind and willing to answer every question I have. They review with me the results of the day, expected prognosis and any clinical trials that may be of interest.

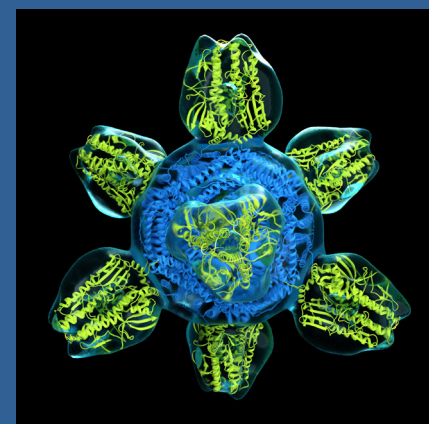
Even at the very first visit, after realizing I am a scientist and did not want any sugar coating on my test results, my staff clinician sat back in his chair and said “ok, I’ll give it to you straight.” I have seen him multiple times since, and truly appreciate his honesty and candor.

More than 6,400 other people are part of the eyeGENE network from the U.S. and Canada, representing over 30 different eye diagnoses and experiences. Genomic information is available in the biobank for more than 95 percent of these participants. Their contributions have led to at least 90 publications and 32 secondary research studies.

I am pleased that my participation enriches the body of knowledge that researchers can use to move genetic eye research forward. It also had an unexpected side effect. Where once I was in obvious denial, the program helped me better embrace and learn to thrive with my own

particular medical situation as I learned more about it.

I hope reading about this experience will encourage NIH staff to consider participating in a study, or at least pass along resources for others. Who knows, maybe you will find it an eye-opening experience too. **R**



ON THE COVER: *Colorized structure of a prototype for a universal flu vaccine. The nanoparticle is a hybrid of a protein scaffold (blue) and eight influenza hemagglutinin proteins on the surface (yellow). The hemagglutinin was specifically engineered to display antibody binding sites common to all human influenza subtypes. The particle designed by Jeffrey Boyington of the NIH Vaccine Research Center (VRC) has been shown to be an effective immunogen in mice and ferrets (VRC). 3D structure of the particle was determined by cryo-electron microscopy by John Gallagher and Audrey Harris of NIAID's Laboratory of Infectious Diseases.*

IMAGE: NIAID

## The NIH Record

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National Institutes of Health  
Turning Discovery Into Health

## Fauci

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intermittent cough during a June 27 virtual interview.

“We are now in our third year of [the Covid-19 pandemic], of one variant following another variant following another variant. But even with vaccinations, which have been extraordinarily lifesaving, we do not get very good protection against infection. Thank goodness, the vaccines protect against severe disease, which is obviously the most important thing.”

His own bout with Covid-19 in June initially was mild but took an unexpected turn. “I rebounded,” said Fauci, who thought he was out of the woods after a round of the antiviral Paxlovid followed by three consecutive days of testing negative. But the next day, he tested positive again and symptoms soon appeared with a vengeance.

“I got much more sick than I was the first time around,” he said. On day 3 of his second course of Paxlovid, he was feeling better.

So far, Fauci’s wife, Dr. Christine Grady, chief of the Clinical Center’s department of bioethics, has evaded the virus.

“That is just the bell-shaped curve of life,” said Fauci. “Some people get infected easily; some people never get infected. Most of the population though will get infected if they are put at risk.”



Fauci with his wife, bioethicist Dr. Christine Grady, during a 2007 vacation in Italy

PHOTO: NIAID

With barely a moment’s rest since the pandemic began, Fauci, 81, still shows little sign of slowing down. “Emerging and re-emerging infectious diseases have been on the forefront of my mind literally for the 38 years that I’ve been the director of NIAID,” he said.

Although he contemplates retirement, he hasn’t set a date.

“I can tell you I certainly hope to retire before I die. That is my goal,” he said with a smile. But for now, “I am just going to have to focus on my job and decide about that at a later time.”

And there is much left to do during a pandemic that is waning but not over. “We are still in the middle of this,” he said. “And although we are doing much better than we were a year or a year and a half ago, we still have a severe challenge in front of us.”

### Where Do We Go from Here?

With infectious diseases, there are three scenarios: eradication, elimination and control.

“We are not going to eradicate this virus,” said Fauci bluntly. The one virus ever eradicated was smallpox, accomplished through mass vaccination against a virus that didn’t mutate. With smallpox, he explained, “the immunity induced either by infection or by vaccination is very durable, measured in decades and perhaps a lifetime.”

Covid-19 likely won’t be eliminated either, he said. Measles and polio were eliminated due to a nearly universally accepted vaccination program. Unlike Covid, measles and polio don’t have variants, and immunity from vaccination or prior infection has been long-lasting.

“Covid varies in a very confounding way,” noted Fauci. The five waves that to date have rippled throughout the world featured different variants, each increasingly more transmissible.

“And this is very perplexing, but it is a reality: the immunity induced by either infection and/or vaccination is very transient,” he said. “It does not have the durability that immunity to smallpox, measles and polio have.” Another hurdle is the lack of universal vaccination, not only in the U.S. but also worldwide.

So that leaves control and coexisting with a virus that isn’t going away. But Fauci stops short of saying the country has entered the endemic phase.

On the one hand, “Months ago, we were in an absolutely fulminant phase of the pandemic,” he said. “We were having 900,000 cases a day, tens of thousands of hospitalizations and more than 3,000 deaths per day.” There has since been a dramatic deceleration of the pandemic.

“Endemic is when it is at a low enough



“Emerging and re-emerging infectious diseases have been on the forefront of my mind literally for the 38 years that I’ve been the director of NIAID,” said Fauci.

PHOTO: NIAID (CIRCA 1984)

level that it has not disappeared, but it does not disrupt society in a substantial way. We are not there yet,” he said. “We still have a significant disruption of our social order.”

One unusual feature of this virus that makes it difficult to control is asymptomatic spread. More than half of the people transmitting Covid-19 have no symptoms.

“You have to be wary,” said Fauci, “and continue to test asymptomatic people.”

Through testing, antivirals, vaccinations and vigilance, there is the potential for Covid to no longer dominate our way of life. But we have to learn to live with it.

“We have to realize this virus is not going to disappear,” said Fauci. “It is not going to go to zero.”

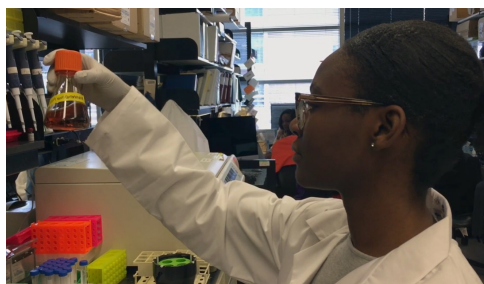
### Stumbling Block in the Response

An ongoing frustration that weighs heavily on Fauci’s mind is Covid-19 misinformation.

“That has been a real stumbling block in our adequate and appropriate response to the outbreak,” he said. “The common enemy is the virus. But in this country, because of the severe divisiveness that we have, we are acting like the common enemy is each other instead of the virus. To have the practice of good public health principles be divided along ideological, political lines is completely unacceptable.”

Generally, “the best way to counter misinformation is to flood the system consistently with correct information,” Fauci pointed out. Unfortunately, the spread of misinformation seems to be outstripping the spread of factual information.

And yet, despite all the divisiveness, disinformation and pressure, Fauci continues to maintain his composure. “Although



Cynthia Ziawo, an NIH IRTA fellow in Dr. Barney Graham's Viral Pathogenesis Laboratory, in the VRC working on the mRNA-1273 Covid-19 vaccine

PHOTO: VACCINE RESEARCH CENTER

you do feel like throwing your hands up and yelling and saying how crazy this is, that is not helpful," he said. "You have to make sure you do not allow things like anger and disgust at what is going on to influence the way you approach a problem." He emphasized responding in a measured, thoughtful, analytical way. "Otherwise, you will be giving in to the conglomeration of chaos that is out there. You do not want to be part of the chaos."

### Overwhelming Success Story

Looking back on the pandemic response to date, Fauci takes pride in NIH's efforts.

Years of research by NIH grantees paved the way for new vaccine platform technologies.

"And right here on campus in our Vaccine Research Center," Fauci said, "the work of Barney Graham and his colleagues led to the development of the stabilized spike protein, which has served as the successful [basis] for almost all of the successful Covid vaccines."

This research enabled vaccines to be tested and authorized in record time.

"The idea that you could go from January [2020], when the sequence of the virus was made public, to having a safe and highly effective vaccine, proven to be effective through a large network of clinical trials in less than 1 year, is completely unprecedented in the annals of biomedical research," said Fauci.

Are there things NIH could have done better? Yes, one can always do better, he admitted. "But when you look at what was really successful, it was the foresight to have the major investment for years in basic and clinical biomedical research which led to vaccines and therapies that have saved literally millions of lives." **R**

## SUMMER EXPERIENCE MAKES IMPACT

### Boone Takes Helm as Director of OER Division

BY MANJU SUBRAMANYA

As a sophomore at Talladega College in Alabama in the 1990s, Ericka Boone was chosen by her biology professor to attend a summer research program at NIH. Little did she realize then that her exposure to the possibilities of science at NIH would influence the trajectory of her career.

Boone went on to earn a Ph.D. in neuroscience from Penn State University and completed postdoctoral research at Emory University and as an early-career investigator at the University of Illinois, before landing a science policy job at the National Institute on Drug Abuse in 2008.

Her experience as a Ph.D. student, postdoctoral researcher, early-stage investigator and health science policy analyst will stand her in good stead in her new job.

On June 6, Boone was appointed director of the Division of Biomedical Research Workforce (DBRW) in the Office of Extramural Research, where she will shape the future of research training for employees in the biomedical science community.

"I've lived some of these experiences," said Boone, who more recently served as the director of the Division of Loan Repayment within DBRW. "I've lived through being an early-career investigator. I've lived through being a graduate student and a postdoc. You have a different understanding than what others may bring to the table.

"I also think that, personally speaking, being a middle child is very important as well, because your whole life you spend community building," she said with a smile. The Virginia Beach native grew up in a big family (four sisters and a brother) to a Navy officer dad and a Department of Transportation contractor mom.

Early exposure to science as a career, access to effective mentors and research training opportunities, equity in funding, lowering of barriers encountered during career transition periods, relief for high levels of student loan debt and more are among some of the most pressing needs of the biomedical research workforce, especially so for people like her—investigators from backgrounds that are underrepresented in the biomedical sciences, she said.

"I want to pound the table on their behalf when they are not in the room," Boone said, quoting Wall Street powerhouse Carla Harris. "When they are moving from one career stage to another, I want to ensure they have appropriate NIH resources and support to ensure that they don't get to the edge of the cliff and fall off.

"To do that," she continued, "I want to make sure we are focusing on developing programs and policies that address vulnerable career stages, like transitions for early-career investigations. We need to address our funding disparities. We say that diversification of the biomedical research workforce is important to us and now we have to make sure we are actualizing that."

Boone is active on the conference circuit with an inspiring, popular talk that urges people to shed their fears and live their authentic real self, personally and professionally. She cites the example of professional basketball player Shaquille O'Neal.

"He is like 10,000 feet tall and he cannot shoot a free throw to save his life, but he is one of the greatest athletes that ever lived," she tells her audience. "He did not let that 1-point free throw hold him back and don't let it hold you back either."

In her new role, Boone wants to motivate early-career investigators to overcome career development obstacles.

Outside of work, Boone runs a jewelry business, travels, loves attending jazz, R&B and gospel concerts and dotes on her son Evan, a pre-vet student at Clemson University.



Dr. Ericka Boone began her NIH journey as a college sophomore attending a summer research program. She's the new director of OER's Division of Biomedical Research Workforce.

## Levine

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cerebral palsy patients. Levine marveled at the life-changing advances NIH has made for people with cerebral palsy over the course of her career alone.

Levine also learned about ongoing CC construction to expand capacity to treat infants and increase the use of curative treatments, such as gene therapy.

After touring the CC, she received updates on Covid-19 research and related current initiatives, including NIH's efforts to include social determinants of health when seeking to understand Covid and other health conditions.

Levine then offered opening remarks for the Pride event (see p. 7) and finished out her day by meeting with officers of the Public Health Service Commissioned Corps at NIH.

"Your work to turn discovery into health is incredible!" she said later in a post on Twitter thanking NIH.



At the entrance to a first floor pediatric inpatient unit, nurse practitioner Ruth Parker (I) greets Levine, who is a pediatrician by training. While here the ASH toured the pediatric clinic and later met with senior leaders at NIH.

PHOTOS: CHIA-CHI CHARLIE CHANG



In the atrium of the Clinical Center are (from l) Dr. James Gilman, CC chief executive officer, who gave an overview of the facility; Dr. Jill Rothschild, chief of the CC Pediatric Consult Service; NIH acting director Dr. Lawrence Tabak; Levine; and Rear Admiral Denise Hinton, deputy U.S. surgeon general.



Dr. Leighton Chan (second from r), chief of rehabilitation medicine, describes aspects of the Neurorehabilitation and Biomechanics Lab, which is embedded in a large block of concrete and insulated from the rest of the hospital by a rubber bumper. These unique characteristics reduce vibration in the lab and enhance accuracy of the motion-capture equipment.



Above, Levine meets with Tabak and a group of IC directors. At right, the HHS delegation takes a photo with several NIH leaders on a CC terrace. Shown are (from l) principal deputy ASH Elisabeth Handley, NINDS director Dr. Walter Koroshetz, NICHD deputy director Dr. Alison Cernich, NHLBI director Dr. Gary Gibbons, Levine, Gilman, Hinton, NEI director Dr. Michael Chiang, Tabak, ASH chief of staff Sarah Boateng and NINR director Dr. Shannon Zenk.



## ASH SPEAKS

## Levine Rounds Out Pride Month

BY AMBER SNYDER

“Happy Pride!” said Adm. Rachel Levine, HHS assistant secretary for health, greeting a hybrid audience in Wilson Hall on June 22. After a full morning of meetings with NIH leadership, Levine was the featured speaker at an event titled “Together Towards Discovery: How Our Intersecting LGBTQIA+ Identities Impact Our NIH Work.”

As the first openly transgender individual to serve in a Senate-confirmed position, the first ASH who is transgender, the first openly transgender 4-star officer across the uniformed services and the first female 4-star officer to lead the Public Health Service Commissioned Corps, Levine’s presence was incredibly meaningful for her NIH audience.

The event also featured a panel discussion with members of Salutaris, an NIH organization dedicated to making the community open and welcoming to all sexual and gender minorities (SGM).

NIH’s 2022 Pride Month theme was “Together Toward Discovery.” Events placed special emphasis on intersectionality and its influence on visibility in the workplace. Intersectionality is a term that refers to the social categorizations—such as race, class and gender—that make up an individual’s identity.

Speaking to a small in-person audience of allies, as well as several hundred attendees via videocast, Levine commended NIH for its dedication to diversity, equity and inclusion (DEI).

“Please know that your work in [DEI] and through your efforts to welcome and celebrate diversity, you are making a difference,” she noted.

Levine, who is also a physician specializing in pediatrics, expressed excitement for NIH’s 2021-2025 Strategic Plan, which includes plans to enhance research on the health and well-being of sexual and gender minorities. NIH also aims to increase data collection on sexual orientation and gender identity (also referred to as SOGI data).

This attention to DEI is not just specific to NIH, Levine said, but is a “whole government approach...We have [people in office] who see us, who support us and affirm us just as we are...[and]



Several event panelists (from l) Vanessa Morgan, Brandon McCullough, Michelle Boyle and Shyam Patel share their experiences working at NIH.



HHS Assistant Secretary for Health Rachel Levine speaks at an NIH Pride Event in Wilson Hall. Moderated by Bali White (r), principal strategist for EDI’s sexual and gender minority employment portfolio, the session included a diverse panel discussion.

PHOTOS: CHIA-CHI CHARLIE CHANG

we have not made progress unless we have made progress for everyone.”

She referenced the recent Executive Order Advancing Equality for LGBTQI+ Individuals, signed by President Biden in honor of Pride Month, which took steps to protect LGBTQI+ children and their families. The needs of our nation are diverse, Levine said, and our current administration believes in “an inclusive approach to governing which gives people a voice.”

Ensuring LGBTQIA+ employees have equal opportunities and can reach their full potential “is essential to the NIH mission,” said NIH acting director Dr. Lawrence Tabak. Several event panelists who are researchers at NIH shared their experiences as LGBTQI+ individuals. While they had not experienced discrimination at NIH as a result of their identities, the fear of discrimination was present in all of their stories.

“I wish that we...don’t have to ‘come out’ every single time,” said Tam Vo, a third-year postdoc at NCI. Even if your workplace is accepting, “you shouldn’t need to come out [when it’s just who you are].”

Brandon McCullough, a supervisory workforce development analyst with All of Us, said he benefitted from seeing the progress made by the DEI and SGM offices when he was first starting out at NIH in 2015.

“When I saw the work that had already been done... that created a safe space for me,” he shared. “I

never felt like I needed to come out to anyone because I worked at an agency where it was quite fine for you to be whomever you were going to be.

“And that just speaks to the work NIH

continues to do,” he added.

Other panelists spoke about the importance of community and allyship.

“It’s a whole matter of using what you have to advance the general good,” explained Michelle Boyle, special assistant to the director/deputy director, NIH Office of Budget. She credited two colleagues who were already “out” with assisting her as she prepared to transition in 2013.

“Having allyship within our workforce is essential,” noted NIAID senior investigator Dr. Karin Peterson. Allyship is plentiful within the Rocky Mountain Laboratories community, she said, and that sense of acceptance can be particularly important if the surrounding community is less welcoming.

Vanessa Morgan of NIMH said she appreciated when workplaces “make [their] acceptance more visible...[it’s] less of a mystery you have to decode.”

Representation was another topic of discussion among the panel. Having a supportive community is important, but it is just as meaningful (if not more so) to see diverse individuals represented in all levels of management.

“When you see Admiral Levine in such a high position in government, it gives the community something to aspire to,” shared Shyam Patel, communications director for the Sexual and Gender Minority Research Office. “To see that representation in government at every level is just crazy to me, but in the best way possible.”

Levine’s schedule did not permit her to stay for the panel discussion, but her parting words assured her audience of her—and the federal government’s—commitment to DEI.

“I have no room in my heart for hatred and, frankly, I have no time for intolerance,” she declared. “[So] let’s all learn to embrace diversity. Let’s all learn to embrace each other. Embrace acceptance, so that many more can follow and see a nation that truly represents us.”

View the archived lecture at <https://videocast.nih.gov/watch=45702>. **R**

## DEIA

CONTINUED FROM PAGE 1

already begun significant efforts in this space and so was well positioned to respond.

The plan was developed and implemented by a working group with representatives from EDI, institute and center directors or their designees, grantees, DEIA experts and community stakeholders, she added. Recently, the working group completed a draft of the plan. It will soon undergo final review and approval.

The plan outlines NIH's vision for strengthening DEIA, said Julie Berko, chief people officer and director of human resources. It does so by capturing "activities that will apply to the entire NIH workplace," including the intramural and extramural communities.

"We will embrace, integrate and strengthen DEIA across all activities," Berko said. "NIH will be a people-centered organization, where all people feel a sense of belonging."

The plan's framework has three objectives:

- Grow and sustain DEIA through structural and cultural change
- Implement organizational practices to center and prioritize DEIA in the workforce
- Advance DEIA through research

There are more than 1,700 NIH-wide DEIA activities, said Dr. Marie Bernard, NIH's chief officer for scientific workforce diversity.

"After the release of the plan, we will build upon these identified activities to develop an implementation plan to propel us forward over the next 5 years," she said.

### First Listening Session Set, July 22

The first DEIA listening session will take place on Friday, July 22 from 1:45 to 2:45 p.m. (ET) and will focus on the Asian American, Native Hawaiian and Pacific Islander populations. Other sessions scheduled:

- Black/African American, Wednesday, Aug. 3, 2-3 p.m.
- Hispanic/Latino, Friday, Aug. 19, 9-10 a.m.
- Native American, Monday, Aug. 22, 11 a.m.-noon
- People with Disabilities, Friday, Sept. 9, 11 a.m.-noon
- Sexual & Gender Minority, Tuesday, Oct. 25, 2-3 p.m.
- Women, Friday, Oct. 19, 4-5 p.m.

Visit the intranet site at <https://bit.ly/3Ppeqyq> to join the sessions and to get updates. Each session will be moderated and recorded.

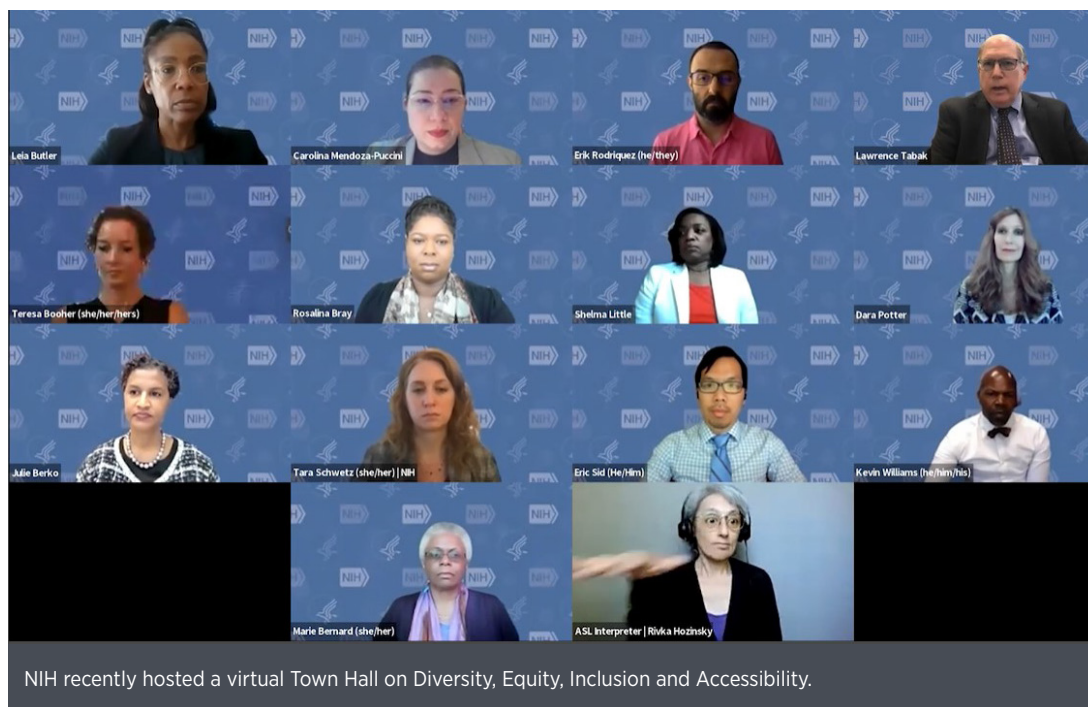
One example of a DEIA activity is EDI's Special Emphasis Portfolio, which focuses on positive, equitable and inclusive employment experiences for federally identified minorities, Bernard noted. A principal strategist leads each portfolio. They organize educational and cultural sensitivity awareness opportunities and recruit and retain a diverse, high-performing workforce.

Another example is the UNITE Initiative, which has worked to create a sense of belonging, promote social accountability and restructure key processes since launching

populations who each discussed challenges they face working at NIH and offered recommendations to advance diversity, equity, inclusion and accessibility.

Special emphasis populations include:

- Asian American, Native Hawaiian, and Pacific Islander
- Black
- Hispanic
- Native American
- People with disabilities
- Sexual and Gender Minorities
- Women



in late 2020. The DEIA performance metric, anti-racism steering committee and racial and ethnic and equity plans developed by ICs all resulted from UNITE's efforts.

In 2019, staff received the Workplace Climate and Harassment Survey. The results informed new NIH programs such as the anti-harassment committee and approaches to address harassment in the workplace. Bernard said a follow-up survey will be administered this fall.

EDI and NIH's Office of the Chief Information Officer have begun to meet with HHS operating divisions and other federal agencies to learn how they execute their accessibility programs. OCIO hopes to adapt and adopt better accessibility practices.

Next the virtual town hall heard from representatives of special emphasis

"I ask that we all think about the steps that each of us can take to foster a culture of inclusion, equity, accessibility and respect for all who work at, visit and interact with NIH," concluded NIH acting principal deputy director Dr. Tara Schwetz. "By working together, I'm confident we can build a workplace and a wider research community in which people from all groups feel as though they're valued, respected and belong."

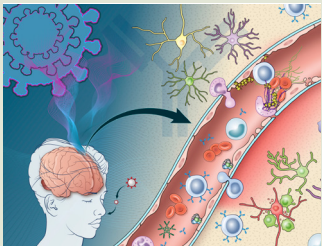
To follow up on the town hall, a series of listening sessions will be conducted with NIH leadership. More information will be provided soon for each of these listening sessions.

The event was coordinated by NIH's Office of Communications and Public Liaison. To watch the full town hall, visit: <https://videocast.nih.gov/watch=45624>.



## Small NIH Study Could Give Insight into Long-Term Neurological Symptoms of Covid-19

An NIH study describes the immune response triggered by Covid-19 infection that damages the



SARS-CoV-2 infection can trigger production of immune molecules that damage cells lining blood vessels in the brain, causing platelets to clot.

PHOTO: NIH MEDICAL ARTS

brain's blood vessels and may lead to short- and long-term neurological symptoms. In a study published in *Brain*, NINDS researchers examined brain changes in nine people who died suddenly after contracting

SARS-CoV-2, the virus that causes Covid-19.

The scientists found evidence that antibodies—proteins produced by the immune system in response to viruses—are involved in an attack on the cells lining the brain's blood vessels, leading to inflammation and damage. Consistent with an earlier study from the group, SARS-CoV-2 was not detected in the patients' brains, suggesting the virus was not infecting the brain directly.

NINDS clinical director Dr. Avindra Nath and his team found that antibodies produced in response to Covid-19 may mistakenly target cells crucial to the blood-brain barrier. Tightly packed endothelial cells help form the blood-brain barrier. Damage to endothelial cells in blood vessels in the brain can lead to leakage of proteins from the blood, which causes bleeds and clots in some Covid-19 patients and can increase stroke risk.

For the first time, researchers observed deposits of immune complexes—molecules formed when antibodies bind antigens (foreign substances)—on the surface of endothelial cells in the brains of Covid-19 patients. Such immune complexes can damage tissue by triggering inflammation.

“Activation of the endothelial cells brings platelets that stick to the blood vessel walls, causing clots to form and leakage to occur,” Nath explained. “At the same time, the tight junctions between the endothelial cells get disrupted causing them to leak. Once leakage occurs, immune cells such as macrophages may come to repair the damage, setting up inflammation. This, in turn, causes damage to neurons.”

Researchers found that in areas with damage to endothelial cells, more than 300 genes showed decreased expression, while 6 genes were increased. These genes were associated with oxidative stress, DNA damage and metabolic dysregulation. This may provide clues to the

molecular basis of neurological symptoms related to Covid-19.

Had the patients in the study survived, the researchers believe they would likely have developed long Covid. “It is quite possible that this same immune response persists in long Covid patients resulting in neuronal injury,” said Nath. “So these findings have very important therapeutic implications.”

## What Can Turtles Tell Us About Longevity?

Looking at data from more than 100 different animals, researchers have revealed some insights into aging that may help better understand longevity in humans. The study showed that cold-blooded, four-legged animals—also known as ectothermic tetrapods—can age very quickly or extremely slowly.

Ectotherms are animals that rely on heat from their environment to regulate their body temperature, and tetrapods are vertebrate animals with four limbs. The category of ectothermic tetrapods includes non-avian reptiles, such as turtles; and amphibians, such as salamanders.



A giant tortoise in the Seychelles

PHOTO: HYSERB / SHUTTERSTOCK

The NIA-funded study, published in *Science*, also revealed that aging rates decrease in species with slow-paced lives. In addition, the data suggest that animals with protective traits, such as armor, venom, shells and spines, exhibit slower aging rates. When comparing ectoderms with endotherms (the category of warm-blooded organisms that includes mammals and most birds), the research team found that ectotherms have a higher diversity of aging rates. This evolutionary study on aging may help researchers better understand aging in humans.

Researchers contributed data from 107 animals from around the world, representing 77 species of reptiles and amphibians in the wild. The scientists examined four different factors to determine whether they contributed to aging: thermoregulation, or the ability of warm-blooded animals to maintain body temperature; environmental temperature; protective traits; and pace of life. They found that turtles, crocodiles and salamanders have significantly low aging rates and are long-lived for their size. Species with protective

traits lived longer than those with no protection. Estimates of ectotherm longevity ranged from 1 year to 137 years.

## Research Shows Norovirus, Other ‘Stomach Bugs,’ Can Spread Through Saliva

Enteric viruses, which cause severe diarrheal diseases, afflict billions of people each year worldwide and can be deadly. NIH scientists have discovered that this class of viruses can grow in the salivary glands of mice and spread through their saliva. The findings show that a new route of transmission exists for these common viruses that include noroviruses—famous for widespread outbreaks on cruise ships—and rotaviruses.

The transmission of enteric viruses through saliva suggests that coughing, talking, sneezing, sharing food and utensils and even kissing all have the potential for spreading the viruses. If the new findings are confirmed in human studies, they could lead to better ways to prevent, diagnose and treat enteric viruses, potentially saving lives. Results from the NHLBI-led study appear in *Nature*.

Enteric viruses can spread by consuming food or liquids contaminated with fecal matter containing these viruses, exiting later through feces.

“This is completely new territory because these viruses were thought to only grow in the intestines,” said Dr. Nihal Altan-Bonnet, chief of NHLBI's Laboratory of Host-Pathogen Dynamics.

The discovery was serendipitous. Altan-Bonnet's team had been conducting experiments with enteric viruses in infant mice, who were fed either norovirus or rotavirus. The mouse pups were then allowed to suckle their mothers, who were initially virus-free.

But after a day, the mouse pups showed a surge in IgA antibodies, important disease-fighting components, in their guts. This was surprising considering that the immune systems of the mouse pups were immature and not expected to make their own antibodies at this stage.

Additionally, the viruses were replicating in the mothers' breast tissue (milk duct cells) at high levels. It seemed the infection in the mothers' breasts had boosted the production of virus-fighting IgA antibodies in their breast milk, which ultimately helped clear the infection in their pups, the researchers said.

The researchers found that the mouse pups had not transmitted the viruses to their mothers through the conventional route—by leaving contaminated feces in a shared living space for their mothers to ingest. That's when they began testing whether the virus somehow spread during breastfeeding. Further testing confirmed the mouse pups' salivary glands were replicating these viruses at very high levels and that suckling had caused mother-to-pup and pup-to-mother viral transmission.

## Agodoa, NIDDK Pioneer for Health Equity, Retires

BY LISA YUAN

Dr. Lawrence Agodoa, director of NIDDK's Office of Minority Health Research Coordination (OMHRC), has retired after 35 years of service to NIH.

As OMHRC director since 2000, Agodoa spearheaded many of NIDDK's signature programs to advance health equity and scientific workforce diversity. His career accomplishments also include leading the development and implementation of NIDDK's first Strategic Plan on Minority Health Disparities and making valued public health contributions through kidney disease research and clinical practice.

In all his roles, he remained tirelessly dedicated to achieving NIDDK's mission of improving health for all people.

"NIDDK has enabled me to carry out my ideal professional pursuits," said Agodoa. "Therefore, there has not been a

Kidney, Urologic, and Hematology Division, where his work focused on reducing racial and ethnic disparities in end-stage renal disease. He led several important clinical trials, including the landmark African-American Study of Kidney Disease and Hypertension (AASK), which showed for the first time that a class of medications called



Dr. Lawrence Agodoa speaks at the HHS' Office of Minority Health Awards ceremony in 2006.

ACE inhibitors could slow the progression of kidney disease caused by high blood pressure.



*"NIDDK has enabled me to carry out my ideal professional pursuits. Therefore, there has not been a need for me to work anywhere else since my arrival at NIH."*

-DR. LAWRENCE AGODOA



need for me to work anywhere else since my arrival at NIH."

In 1987, he joined the NIH as a program director and scientist in the institute's



NIDDK director Dr. Griffin Rodgers (l) and deputy director Dr. Gregory Germino (r) pay tribute to Agodoa (c) at his retirement celebration.

Under Agodoa's leadership, OMHRC established several long-term diversity programs that, for more than two decades, have supported people from groups that have been historically underrepresented in biomedical research.

Among the initiatives Agodoa helped create and develop are NIDDK's Diversity Summer Research Training Program and Short-Term Research Experience to Unlock Potential, which provide training to high school and college students from under-resourced communities; and the Network of Minority Health Research Investigators, which supports and mentors researchers throughout their careers.

Agodoa also oversaw the Minority

Organ and Tissue Donation Program, which he helped initiate in 2001 to reduce barriers to organ and tissue donation among various racial and ethnic communities. He has published more than 300 papers and served as a physician at Walter Reed Army Medical Center, professor at the Uniformed Services University of the Health Sciences and consultant in gastroenterology and urology for the Food and Drug Administration.

In retirement, Agodoa will return to Seattle, where he completed his medical residency and postgraduate training in internal medicine, nephrology, renal pathology and rheumatology.

"Larry is a highly respected and valued leader, and his transition is a great loss to NIDDK," said NIDDK director Dr. Griffin Rodgers. "His insights and outstanding contributions have advanced NIDDK's mission and made a significant impact on public health. We wish him the very best in this exciting new chapter."

## DPCPSI's Anderson Retires

BY KELLEN ASHFORD AND ROBIN KAWAZOE

Dr. James M. Anderson, NIH deputy director for program coordination, planning and strategic initiatives (DPCPSI), retired June 30, after nearly 12 years of service.

When recently asked during a meeting of the DPCPSI Mentoring and Career Guidance Program what he would consider to be his best career decision, Anderson said taking the DPCPSI post.

"There are multiple reasons, including that the position enables me to apply all of my previous training, experience and skills

in conducting research, providing clinical care, and managing an academic department to my work at NIH," he said. "I would add that the opportunity to work with the



Dr. James M. Anderson, NIH deputy director for program coordination, planning and strategic initiatives, retired June 30.

exceptionally capable and dedicated staff and leadership at the NIH is another reason why moving to NIH was a great career move.”

“NIH was fortunate to recruit Jim to NIH in 2010,” said NIH acting director Dr. Lawrence Tabak. “His wide-ranging experience in clinical medicine and academic research and administration made him the ideal candidate for the job. Jim helped form the division and the offices within to become central NIH-wide coordinators for many thematic areas of science, including the NIH Common Fund.”

Under Anderson’s stewardship, DPCPSI grew from seven offices in 2010 to 14 offices that coordinate NIH-wide research and activities related to HIV/AIDS, research infrastructure, behavioral and social sciences, disease prevention, dietary supplements and nutrition as well as research to focus on the health of women, sexual and gender minorities, and American Indians and Alaska Natives.

In addition, Anderson brought together NIH-wide planning and evaluation functions in DPCPSI and prioritized development of new approaches for portfolio analysis and NIH-wide leadership in data science.

“It has been gratifying to oversee the development of the division into a highly effective leader and coordinator for multiple areas of cross-cutting science,” he said.

As a senior investigator in the NHLBI intramural program, Anderson continued his research focused on the molecular basis for defining paracellular transport and its implications for disease.

In recognition of his research and lifetime achievement, he received the Walter B. Cannon Award from the American Physiological Society—the highest research honor awarded by the organization—in 2014. Post-retirement, he will continue to serve as an editor for *Physiology*.

Prior to coming to the NIH in 2010, Anderson served as professor and chair of cell and molecular physiology at the University of North Carolina-Chapel Hill. He was a professor of internal medicine and cell biology and chief of the digestive diseases section at Yale School of Medicine until 2002.

After retirement, Anderson looks forward to spending more time with his wife and family and having the flexibility and time to pursue new interests.

## Former NIDDK Clinical Director Balow Retires After 50 Years at NIH

BY KATIE CLARK

After 31 years as clinical director in the NIDDK Division of Intramural Research and 50 years total at NIH, Dr. James “Jim” Balow has retired. Balow stepped down as NIDDK’s clinical director in 2020 and has since remained in his position as acting chief and senior investigator in NIDDK’s Kidney Diseases Branch.

“With his knowledge on topics affecting NIDDK, NIH and the broader medical community, Dr. Balow has earned enormous respect from his peers,” said NIDDK director Dr. Griffin Rodgers. “His reputation for fairness and objectivity has made him a frequent go-to person for those seeking sage advice, and he has provided invaluable counsel to NIDDK’s Office of the Director over the decades.”

After a fellowship in nephrology at Georgetown University Hospital in Washington, D.C., Balow began his NIH career with the National Institute of Allergy and Infectious Diseases in 1972 as a clinical associate with Drs. Anthony Fauci and Shelly Wolff and developed the first in-house nephrology patient consult service at the Clinical Center.

After joining NIDDK in 1977, Balow developed a world-class clinical research program on immunologically mediated glomerular diseases. He quickly rose through the ranks at NIH, becoming chief of the CC clinical nephrology service and chief of the kidney diseases section in NIDDK’s Kidney Diseases Branch in 1984, before becoming NIDDK clinical director in 1989. He has held many leadership positions at NIH and within the broader scientific community, including chair of the CC medical executive committee, ethics committee, consult review



committee, credentials committee and the NIH information technology management committee.

Balow has published more than 260 scientific papers and book chapters. Along with his longstanding NIDDK colleague Dr. Howard Austin III, Balow led establishment of the NIH standardized classification of the pathology of lupus nephritis and, with colleagues from the National Institute of Arthritis and Musculoskeletal and Skin Diseases, established the NIH regimen of pulse cyclophosphamide for treatment of lupus nephritis.

NIDDK has launched a national search for Balow’s replacement. Dr. Christopher Koh, NIDDK deputy clinical director and senior research physician in the Liver Diseases Branch, has been serving as acting NIDDK clinical director since October 2020. [E](#)

## VOLUNTEERS

### Volunteers Wanted for Sleep Study

NINDS researchers seek healthy volunteers ages 18-34 to participate in a study exploring patterns of brain activity that occur during sleep. You will have 2 overnight studies where you will sleep in the magnetic resonance imaging (MRI) scanner. Compensation provided. For more information, call (800) 411-1222 (TTY 1-866-411-1010). Refer to study #16-N-0031. Online <https://bit.ly/3Pbc9B>.

### Adults with Covid-19 Sought

NIMHD researchers are recruiting adults newly diagnosed with Covid-19 (within 72 hours). The study will collect physical health data using a temperature patch and digital wristband that will be provided. Collected data will be uploaded to an app using a smartphone and will help researchers better understand how Covid-19 progresses and its long-term effects in groups with different demographics and risk profiles. Contact the Office of Patient Recruitment at (866) 444-2214 (TTY users dial 711) or [ccopr@nih.gov](mailto:ccopr@nih.gov). Refer to study #000315. Online: <https://go.usa.gov/x676m>.

### Healthy Women Needed for Study

NICHD is seeking healthy women to compare with women who have experienced implantation failure and/or early or recurrent pregnancy loss. Researchers want to look at the uterine lining, the endometrium, to understand its role in implantation and miscarriage. Contact the Office of Patient Recruitment, (866) 444-2214 (TTY users dial 711) or [ccopr@nih.gov](mailto:ccopr@nih.gov). Online: <https://go.usa.gov/xzE5>. Refer to #000206-CH.

## New Virtual Guide for Discovery Lake on NIEHS Campus

BY KELLEY CHRISTENSEN

Discovery Lake, the 27-acre body of water between the NIEHS campus and facilities of the U.S. Environmental Protection Agency in Research Triangle Park, N.C., can now be enjoyed in a new way through the Discovery Lake Nature Trail virtual guide.

NIEHS's Joe Poccia, digital design manager for the Office of Communications and Public Liaison, along with Bill Steinmetz of the Health and Safety Branch and Rob Levine of the Operations and Security Branch worked to design new signage for the trail and create a corresponding web-based tour.

More than 120 species of birds call Discovery Lake home, as well as beavers, turtles and otters. Many of these animals can be seen from various vantage points along the trail, which can be appreciated as a 1.6-mile loop or in shorter sections. There are also several connections between the trail and the campus pedestrian pathway network that can expand the walking distance.

Small, picturesque bridges that span inlets along the lake contribute to the remarkably quiet, park-like environment. Visitors can also enjoy the lake by boating or fishing in designated areas.

"The new signage and virtual guide give visitors an opportunity to gain knowledge about common plant and animal species in our Discovery Lake ecosystem," said Steinmetz, who developed the tour's written content. "The tour information also has an



More than 120 species of birds call Discovery Lake home, as well as beavers, turtles and otters.

PHOTO: STEVE MCCA/W/NIEHS



The lake was made originally as a stormwater catchment but has become a beloved centerpiece of the research campus in Research Triangle Park, N.C.

PHOTO: STEVE MCCA/W/NIEHS

underlying focus on the interaction between humans and the surrounding environment."

Created in 1977, the lake was made originally as a stormwater catchment but has become a beloved centerpiece of the research campus.

The virtual tour was designed with big pictures and buttons to make it easy to navigate while on the move. Each marker on the map is large and clickable. Poccia said the team is in the process of installing QR codes on each of the trail markers so visitors can access the information for each location using the camera on their phones.

The web-based tour eliminates printing costs and paper waste. It will also be easy to update with new features, photos and information in the future.

"For me, the guide provides places to pause along the trail, to look around and to listen more closely than I normally would," Poccia said. "The breadth and diversity of the natural world is astonishing and the guide provides a starting point for exploration."



The virtual guide shows several connections between the trail and the NIEHS campus pedestrian pathway network.

IMAGE: NIEHS

View the guide at: <https://www.niehs.nih.gov/about/stewardship/lake/virtual-guide/index.cfm>. **R**