

AFTER 29 YEARS AS DDIR Gottesman Returns to Lab Full Time, Leaves Intramural Research Legacy

BY CARLA GARNETT

When Dr. Michael Gottesman was named deputy director for intramural research (DDIR) officially in October 1994, he was already on his third or fourth post at NIH and he'd been acting DDIR for a year. Over the 29 years since then, he steered the Intramural Research Program (IRP) successfully through numerous challenges—most recently a worldwide pandemic that temporarily halted most in-person research in 2020.

In August, responding to what he called both a push and a pull, Gottesman, the

longest-serving DDIR since World War II, stepped down to return full time to his NCI Laboratory of Cell Biology.

“There were a lot of considerations,” he said. “One of them was my advancing age—I was 75 last October... It seemed reasonable to me that somebody earlier in their career would be a better match for the job, which is very stressful and very time consuming. That was the push. The pull was my lab.

“I waited and waited and waited for cancer to be cured so I wouldn't have anything to do,” he quipped, “but I really feel like I have some good science left in me. We often talk about thinking globally and acting locally. I've been thinking

globally now for 29 years and it's time to act locally within my own laboratory.”



Dr. Michael Gottesman opens NIH Research Festival in 2015.

Historic Legacy at IRP

Gottesman logged nearly 3 decades in the DDIR hot seat. He served under 3 NIH directors—7, if you factor in those who have held the role on an interim basis. For perspective on his extraordinary tenure, you have to look back at the medical research environment at the time.

In 1994, NIH's IRP had been under close scrutiny for several years. Everything from its percentage of the NIH budget to peer review of its science had been appraised—often publicly,

SEE GOTTESMAN, PAGE 8



Dr. Tara Schwetz, NIH acting principal deputy director (I) and Dr. Alfred Johnson, deputy director for management, give thanks.

PHOTO: CHARLIE CHIA-CHI CHANG

MORALE BOOSTER RACES BACK Challenge Relay Returns After 2-Year Absence

BY AMBER SNYDER

The 37th NIH Institute Challenge Relay (and vendor fair) made a triumphant return on Sept. 21 after a 2-year pandemic hiatus.

Eighty teams registered (up 10 from 2019's 70 teams), proof of “not only how popular this event is, but also how important

SEE RELAY, PAGE 6



The post-anesthesia care unit (PACU) ran as team Golden Girls.

PHOTO: MARLEEN VAN DEN NESTE

BOOTS ON THE GROUND NIH Leaders Thank DOHS for Services During Pandemic

BY DANA TALESNIK

While all NIH'ers work to safeguard public health, subsets of staff are tasked with keeping all NIH'ers safe. During the pandemic, one such group—the Division of Occupational Health and Safety (DOHS), part of the Office of the Director's Office

SEE DOHS, PAGE 4



NIAID's Lane collects an “Oscar.” See story, p. 12.

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NIMHD Hosts James for Native American Heritage Month

Nov. 3

For Native American Heritage Month, the NIMHD Director's Seminar Series will host Dr. Judith A. James, vice president of clinical affairs at Oklahoma Medical Research Foundation on Thursday, Nov. 3 at 2 p.m. ET. Her talk is titled, "Improve Rheumatic Disease/Decrease Disability in American Indians." The virtual presentation can be viewed via NIH videocast. Visit <https://bit.ly/3TyR2ZY> for details about NIMHD seminars.



Dr. Judith A. James

PHOTO: OKLAHOMA MEDICAL RESEARCH FOUNDATION



First UNITE Progress Report Published

Earlier this month, NIH UNITE published information about the initiative's initial impact on health disparities and minority health research, the external biomedical and behavioral workforce and NIH staff. The UNITE Progress Report for Fiscal Years 2021-2022 describes NIH's actions to identify and address structural racism that may exist within NIH and in the biomedical research enterprise. The report focuses on progress toward these goals:

- Elevate HD/MH research across institutes and centers
- Promote equity in the NIH-supported biomedical research ecosystem and in NIH's internal workforce
- Improve accuracy and transparency of racial and ethnic equity data

UNITE was formed amid stark health inequities highlighted by the Covid-19 pandemic and the horrific surge of racially motivated violence in 2020 and 2021.

"At NIH, these events led us to see the reality of racial inequities in biomedical and behavioral science with fresh eyes," noted Dr. Marie Bernard, NIH chief officer for scientific workforce diversity

Chemistry Nobel Awarded to Two NIH Grantees

NIH supported the research of 2 of the 3 recipients of the 2022 Nobel Prize in Chemistry, which was announced by the Royal Swedish Academy on Oct. 5.

Dr. Carolyn Bertozzi and Dr. K. Barry Sharpless shared the award with Denmark's Dr. Morten Meldal "for the development of click chemistry and bioorthogonal chemistry."

Bertozzi is the Anne T. and Robert M. Bass professor in the school of humanities and sciences at Stanford University and a professor of chemistry, with courtesy appointments in chemical & systems biology and radiology.

Since 1999, she has received continuous NIH funding primarily from NCI, NIAID and NIGMS, totaling \$40,089,836.

Sharpless, the W.M. Keck Professor of Chemistry at Scripps Research, has received near continuous funding from NIGMS since 1975 totaling \$15,935,775.

He was also awarded the 2001 Nobel Prize in Chemistry for his NIH-supported research on chirally catalyzed oxidation reactions.

In addition, while NIH did not support the work of this year's Nobel Prize in Physiology or Medicine to Dr. Svante Pääbo at Max Planck Institute for evolutionary biology, Dr. Jim Mullikin at NHGRI has collaborated extensively with him.

To date, 172 NIH-supported researchers—including several who have served as NIH staff scientists—have been sole or shared recipients of 101 Nobel Prizes.

and UNITE co-chair. "We were dismayed by the inestimable loss of talent, creativity and innovation due to long-standing cultures of exclusion. And we recognized that it was time to unite and enact a seismic shift in NIH systems, policies, and cultures."

Readers can explore this inaugural progress report—developed in collaboration with UNITE co-chairs, committees and allies—to learn about its accomplishments and its next steps, including: enhancing its understanding of NIH investments in HD/MH research; releasing new priority programs and policies to enhance workforce diversity, equity, inclusion; bolstering NIH's culture of inclusive excellence and supporting diverse and equitable hiring practices; and creating opportunities to listen to the needs and experiences of the workforce.

"While we take pride in UNITE's achievements and

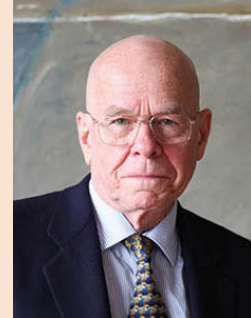


The 2022 Chemistry Nobel laureates are NIH grantees. Above, Dr. Carolyn Bertozzi

PHOTO: ANDREW BRODHEAD/STANFORD UNIVERSITY

At right, Dr. K. Barry Sharpless

PHOTO: IKE SHARPLESS/COURTESY SCRIPPS RESEARCH



In 2014 in Masur Auditorium, then NIH director Dr. Francis Collins (l) and NHGRI director Dr. Eric Green (r) joined future Nobelist Dr. Svante Pääbo (second from r) as he reunited with collaborator Dr. Jim Mullikin of NIH's Intramural Sequencing Center. Read the full story at <https://bit.ly/3rrQ31p>.

future direction, we recognize that the significant, lasting change UNITE seeks to achieve is a long-term endeavor," Bernard said. "We remain committed to growing UNITE's efforts. Accountability and transparency are cornerstones of UNITE, and we will continue to share UNITE's progress in catalyzing change to foster equity for all."

Find the full progress report at: <https://bit.ly/3T3yWiy>. For more information on UNITE, sign up for email updates at: <https://bit.ly/3eDD6yG>.

Share Your Pet Halloween Photos

The *Record* wants to share photos of your pet in costume for Halloween. Send the image with a short caption, your name and pet's name, and your job at NIH to nihrecord@nih.gov. We'll run the best we get by Nov. 1 in our Nov. 11 issue.

Workshop Explores Strategies to Tackle Health Disparities in Osteoarthritis

BY TRISH REYNOLDS

A recent 2-day NIH workshop aimed to better understand health disparities in caring for and treating people with osteoarthritis (OA) and the role played by social determinants of health. NIAMS, NIA and NIMHD sponsored the event.

OA is a degenerative joint disease and a leading cause of pain and disability. There are currently no FDA-approved therapies to prevent or slow its progression, and current treatments focus on reducing pain or—at later stages of disease—surgical replacement of the joint.

The meeting convened osteoarthritis investigators and health disparities researchers to discuss why inequities in OA treatment outcomes and access to care exist and how to address these challenges.

In opening remarks, NIAMS director Dr. Lindsey Criswell called for participants to “continue to look holistically at all the opportunities to work across the many fields of science in order to equitably reduce the impact of disease caused by osteoarthritis.”

Throughout the meeting, speakers outlined documented health disparities in OA. For example, knee OA is more prevalent and more severe in African Americans than in Whites. African Americans are also more likely than Whites to delay doctor-recommended knee replacement and tend to experience worse post-operative outcomes. Additionally, African Americans perceive joint replacement to be less useful than Whites due to different expectations and knowledge about the procedure.

Breakout sessions, which expanded upon the workshop topics, let participants identify gaps and opportunities to improve issues related to health disparities in OA.

“The diverse group of participants provided collaborative and informative discussions,” said meeting organizer and NIAMS scientific program director Dr. Kristy Nicks. “Several overlapping themes emerged.”

The need to better integrate resources outside of the traditional health care arena into OA patient care was a common suggestion among participants. For example, community health workers, social workers, community centers and libraries can all play an important role in bridging the gap between OA patients and health services.

Fellow meeting organizer Dr. Patricia Jones, who directs NIA’s Office of Special Populations, reiterated the need for and value of community involvement. “The community-level discussions were particularly insightful in enlightening us on important points to consider that may

be highlighted in the literature but not fully appreciated in the real-world context,” she later said about the meeting. “Participants were able to provide that context in real time.”

Given the role of excessive weight and physical inactivity in the development and progression of OA, participants also discussed the need to emphasize and integrate evidence-based interventions that can lead to improved health. To improve outcomes and address disparities, programs should be tailored to specific patient communities and cultures.

Enhancing patient-provider communication and establishing easily accessible OA information resources were additional meeting themes. Resources need to target both patients and providers, while addressing language, cultural and health literacy barriers.

“An important objective for this meeting was to identify research gaps and needs that could be addressed in future NIH activities,” said Nicks. “Participants expressed continued support for large OA studies that are

collecting data from underrepresented and understudied populations.”

Additional research opportunities included the need for standardized OA measures and consistent reporting practices to enhance clinical assessment and outcome analysis. Another echoed theme was the need to leverage evidence-based resources and methods from other fields to address OA health disparities.

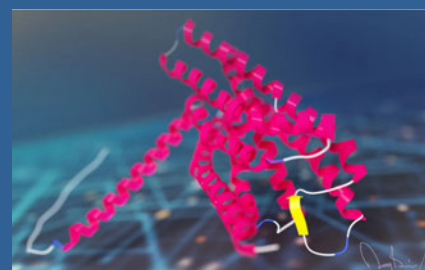
“Although the three NIH components leading this effort focused specifically on OA, we hope this workshop can serve as a model for other NIH entities and other federal agencies that are committed to reducing disparities in, and the overall impact of, diseases across the NIH mission,” Criswell concluded. **R**



Dr. Lindsey Criswell



Dr. Kristy Nicks



ON THE COVER: This free fatty acid receptor 2 protein of a black bear is an example of a complex structure that has been solved with the program called AlphaFold. Read more about AlphaFold and the use of AI to battle antibiotic resistance in the NIH Director’s Blog at <https://bit.ly/3SEheSG>.

IMAGE: DONNY BLISS/NIH OCPL

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DOHS director Dr. Jessica McCormick-Ell thanks her division as ORS director Colleen McGowan, who moderated the event, looks on.

DOHS

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of Research Services—took on unforeseen roles in supporting employees’ physical and mental health.

NIH leadership recognized their contributions at a Sep. 21 gratitude event, continuing the tradition of thanking the above-and-beyond efforts of NIH’ers throughout the pandemic.

“I’m awestruck by everything you all do every day,” said Dr. Jessica McCormick-Ell, DOHS director.

“You without fail jump in and do whatever you need to do, as you’ve always done,” said NIH deputy director for management Dr. Alfred Johnson, who knows firsthand the plethora of DOHS duties,

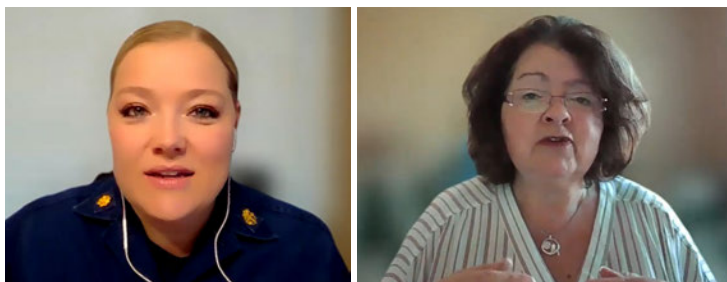
having previously served as ORS director. He thanked “the boots on the ground, because that’s where it all really happens.”

In normal times, DOHS is the division called when there’s an injury, hazard or exposure. DOHS staff also are tasked with mental health support, vaccine clinics, risk assessments, design review for renovations and construction projects, inspections and compliance, as well as crafting the comprehensive safety plan NIH uses.

During the pandemic, DOHS provided 2,000 clinical encounters per quarter for occupational health services, supported research pivots for Covid and collaborated to ensure supply chain needs were met. DOHS also conducted regular safety inspections, including 78 walk-throughs of the Central Utility Plant to identify and correct hazards.

“It was uplifting to see all the work you all have done that helps to keep us safe and healthy here on campus and more broadly in the community,” said Dr. Tara Schwetz, NIH acting principal deputy director. “That impact ripples out...nationwide and beyond.”

McCormick-Ell thanked the division for rising to the challenges of an extraordinary time.



Lt. CDR Megan Brose (l) delivered remarks to the room remotely from Hamilton, Mont. On right, EAP’s Anna Verschoore also spoke virtually.

“The one thing I’ve heard over and over again is that you made people feel safer here than they felt anywhere else,” she said. “You helped alleviate anxieties, you listened to fears and concerns and you provided excellent guidance and advice to NIH staff.”

Several DOHS staff offered brief reflections during the hybrid event that featured about 30 people in a Bldg. 31 conference room and many more on Zoom.

Lt. CDR Megan Brose, the safety lead at NIH’s Rocky Mountain Laboratories (RML) in Hamilton, Mont., spoke virtually about the small but mighty maximum-containment NIAID research facility focused on current and emerging infectious diseases.

“Over the last couple of years,” she said, “our researchers conducted many critical experiments that were instrumental in the science behind the pandemic response, including initial rodent and non-human primate animal model studies of Moderna, Pfizer and AstraZeneca Covid vaccines.”



DOHS staff in attendance gather for a group photo with NIH leaders, including Schwetz, Johnson, McGowan, McCormick-Ell and Chertow.

PHOTOS: CHARLIE CHIA-CHI CHANG



Vince Burton, Lt. Josh Greenberg and Rhonda Walther delivered in-person remarks about how their work pivoted during the pandemic.

PHOTOS BY CHARLIE CHIA-CHI CHANG



The team of 11 in Montana also supported the researchers who tested the stability of SARS-CoV-2 in different conditions and its susceptibility to disinfectants, research that informed national safety guidelines.

“Our group had to pivot quickly not only to get our safety duties done to support the pandemic response, but also to get our normal non-Covid duties completed at the same time,” she said.

During the pandemic, research continued into other infectious viruses such as Ebola and Marburg and, more recently, monkeypox. Teams continued routine biosafety duties while moving to a virtual format, including electronic review of biosafety data to facilitate rapid research.

“We did all this without a pause in research operations,” recounted Brose. “And in fact, there was a dramatic increase in research experiments conducted here during that time, which also meant a dramatic increase in our workload.”

The workload also increased and shifted dramatically for DOHS’s Employee Assistance Program, which provides consultations, referrals and training to support emotional wellbeing and work-life balance.

At the onset of the pandemic, EAP provided services by phone then transitioned to telehealth, including a virtual short-term clinic for psychiatric consultation as staff and supervisors struggled with a range of new stressors.

“We extended the number of sessions because the acuity of problems that people were presenting to us were much higher,” said EAP manager Anna Verschoore, who also spoke virtually.

“We’re incredibly humbled to feel so connected to the mission over the last

couple years,” she said, “helping [NIH’ers] problem-solve and cope—particularly with the anxiety about Covid exposure. What was most amazing for me was witnessing the resilience and tenacity from the workforce,

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“The one thing I’ve heard over and over again is that you made people feel safer here than they felt anywhere else.”

—DR. JESSICA MCCORMICK-ELL

★ ★ ★

especially those who found really creative ways to work around all the restrictions and uncertainties.”

Amid all the confusion, especially early in the pandemic, “trust had to come into play,” said AED program support Vince Burton, who applauded NIH leaders for their collaboration and guidance.

He reflected on how his group worked together to make sure each piece of the puzzle was placed, “so our leadership wouldn’t be inundated with a lot of menial issues.”

Burton manages the AED program—defibrillators, blood pressure machines, trainings—which usually remains in the periphery. “You don’t see it until you really need it,” he said. During the pandemic, he too pivoted to additional duties, including volunteering with the Covid-19 car testing line and verifying staff vaccination data.

“We were happy to put in our own piece and make a difference,” Burton said.

During such extenuating circumstances, noted Johnson, “even the smallest piece of this puzzle is very important.”

Rhonda Walther, safety support at NIH’s Baltimore campus, credited longtime relationships for their success in supporting lab, clinical and administrative staff throughout the pandemic.

In Baltimore, their small team “became that first face


of DOHS and in some cases the only face of DOHS,” said Walther. She recounted often having to scramble and shift gears to stay informed and get the right answers fast.

Working through the pandemic was “like being in the heat of the battle at all times,” said Lt. Josh Greenberg, who provides safety support in DOHS’s Technical Assistance Branch. His team helped with vaccinations and testing, among other Covid-related duties. “We

filled whatever roles were needed and did it happily,” he said.

Greenberg was one of several panelists who deployed with the Public Health Service on multiple health and safety missions during the pandemic. These NIH’ers noted the challenge of juggling their own missions while assuring work coverage when numerous colleagues also deployed.

“As we pivot to more calm seas, I hope you’ll be able to really reflect on your accomplishments and absorb all you have built these last few years,” said Dr. Jessica Chertow, associate director of scientific resources at ORS. “I am struck by the enormity of the machine that you operate, and how refined

that operation is, and that has allowed you to achieve and produce at such high levels that no one would have expected,” during such tenuous circumstances. “Keep innovating. Keep looking toward the future.” 



Dr. Jessica Chertow



At left, for Covid safety, there were no batons passed. Fist or elbow bumps served as handoffs. At right, the Intramural Incredibles are poised to compete.

Above, The PCR: Postbac Chain Relay, which includes (from l) Nicole Hsiao-Sánchez, Marcel De Jesús, Madalyn Jones, Andrew Cook and Will Rich, won the race by a mere second over Follow the LDDR (below).

Relay

CONTINUED FROM PAGE 1

it is for morale and how much it was needed for everyone involved,” said David Browne, event organizer and co-president of the NIH Recreation & Welfare Association.

Two-time defending champions Worktime’s Over yielded their crown to The PCR: Postbac Chain Relay. This year’s winners blazed across the finish line with a final time of 14:59, with second-place finishers Follow the LDDR one second behind in a down-to-the-wire battle. My Gel Runs Faster Than Yours

took third, and Worktime’s Over won their heat but ultimately finished fourth overall.

The race was split into 2 heats this year. Five-member teams with a variety of gender representation ran the half-mile loop around Bldg. 1. Runners started on Center

Drive, then turned right to ascend South Drive, and finished on a downhill over Memorial and Center. The final runner on each team had another brief uphill climb at the end, turning into the driveway between Bldgs. 1 and 2 for the grand finish.

NIH Police directed traffic to keep runners safe, but one type of unforeseen obstacle was left behind by the campus geese. “The goose

poop [on the road] was an extra variable,” joked Michael C. of team Engine X.

Relay Top 25 Finishers

1	14:59	The PCR: Postbac Chain Relay	54
2	15:00	Follow the LDDR	71
3	15:05	My Gel Runs Faster Than Yours	19
4	15:31	Worktime’s Over	46
5	15:49	The Neoantigens	29
6	16:50	Short Gut	52
7	17:07	All Pain No Gain	16
8	17:10	On your marmoset...GO!	59
9	17:20	B1 Brain Brigade	61
10	17:42	Anagramic Threshold	28
11	17:50	(NI)AAA Batteries	42
12	18:08	Hertz So Good	72
13	18:08	RuntimeError	62
14	18:12	We just RUN assays	67
15	18:16	Paper Tigers	8
16	18:21	Too GUT to be true!	53
17	18:21	Electro-for-race	74
18	18:22	Safety’s Always First	63
19	18:25	Wurtz Possible Runners	45
20	18:37	Run Now, Rehab Later	47
21	18:39	Look! A Kitten!	6
22	18:51	Eosinothrills	66
23	18:56	The Circulators	17
24	18:56	The Small but Mighty Nurses	80
25	19:03	Farel Kats	13



Below, My Gel Runs Faster Than Yours came in third.

PHOTOS: MARLEEN VAN DEN NESTE



NEI Strong! Competitors and cheerleaders from several NEI teams, including House of the TH17, House of Vision and perennial favorite Wurtz Possible Runners, strike a pose on the front lawn of Bldg. 1.

PHOTO: DUSTIN HAYS



ORS director Colleen McGowan (center, l) and Dr. Lawrence Tabak (center r), performing the duties of NIH director, spread... enthusiasm with team Bacillus anthracers.



“NIH employees understand the importance of staying active and having fun while doing so,” said Tabak, who welcomed runners with McGowan (shown, l). At right, R&W’s David Browne commented on how the relay boosts morale throughout the NIH community.

Dr. Lawrence Tabak, performing the duties of NIH director, and Colleen McGowan, ORS director, provided opening remarks for the event.

“NIH employees understand the importance of staying active and having fun while

doing so,” Tabak said.

He also recognized the competitive nature of some of the runners. “No pressure, but I’ve seen some of the teams here practicing on weekends,” he quipped.

“We like competition!” McGowan agreed.

As always, team names and costumes were the highlight of the event, with standouts such as The Golden Girls (in brightly colored wigs), On Your Marmoset... Go! (wearing monkey-ear headbands) and

Smooth Operators (clad in surgical scrubs).

This year’s winning team had representatives from 5 ICs: team captain Nicole Hsiao-Sánchez of NICHD, and members Madalyn Jones (NIAID), Andrew Cook (NIDDK), Marcel De Jesús (NIAAA) and Will Rich (NCI). The team practiced together for several weeks leading up to the event, said Hsiao-Sánchez, “finish[ing] our respective experiments at our labs, and still show[ing] up to practice after a long day of work.

“As young scientists in training, our team epitomized the spirit of collaboration that is the foundation of great science.”

NCBI Teams Run in Memory of Iskhakov

NLM’s National Center for Biotechnology Information fielded at least six teams, all running in memory of NCBI engineer and longtime NIH relay enthusiast Alexey Iskhakov, who passed away on Apr. 13.

Dozens of racers ran with teams named Proud Snail Hunters, Here for the Candy, Paper Tigers, Engine X, Huff N Puff N Stuff and VariANTZ to honor Iskhakov’s legacy in the event.

“Alexey was a tireless supporter of NCBI’s participation in the NIH relay,” recalled NCBI staff scientist Colleen Bollin, technical program manager of the Information Engineering Branch’s Sequence Archives and Submissions Program. “He recruited new runners by showing up at the desks of newly arrived staff and asking them to join, frequently bribing them with candy to get them to give it a try even if they didn’t consider themselves runners. He would contact runners from the previous year and convince them to run in the current relay.

“Sometimes people formed their own teams, but often Alexey would build new teams from his list of recruits, building friendships between people from different parts of NCBI. Alexey would



NCBI fielded at least 6 teams to honor the legacy of longtime relay enthusiast Alexey Iskhakov (l). At right, he cheers on fellow NCBI'er Myra Derbyshire, who was running for a different NCBI team circa 2010.

register as many teams as he could and maintained a list of alternate runners for the frequently occurring situation where runners had to drop out due to illness or injury. Alexey also recruited photographers to capture the race. Every year, Alexey organized two practice walks through the race course, during which he distributed candy and gave out tips for how best to run the course.

“On the day of the race, he gathered the runners, photographers and spectators, handed out more candy and guided the group to the race course. After running his own lap, Alexey would often run

part or all of the lap with the other members of his team, encouraging them and cheering them on, and then go on to run with any other NCBI runner that he could find, cheering them on as well.

“After the race, Alexey handed out even more candy and helped people collect the T shirts that were the usual participation prizes,” she continued. “Alexey also coordinated the sharing of

photos after the race and shared the results.”

Iskhakov also was known for running under colorful team names. In 2007, he and teammates entered as “Supersonic Pancakes” but could not recall the origins of the moniker.

“There were two Russian women who formed a whole Russian team that consisted of Russian-speaking people from the former USSR,” he had said, when asked by the *NIH Record*. “I do not know how they invented that name. I think that it is better to ask them about it...Seems that ‘pancakes’ is a free translation of the Russian word ‘bliny’—Russian-style crepes.”

Over the years Iskhakov made valuable contributions to multiple NLM/NCBI projects including development and maintenance of Links and History systems for Entrez, VDB storage system and most recently SRA processing pipeline.

“We remember Alexey as a highly competent engineer who was well respected by his colleagues and who helped his teams to solve many challenging problems,” said Dr. Stephen Sherry, NLM/NCBI acting director, in a note about Iskhakov’s passing. “Alexey was highly dedicated to the NCBI mission and team and never made compromises to do the things he believed in. He will be missed.”



NCBI relay racers, with Dr. Stephen Sherry (standing, l) and staff scientist Colleen Bollin (standing c, holding the banner’s “B”)

Gottesman

CONTINUED FROM PAGE 1

in the media. In fact, a congressionally mandated panel had that spring issued 42 recommendations for improving the IRP.

“The intramural program was receiving quite a bit of criticism,” recalled former NIH director Dr. Harold Varmus, who appointed Gottesman as DDIR. “There were many on the outside who were critical. Some of that was related to the fact that success rates for extramural grantees were low and people were jealous of the intramural program and concerned about how rigorously it was being managed.

“What I needed was somebody I knew and trusted well—Michael and I knew each other and had for a long time—somebody who was highly respected as a critical scientist, someone with a sense of humor, and importantly, somebody who was deeply



In a CC corridor, Gottesman (second from r), along with then-NIH director Dr. Francis Collins (c), helps cut the ribbon on renovated space for the Foundation for Advanced Education in the Sciences as part of Research Festival 2013.

devoted to the intramural program and its success,” Varmus said. “Michael had already displayed his ability to run something—he had been the acting director of the Human Genome Center, while they were waiting for a new director—and I respected and liked him immensely. One of the first things I did [as NIH director] was my effort to seduce Michael to take the position, sitting outside of Bldg. 1 on a day in September 1993. Happily, he gave it some thought and decided to do it. Ever since then, he’s prospered dramatically in the job because he is a good manager. He listens to everybody. Everybody likes Michael. And he’s a superb scientist and a very good human being.”

Following a Blueprint

Gottesman, who had served on one of several committees evaluating the



Gottesman addresses a Clinical Center Town Hall meeting about restructuring hospital operations in 2016.

IRP, took the list of recommendations as marching orders.

“That report was pretty much a blueprint for changes that would be made in the intramural program to sort of update it a bit,” Gottesman said, “to make sure it still had its cutting edge, make sure it could still recruit outstanding scientists.”

Within 5 years, he had overseen implementation of everything in the “big red book” (as the recommendations came to be called)—a stronger tenure system had been devised, the Clinical Center was being renewed, training for the next generation of biomedical investigators had been expanded and opened to a more diverse community.

NIDA scientific director Dr. Amy Hauck Newman first met Gottesman when he invited her to lunch after she gave a Director’s Seminar Series talk in 1996.

“I was a ‘rare bird’ in those days at the NIH—a female medicinal chemist, working on medications to treat cocaine use disorder, with 3 children, 6 and under,” she recalled. “Nevertheless, that invitation, first to give a talk in Wilson Hall and then to have lunch with the DDIR, was empowering. Over the years, I rose through the ranks of NIDA, had a few occasions to interact with Michael again, and finally became the SD in November 2020. He told me then that when he first met me, he expected that this would be my path. The fact that Michael likely empowered hundreds if not thousands of young tenure-track investigators, PIs and ultimately SDs over the 29 years he served as DDIR is

both remarkable and highly laudable. He is certainly a diamond in the (NIH) rough.”

Among the gnarly terrain Gottesman has had to navigate are various issues that tend to capture headlines and create headaches: investigators’ honoraria and potential conflicts of interest, use of stem cells in research, patient safety and the culture of research at the Clinical Center and allocation of resources to early-career scientists versus long-term veterans.

“Michael’s brilliance is evident from his impeccable memory and in-depth knowledge of nearly every scientific topic studied at the NIH,” said former NIH director Dr. Francis Collins, in a statement following Gottesman’s announcement to step down. “His experience in running a laboratory with a focus on cancer has kept him keenly aware of the goals and needs of NIH’s scientific staff, including clinicians. One certain key to Michael’s success as DDIR has been his own experience as a physician-researcher at NIH.”

Half Century of NIH Experience

In 1971, just a year after graduating from Harvard Medical School, Gottesman was recruited as a Public Health Service “Yellow Beret” into NIH’s Research Associates Program.

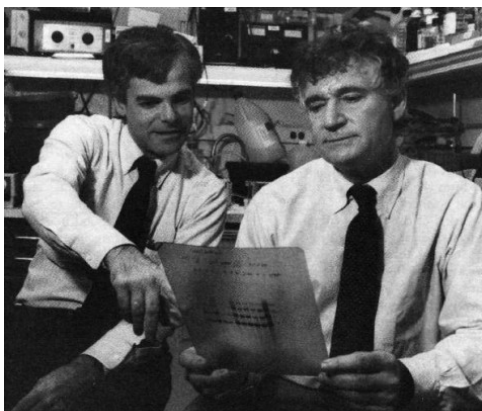
“NIH was the premier place for medical research in the 70s,” he observed. “And I would warrant it still is, but there there’s more competition now than there used to be.”

Despite his awareness of NIH’s stellar reputation, Gottesman made his rounds before making his leap.

“I talked to a lot of people, met with a lot of people,” he remembered. “I found



Then-NIH director Dr. Harold Varmus (l) joined Gottesman as he’s sworn in as a rear admiral in the Public Health Service in 1998. Serving as acting U.S. surgeon general at the time, Dr. Audrey Manley conducted the ceremony. Varmus currently serves as the Lewis Thomas University professor of medicine at Weill Cornell Medicine and a senior associate at the New York Genome Center.



Gottesman in a lab with NIH legend Dr. Ira Pastan, in 1989

somebody who I really liked. That's Marty Gellert...It was a fantastic experience for me. I had done some research before in summers and so on, but Marty is a quintessential scientist. He's very rigorous, he's very creative. He gave me a lot of freedom in the laboratory."

After 3 years in what was then the National Institute of Arthritis and Metabolic Diseases (now NIDDK), Gottesman left NIH to finish his medical residency. The career die had been cast, however. He'd loved science from an early age—dabbling in rocket science as a kid, even—and his NIH stint sealed the desire to pursue medical science.

"I thought it was going to be some combination of practice and basic research, with the emphasis on basic research," he said. "When I did the research in the laboratory, I always thought, well, one day this will bear fruit and will be clinically relevant. I think every physician who does research has that in the back of his or her mind, that maybe one day I'll be able to treat patients with what I'm learning in the laboratory."

Tangible Returns

Gottesman returned to NIH in 1976, earning a tenure-track lab post at the widely acclaimed NCI Laboratory of Molecular Biology founded by NIH legend Dr. Ira Pastan.

"It's important to point out some of the things that Michael has done along the way that have been particularly important," said Varmus, who also trained at NIH under Pastan. "One is persuading the scientific directors, who can be quite independent minded, to improve the rigor of their review of intramural programs. He helped to get the Stadtman [Tenure-Track Investigators]

Program put in place. That has had a huge effect on the quality of new scientists in the program. And he did a great job in improving the number of graduate students working on the NIH campus, in finding ways for students in many graduate programs around the country to come to NIH and do their thesis work. That also led the way to the creation of the [NIH] Oxford-Cambridge Scholars Program."

His colleagues and associates unanimously say Gottesman's success as DDIR stems naturally from his personality.

"I saw Michael bring the perspectives of an outstanding scientist to the position of DDIR, as did his predecessors before him," said Dr. Richard Wyatt, deputy director of NIH's Office of Intramural Research who has been Gottesman's close advisor in the job from the beginning. "He also had the distinctive capacity and patience to listen to intramural researchers with calmness,

compassion, civility, fairness, humility and wisdom. It was an honor to support him in his role as DDIR for nearly 30 years."

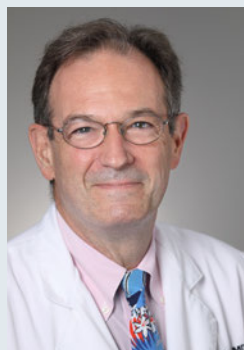
Dr. Lawrence Tabak, performing the duties of NIH director, noted that Gottesman has left his own blueprint for the job.

"With his contagious optimism, adept problem-solving attitude and wise policy-making, Michael has created a strong and living legacy to guide the future DDIR," said Tabak. "The programs he developed have touched every stage of a scientific career—from high school and college internship programs, graduate studies, and postdoctoral training, to recruitment, career development, tenure, and emeritus transition of faculty. His leadership will be remembered in many things, including the remarkable improvements seen in research integrity and the recruitment and subsequent achievements of a diverse scientific workforce." **R**

Holland To Give 2022 Astute Clinician Lecture

CELEBRATING 25 YEARS

NIH distinguished investigator Dr. Steven Holland will give the Astute Clinician Lecture as part of the NIH Director's Wednesday Afternoon Lecture Series on Nov. 2 from 2 to 3 p.m. via NIH videocast. He will present "Anticytokine Autoantibodies: Causes, Concomitants and Complications of Infectious Diseases." Holland's lecture marks the 25th anniversary of the Astute Clinician Lecture Series.



Dr. Steven Holland

Holland is NIAID scientific director and chief of the immunopathogenesis section, which uses a bench-to-bedside model for a fully integrated approach to infectious disease—incorporating the molecular genetics of the host and the pathogen as well as mechanisms of pathogenesis, together with clinical appreciation and investigation—to gain new insights into both mechanisms of action and avenues of therapy.

Holland earned his M.D. from Johns Hopkins University, where he remained for his internal medicine residency, chief residency, and fellowship in infectious diseases. He came to the NIAID as a National Research Council fellow in 1989 in the Laboratory of Molecular Microbiology, working on transcriptional regulation of HIV.

In 1992 he joined the newly formed Laboratory of Host Defenses, shifting his research to the host side, with a focus on phagocyte defects and their associated infections. His work centered on the pathogenesis and management of chronic granulomatous disease, as well as other congenital immune defects affecting phagocytes, including those predisposing to mycobacterial diseases.

Holland became NIAID scientific director in 2016.

The Astute Clinician Lecture was established in 1998 with a gift from the late Dr. Robert W. Miller and his wife, Haruko. The talk honors U.S. scientists who have observed unusual clinical occurrences and, by investigating them, have opened an important new avenue of research. Learn more at <http://www.cc.nih.gov/researchers/lectures/astuteclin.html>.

The lecture will be held in Lipsett Amphitheater, Bldg. 10, and viewable online live via NIH videocast. To attend in person, email WALSoffice@od.nih.gov so that the number of attendees can be monitored for Covid-19 safety reasons.

More information about WALs is posted at <https://oir.nih.gov/wals>. Sign language interpreting services are available upon request. For interpreting services or other reasonable accommodation, email WALSoffice@od.nih.gov or call (301) 594-6747.

Bionic Pancreas Improves Type 1 Diabetes Management

A device known as a bionic pancreas, which uses next-generation technology to automatically deliver insulin, was more effective at maintaining blood glucose (sugar) levels within normal range than standard-of-care management among people with type 1 diabetes. Results



iLet bionic pancreas device

PHOTO: BETA BIONICS

of this multicenter clinical trial, primarily funded by NIDDK, were published in the *New England Journal of Medicine*.

Automated insulin delivery systems, also called artificial pancreas or closed-loop control systems, track a person's blood glucose levels using a continuous glucose monitor and automatically deliver the hormone insulin when needed using an insulin pump.

Compared to other available artificial pancreas technologies, the bionic pancreas requires less user input and provides more automation because the device's algorithms continually adjust insulin doses automatically based on users' needs. Users initialize the bionic pancreas by entering their body weight into the device's dosing software at the time of first use.

Users of the bionic pancreas also do not have to count carbohydrates, nor initiate doses of insulin to correct for high blood glucose. In addition, health care providers do not need to make periodic adjustments to the device settings.

"Keeping tight control over blood glucose is important in managing diabetes and is the best way to prevent complications like eye, nerve, kidney and cardiovascular disease down the road," said Dr. Guillermo Arreaza-Rubín, director of NIDDK's diabetes technology program. "The bionic pancreas technology introduces a new level of ease to the day-to-day management of type 1 diabetes, which may contribute to improved quality of life."

The 13-week trial, conducted at 16 clinical sites across the country, enrolled 326 participants ages 6 to 79 years who had type 1 diabetes and had been using insulin for at least one year. Participants were randomly assigned to either a treatment group using the bionic pancreas device or a standard-of-care control group using their personal pre-study insulin delivery method.

In participants using the bionic pancreas, glycated hemoglobin, a measure of a person's long-term blood glucose control, improved from 7.9 percent to 7.3 percent, yet remained unchanged among the standard-of-care control group. The bionic pancreas group participants spent 11 percent more time, approximately 2.5 hours per day, within the targeted blood glucose range compared to the control group. These results were similar in youth and adult participants. Improvements in blood glucose control were greatest among participants who had higher blood glucose levels at the beginning of the study.

The study is one of several pivotal trials funded by NIDDK that is providing safety and efficacy data needed for regulatory review and licensure to make the technology commercially available.

NIDDK director Dr. Griffin P. Rodgers said, "While we continue to search for a cure for type 1 diabetes, devices like the bionic pancreas can allow people to worry less about their blood-glucose levels and focus more on living their fullest, healthiest lives."

A Better Treatment for Cat Allergies?

An NIH study found an experimental approach added to allergy shots—a standard cat allergy treatment—made it more effective and faster acting, and the benefits persisted for a year after treatment ended. The findings were published in the *Journal of Allergy and Clinical Immunology*.



PHOTO: PORMEZZ/SHUTTERSTOCK

NIAID-supported investigators tested whether giving a monoclonal antibody called tezepelumab plus cat allergy shots to people with allergic rhinitis caused by cat allergens would improve symptom relief over allergy shots alone. Allergic rhinitis involves inflammation of the nasal membranes and causes symptoms such as sneezing, runny nose and watery, itchy eyes.

Tezepelumab blocks a protein called thymic stromal lymphopoietin (TSLP), which is secreted by cells that cover the surface of organs like the skin and intestines or that line the inside of the nose and lungs in response to signals of potential danger. In allergic disease, TSLP helps initiate an overreactive immune response to otherwise harmless substances like cat dander, provoking airway inflammation that leads to allergic symptoms.

The Phase 1/2 clinical trial, called CATNIP, enrolled 121 adults ages 18 to 65 years at nine medical centers in eight cities across the United States.

The participants were assigned at random to receive either tezepelumab plus subcutaneous cat allergy shots, tezepelumab plus placebo shots, placebo plus allergy shots or a double placebo. No one knew who received which regimen until the end of the study.

Participants received one spritz in each nostril of a nasal spray containing cat allergen extract six times during the two-year study period. The study team recorded participants' level of nasal symptoms and airflow through the nose at 5, 15, 30 and 60 minutes after receiving the nasal spray and hourly for up to five hours thereafter.

The investigators found that participants' worst nasal symptoms were 36 percent lower at the end of treatment in the group that received tezepelumab plus allergy shots compared to the group that received allergy shots alone, and 24 percent lower a year later.

These results show for the first time that adding a cytokine inhibitor to allergy shots can reduce allergic rhinitis symptoms for an extended period after just one year of treatment.

With the successful outcome of the CATNIP trial, plans are underway for a NIAID-supported Phase 2 trial of tezepelumab plus oral immunotherapy for food allergy.

A 3D Map Reveals DNA Organization Within Human Retina Cells

NEI researchers mapped the organization of human retinal cell chromatin, the fibers that package 3 billion nucleotide-long DNA molecules into compact structures that fit into chromosomes within each cell's nucleus. The resulting comprehensive gene regulatory network provides insights into regulation of gene expression in general, and in retinal function, in both rare and common eye diseases. The study was published in *Nature Communications*.

"This is the first detailed integration of retinal regulatory genome topology with genetic variants associated with age-related macular degeneration (AMD) and glaucoma, two leading causes of vision loss and blindness," said the study's lead investigator, Dr. Anand Swaroop, senior investigator and chief of the Neurobiology Neurodegeneration and Repair Laboratory at NEI.

"Having such a high-resolution picture of genomic architecture will continue to provide insights into the genetic control of tissue-specific functions," Swaroop said.

The integrated genome regulatory map will also assist in evaluating genes associated with other common retina-associated diseases such as diabetic retinopathy, determining missing heritability and understanding genotype-phenotype correlations in inherited retinal and macular diseases.



Jennifer Levithan

Levithan Appointed New Deputy Executive Officer at NIGMS

Jennifer Levithan was recently appointed as deputy executive officer of NIGMS. In this position, she works closely with the NIGMS executive officer to manage the institute's administrative policies, planning and operations, including those related to acquisitions, financial management, information technology, communications, management analysis, human capital, ethics, continuity of operations and workplace flexibilities.

Prior to joining NIGMS, Levithan was deputy executive officer for the NIH Office of the Director. She supported OD's executive office staff with a wide range of human resource and administrative activities. Before that, she held leadership positions in NIH's Office of Human Resources, including serving as the acting deputy director and senior branch chief in the Human Resources Systems, Analytics and Information Division.

Levithan earned a bachelor's degree in psychology from the University of Maryland, College Park, and a master's degree in business administration from Central Michigan University.



Dr. Richard Youle of NINDS was recently inducted into the American Academy of Arts and Sciences.

NINDS's Youle Honored by American Academy of Arts and Sciences

Dr. Richard Youle, a senior investigator in the biochemistry section of NINDS's Surgical Neurology Branch (SNB), was recently inducted into the American Academy of Arts and Sciences.

According to the academy—which was established in 1780—the honor recognizes extraordinary people who help solve the world's most urgent challenges, create meaning through art and contribute to the common good from every field, discipline and profession.

“It was such a surprise to be elected to the illustrious American

Academy of Arts and Sciences,” said Youle, who was elected as a member of their class of 2021. However, due to Covid-19 delays, the in-person induction ceremony was deferred to September 2022. “This honor and the fun induction ceremony are highlights of my career that I will always cherish.”

Youle earned his bachelor of arts degree from Albion College in Michigan and his Ph.D. in biology from the University of South Carolina, where he studied the protein toxin ricin. He came to NIH in 1978 to complete postdoctoral work on engineering new cell-type-specific protein toxins in the lab of Dr. David Neville at NIMH.

Youle joined NINDS in 1985 as a principal investigator in SNB. There he studied a wide range of subjects, including bone marrow transplantation and programmed cell death, and developed and conducted clinical trials of new therapies for brain tumors.

Most recently, Youle and his colleagues discovered functions and interrelationships among proteins mutated in familial Parkinson's disease. Their research suggests that the mutations may be linked to a breakdown in the way brain cells dispose of damaged mitochondria in a process called mitophagy. The results have led to a better understanding of the role genes play in the healthy and diseased brain and opened new avenues for therapy of Parkinson's disease that are being pursued by numerous biotech companies. For this work, Youle won a Breakthrough Prize in Life Sciences in 2021.

His laboratory currently is focused on molecular mechanisms of autophagy (the process in which the body breaks down and destroys old, damaged cell parts), mitochondrial quality control and neurodegenerative disorders. —**Shannon E. Garnett**

Bianchi Noted Among Forbes 'Impact' Makers

NICHD director Dr. Diana Bianchi was recently named in the Forbes 2022 “50 Over 50” Impact list for her leadership of NICHD and advocacy for the inclusion of underrepresented populations in Covid-19 research. Bianchi was selected among thousands of nominees.

The Forbes site noted, “Throughout the Covid pandemic, Dr. Bianchi championed the inclusion of women, pregnant people, infants, children and people with disabilities in research to improve their care. This includes funding research on the effects of Covid-19 on pregnancy and fetal development and infants and children, particularly how to improve the safety of in-person schooling.”

Fellow honorees include Supreme Court Justice Ketanji Brown-Jackson and tennis champion Billie Jean King.

To read Bianchi's full citation, go to <https://bit.ly/3rZvzNZ>. To read about the other honorees, see <https://www.forbes.com/50over50/impact>. **R**



NICHD director Dr. Diana Bianchi

**PUBLIC SERVICE ‘OSCARS’
Lane Captures ‘Sammies’
Career Achievement Honor**

For the third straight year, NIH brought home hardware from the annual Sammies awards ceremony, considered the “Oscars” of public service.

Dr. H. Clifford Lane, clinical director at the National Institute of Allergy and Infectious Diseases, won the 2022 Paul A.

Volcker Career Achievement Medal given by the nonpartisan, nonprofit Partnership for Public Service in its annual Samuel J. Heyman Service to America Medals (Sammies) gala.

Awardees were saluted last month at a Kennedy Center ceremony and reception.

“During four decades at [NIH], Lane has conducted lifesaving research for people with HIV/AIDS, had an enormous impact combating and treating infectious diseases overseas such as Ebola and helped establish

national treatment guidelines for Covid-19 amid the deadly pandemic,” the partnership said on its website in announcing this year’s awards.

The Career Achievement Medal is named for the late Volcker in recognition of his nearly three decades of distinguished federal service. The honor recognizes career federal employees who have led significant and sustained achievements during 20 or more years of service in government.

A virtual look at this year’s Sammies and the winners’ work will be shown on Wednesday, Nov. 23 on Bloomberg TV.



NIAID director Dr. Anthony Fauci, Sammies Federal Employee of the Year in 2020, congratulates Dr. H. Clifford Lane for receiving the organization’s 2022 Paul A. Volcker Career Achievement Medal. The presentation ceremony and reception were held at the Kennedy Center.

PHOTOS: JOSHUA ROBERTS/PARTNERSHIP FOR PUBLIC SERVICE



Above, 2022 honoree Lane speaks at the Sammies event. Below, Lane with wife Linda (l) and daughter Rebecca



This year’s winners of the Samuel J. Heyman Service to America Medals