



National Institutes of Health

ADVANCE PLANNING IN ‘SPIRIT’ Studies Aim to Spur Dialogue on End-of-Life Wishes

BY DANA TALESNIK

It’s a tough subject to contemplate for ourselves let alone to discuss with loved ones, making it all too easy to postpone the conversation. But a series of studies suggest that preparing for end-of-life (EOL) treatment decision-making not only helps honor patients’ wishes, but also ultimately reduces the anxiety and post-bereavement distress of families.

Too often, people focus on advance directives, missing an important part of the

planning process, noted Dr. Mi-Kyung Song at a recent NINR Director’s Lecture.

“I think equating completing advance directives with advance care planning is the problem—the overreliance on legal documents without conducting the necessary good conversations with the patient and family,” said Song, a tenured professor



Dr. Mi-Kyung Song

and director of the Center for Nursing Excellence in Palliative Care. “Not having advance care planning that can prepare for end-of-life decision-making [can lead] to disastrous harm for the patient and lifelong distress or trauma for the family.”

Song, who also serves as the Edith Honeycutt endowed chair in nursing at Emory University, developed a protocol for patients with chronic conditions and their families that she continues to test in a series of pilot and full-scale NIH-funded clinical trials called SPIRIT (Sharing Patient’s Illness Representations to Increase Trust).

Decades of research have shown that family decision-makers—the surrogates—frequently are unaware of their loved one’s illness progression. “We often believe we have time when, in fact, we don’t,” she said.

“Surrogates lack the intimate knowledge

SEE SPIRIT, PAGE 6



Timothy Caulfield

HEALTH LAW PROFESSOR ADVISES Scientists Must Speak Up Against Misinformation

BY ERIC BOCK

“We’re in the middle of an ‘infodemic,’” warned Timothy Caulfield recently at an Office of Dietary Supplements seminar about current falsehoods surrounding Covid-19 and other misinformation circulating in the media.

Medical professionals and organizations must stand up for quality information, said

SEE CAULFIELD, PAGE 4

WAIT FOR YOUR EXIT Mueller Presents Different Perspectives of Mentorship

BY AMBER SNYDER

Yoda. Gandalf. Dumbledore.

Mentors in pop culture are often portrayed as wise, elderly figures (often men) who teach important lessons to their mentees. Dr. Jenna Mueller of the University of Maryland is neither elderly nor male, and is building a career as a successful researcher and mentor. She spoke recently in the Women Leaders in Academic Research series, giving a talk titled “Re-Thinking



Dr. Jenna Mueller



The ‘Art’ of Coping. See p. 12.

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Kasza To Present Next 'Methods' Webinar Nov. 18

Join the Office of Disease Prevention for a Methods: Mind the Gap webinar with Dr. Jessica Kasza on the use of correlation structures for stepped wedge and related designs. The webinar will take place on Thursday, Nov. 18 at 4 p.m. ET.

Kasza is an associate professor in biostatistics in the School of Public Health and Preventive Medicine at Monash University in Melbourne, Australia. She completed her Ph.D. in 2010 at the University of Adelaide.

At Monash University, she leads the development of statistical methodology for longitudinal cluster randomized trials. She also has interests in the comparison of health care providers and in causal inference. Kasza is the president of the Statistical Society of Australia and, in that role, is keen to ensure that the Australian statistical community is diverse, welcoming and inclusive.

Webinar registration is required. Visit prevention.nih.gov/education-training/methods-mind-gap/does-it-decay-decaying-correlations-design-and-analysis-stepped-wedge-trials. The webinar will be recorded and available on the ODP website within approximately 1 week.



Dr. Jessica Kasza

The Mind the Gap series explores research design, measurement, intervention, data analysis and other methods of interest in prevention science.

For more information, see prevention.nih.gov/MindTheGap.

Blood Bank in Critical Need of Donors

The NIH Blood Bank is currently experiencing low blood product inventory, in the context of nationwide shortages. The ongoing Covid-19 pandemic has negatively affected blood drives and donor recruitment.

Unfortunately, the need for blood transfusion at the Clinical Center has remained constant to support patients with cancer, surgeries and emergencies. Currently there is a critical need for O-positive and O-negative blood donors.

To make an appointment, visit www.cc.nih.gov/blooddonor or call the NIH Blood Bank in Bldg. 10 at (301) 496-1048 or the Platelet Center at Fishers Lane at (301) 496-4321.



Speaking at the ribbon-cutting for the University of Missouri's Roy Blunt NextGen Precision Health building, NIH director Dr. Francis Collins is applauded by Dr. Mun Choi (l), university president, and Darryl Chatman, chair of the University of Missouri board of curators.

IMAGE: UNIVERSITY OF MISSOURI

Collins Attends Ribbon-Cutting for New Precision Medicine Facility

NIH director Dr. Francis Collins was among other national, state and local dignitaries on Oct. 19 for the official ribbon-cutting ceremony of the Roy Blunt NextGen Precision Health building at the University of Missouri, Columbia. The 265,000-square-foot facility will serve as the hub of the university's NextGen initiative to help accelerate precision medicine endeavors.

In brief remarks, Collins praised efforts by U.S. Sen. Roy Blunt (R-MO) and others in Congress to increase the nation's investment in scientific research innovation. The NIH director also gave a keynote presentation and described the great potential of precision medicine to build a personalized approach to and transform the future of health care.

ORWH Hosts Forum to Recognize Diversity Competition Winners

NIH recently awarded \$50,000 each to 10 institutions as part of a prize competition recognizing their biomedical and behavioral science departments for enhancing gender diversity and equity among their faculties. The Office of Research on Women's Health recognized these institutions and the honorable mentions for their evidence-based interventions in a forum titled "Effective Approaches to Fostering Faculty Gender Diversity, Equity and Inclusion: Celebrating Progress."

Hosted in partnership with the American Association for the Advancement of Science's STEMM Equity Achievement (SEA) Change initiative and in collaboration with the National Academies of Sciences, Engineering and Medicine's committee on women in science, engineering and medicine, the forum featured four panels with representatives from the winning institutions and the honorable mentions as well as SEA Change participants. Forum presenters discussed institutional strategies and practices that have substantially contributed to systemic change aimed at addressing gender diversity and equity issues among faculty members in academic biomedical and behavioral science departments.

View the forum video at <https://www.youtube.com/watch?v=8FUe2Wu-za8>. See the complete list of competition winners at <https://orwh.od.nih.gov/in-the-spotlight/all-articles/2021-challenge-prize-winners>.



ORWH recently hosted a virtual forum on ways to foster faculty gender diversity, equity and inclusion.

Rotimi Is New NHGRI Scientific Director

NIH distinguished investigator Dr. Charles Rotimi recently took the helm as NHGRI scientific director and leader of the NHGRI Intramural Research Program. A longstanding member of the institute's IRP, he currently serves as director of the trans-NIH Center for Research on Genomics and Global Health and chief of NHGRI's Metabolic, Cardiovascular and Inflammatory Disease Genomics Branch.

Rotimi has designed and led major basic science and clinical research projects in human genomics. He is a leader in the development of global genomics expertise and resources, acting as a vocal advocate for increased ancestral diversity in research participants and in the international scientific workforce. His expertise in the unique genomic diversity of African populations has helped advance several key genomics initiatives.

Notably, Rotimi engineered the successful engagement of African communities for the International Haplotype Mapping Project (HapMap) and was active in the 1,000 Genomes Project.

Together, those two projects revolutionized scientific understanding of the global distribution of common genomic variants and facilitated the large-scale implementation of genome-wide association studies.

Rotimi is perhaps most well-known for being a key architect and major participant in the Human Heredity and Health in Africa (H3Africa) Initiative,



Dr. Charles Rotimi

which is funded by NIH and Wellcome Trust and has greatly expanded genomics-based studies of human disease on the African continent.

As a leading genetic epidemiologist and genomics researcher with expertise in statistical genetics, computational science, biochemistry, health disparities and scientific management, Rotimi is well qualified to lead the NHGRI Intramural Research Program and ideally prepared to usher the IRP into its next phase. Rotimi has the distinction of being the first-ever African-born scientific director of an NIH institute.

Rotimi earned a bachelor's degree in science from the University of Benin, Nigeria; a master's in health care administration from the University of Mississippi, Oxford; and a Ph.D. in epidemiology from the University of Alabama at Birmingham. He is a member of three global academies: the U.S. National Academy of Medicine, the American Academy of Arts and Sciences and the African Academy of Sciences. He was the founding president of the African Society of Human Genetics

University of Cologne in Germany, where she also completed her pediatric residency. She then moved to NIH for a pediatric hematology and oncology fellowship in NCI's Pediatric Oncology Branch. Her early clinical research was focused on antimetabolites. She had a leadership role in the clinical development of glucarpidase, a rescue agent for patients who experience renal failure after administration of high-dose methotrexate. Widemann became a tenure-track investigator in 2000 and earned tenure in 2009.

The Astute Clinician Lecture was established in 1998 through a gift from the late Dr. Robert W. Miller and his wife, Haruko. It 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>.

To watch, tune in to <https://videocast.nih.gov/watch=43814>. Continuing Medical Education credits will be available.

Sign language interpreting services are available upon request. Individuals who need interpreting services or other reasonable accommodations to participate in this event should email WALSoffice@od.nih.gov or call 301-594-6747.

and is the 2021 president-elect and 2022 president of the American Society of Human Genetics. He has received dozens of awards and recognitions, contributed to several books and co-authored more than 300 scientific papers.

NHGRI's IRP supports more than 50 investigators conducting a wide range of research at the forefront of genomics. Rotimi took the reins as scientific director on Oct. 10, 2021—precisely 11 years to the day after Dr. Dan Kastner took that baton from Dr. Eric Green, who served as the NHGRI scientific director from 2002-2011.

An NIH distinguished investigator, Kastner will continue his physician-scientist role at the institute, after leading NHGRI's IRP for more than a decade through a productive growth phase in both scientific depth and breadth. **R**



ON THE COVER: Zahraa Alhabib, a ReBUILDetroit trainee, practices pipetting during the 2017 Summer Enrichment Program for incoming students at the University of Detroit, Mercy. ReBUILDetroit is 1 of 10 Building Infrastructure Leading to Diversity (BUILD) programs in a consortium funded by the NIH Common Fund.

IMAGE: JOHN POWELL

The NIH Record

Since 1949, the *NIH Record* has been published biweekly by the Editorial Operations Branch, Office of Communications and Public Liaison, National Institutes of Health, Department of Health and Human Services. For editorial policies, email nihreford@nih.gov.

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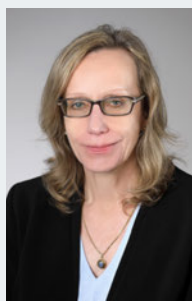


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NIH National Institutes of Health
Turning Discovery Into Health

Widemann to Give 2021 Astute Clinician Lecture

Dr. Brigitte Widemann will give the Astute Clinician Lecture as part of the NIH Director's Wednesday Afternoon Lecture Series on Dec. 8 from 3 to 4 p.m. via NIH VideoCast. She will present "Advancing Therapies for Neurofibromatosis Type 1 (NF1): Lessons Learned from Every Patient."



Widemann is a pediatric oncologist with expertise in drug development and early clinical trials for children with refractory solid tumors and genetic tumor predisposition syndromes, in particular neurofibromatosis type 1 (NF1). Her pioneering research on NF1 resulted in the first Food and Drug Administration-approved medical therapy, the MEK inhibitor selumetinib, for children with NF1 and inoperable, symptomatic plexiform neurofibromas in 2020. She is currently applying lessons learned from NF1 to children and adults with very rare solid tumors.

Widemann earned her medical degree at the



Caulfield recently spoke at a virtual ODS seminar.

Caulfield

CONTINUED FROM PAGE 1

Caulfield, Canada research chair in health law and policy, professor in the faculty of law and School of Public Health and research director of the Health Law Institute at the University of Alberta.

Over time, harmless-sounding terms like “immune-boosting” have normalized misinformation, he said. Such language is often associated with healthy behaviors, such as exercise, sleep and a balanced diet, creating a “health halo” effect. Those pushing immune-boosting misinformation use scientific jargon to give credibility to bunk, a practice Caulfield calls “scienceploitation.”

These positive associations make it easier to sell unproven products and, later on, get many people to believe other types of deceptive messages, such as anti-vaccine misinformation. Many people hawking bunk “immune-boosting” supplements and alternative medicines are also part of the anti-vaccine movement.

Conspiracy theories such as proclaiming Covid-19 results from 5G cellular technology or that the virus is a scam to force a vaccine containing a microchip on the world’s population get a lot of media attention. However, Caulfield pointed out, most Covid-19 online misinformation promotes “miracle cures” and other unproven treatments.

Those who get their news from social media platforms like Facebook, Instagram, Twitter or TikTok are more likely to believe misinformation, be misinformed and spread misinformation, he asserted.

In what’s called a “top-down, bottom-up

★★★
“We need trusted voices like [NIH] to speak up in clear terms with shareable content that makes a very particular point about what the evidence actually says.”

—TIMOTHY CAULFIELD

★★★

phenomenon,” celebrities, politicians and influencers push misinformation and then the public amplifies it.

Additionally, fake documentaries and video clips found on streaming sites have millions of views. Compelling narratives and slick production values “can overwhelm our ability to think scientifically,” Caulfield explained. Unfortunately, even health science students find these documentaries persuasive.

The speaker said celebrities play an important role in how the public thinks about health. They can normalize healthy behavior or knowledge of diseases. For instance, Caulfield said, Tom Hanks’s announcement that he tested positive for Covid-19 increased some people’s understanding of the virus.

They can also negatively impact public discourse. Recently, actress Gwyneth Paltrow revealed she had long Covid. But she also used her announcement to advertise several unproven products that she claimed eased her symptoms. Caulfield said it was “infuriating” that she used the fear people have about long Covid as an opportunity to sell ineffective supplements.

The medical director of England’s National Health Service even spoke out against Paltrow’s treatment regimen, saying “some of the solutions she’s recommending are really not the solutions we recommend.”

Even though the NHS did not take any regulatory action against Paltrow, Caulfield said, they did use her comments as an opportunity to debunk misinformation and explain what the science really says. “I’d like to see more of that,” he noted.

To counter misinformation, Caulfield urged government agencies and individual medical professionals to speak up more often against misinformation.

His research has found that when experts debunk untrue messages, the public listens. Very rarely, if at all, is there a backfire effect—the idea that debunking falsehoods can further entrench belief in them—from

speaking out against misinformation. Also, quickly correcting bad information prevents it from being politicized.

Recently, the official Twitter account of the Food and Drug Administration warned against the use of ivermectin to treat Covid-19. “You are not a horse,” the regulatory agency tweeted. “You are not a cow. Seriously, y’all. Stop it.” It linked to a post, “Why You Should Not Use Ivermectin to Treat or Prevent Covid-19.”

“Some people didn’t like this,” Caulfield said. “They thought that the FDA should not be putting tweets out like this. I think we need to in this era of misinformation. We need trusted voices like [NIH] to speak up in clear terms with shareable content that makes a very particular point about what the evidence actually says. I don’t think we have enough of this.”

To effectively debunk scientific misinformation, Caulfield advised researchers to:

- Provide scientific evidence
 - Use clear and shareable content
 - Reference trustworthy and independent sources
 - Note scientific consensus and that science is a process that’s always evolving
 - Be nice, authentic and humble
 - Craft creative messages that incorporate narratives and humor
 - Highlight the rhetorical tricks, such as the use of anecdotal evidence or testimonials, that are used to push misinformation
 - Ensure science, facts and the truth are the most memorable parts of the message
 - Remember the general public—not hardcore deniers—is the target audience
- “Debunking really does work,” Caulfield said.

In January, Caulfield helped launch a Canadian initiative called “ScienceUpFirst” that works with a collective of independent researchers, health care experts and research communicators to share the best available science in creative ways to stop the spread of misinformation. For details, visit: <https://www.scienceupfirst.com/>.

Zuk Named NIGMS Deputy Director

Dr. Dorit Zuk was recently selected as NIGMS deputy director. In this role, she will provide leadership on the full range of NIGMS activities supporting basic research that increases understanding of

foundational biological processes and drives advances in human health. Zuk had served as acting NIGMS deputy director since November 2020, and director of the Division of Genetics and Molecular, Cellular and Developmental Biology since January 2016.



Dr. Dorit Zuk

“Dr. Zuk is a trusted advisor who can always be counted on for her expertise and sound judgment,” said NIGMS director Dr. Jon Lorsch. “She has formed strong collaborations within NIGMS and across NIH and has made numerous contributions to building a stronger and more diverse biomedical enterprise. I am extremely pleased that she will continue her dedicated service to the institute as a vital part of our leadership team.”


Zuk is a molecular biologist whose research has focused on muscle development and RNA metabolism. She also has a strong background in science policy and communication, and has spearheaded NIGMS initiatives to diversify the research organism

landscape, develop a collaborative program with the National Science Foundation to fund research that advances the scientific basis of science and innovation policy, and enhance the rigor and reproducibility of biomedical research.

“I am excited to work with Dr. Lorsch and all of NIGMS to achieve the institute’s goals of funding the highest quality science; developing research capacity around the nation; and supporting an innovative, sustainable and diverse biomedical research workforce,” Zuk said.

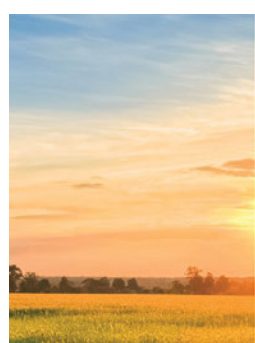
Prior to joining NIGMS, Zuk directed the former Office of Policy, Communications and Strategic Alliances at NCATS. Before that, she served as the science policy advisor to the NIH deputy director for extramural research, providing leadership on a range of topics, including financial conflicts of interest policies and the future of the biomedical research workforce.

Zuk came to NIH in 2007 as a science and technology policy fellow of the American Association for the Advancement of Science. From 2008 to 2009, she served as a program officer for science policy and Hellman fellow at the American Academy of Arts and Sciences. She began her policy career after working in scientific publishing, serving as the deputy editor of the journal *Cell* from 2000 to 2002 and as the editor of the journal *Molecular Cell* from 2003 to 2007.

Zuk earned a B.Sc. in biology from Tel Aviv University and an M.Sc. in biology and a Ph.D. in cell biology from the Weizmann Institute of Science. She conducted postdoctoral research at the University of Massachusetts Medical School in the laboratory of Dr. Allan Jacobson. She is the recipient of numerous NIH honors, most recently an NIH Director’s Award for her contributions to incorporate natural language processing into grant referral processes. 

Register for Rural Health Day Seminar

The 2021 NIH Rural Health Seminar will be held virtually on Thursday, Nov. 18 from 11 a.m. to 5:30 p.m. ET. This year’s theme is “Structural-Level Determinants of Rural Health Disparities.” Seminar sessions will



2021 NIH Rural Health Seminar

Structural-Level Determinants of Rural Health Disparities

Thursday, November 18, 2021
11:00 a.m. — 5:30 p.m. ET

#RuralHealth



explore important issues related to rural health by focusing on the following areas:

- Sociocultural and economic determinants of health in rural populations
- Physical environmental determinants of health in rural populations
- Evaluation, measurements and policy implications on rural health

Attendees will gain a deeper understanding of how structural determinants affect rural populations and the need for multilevel interventions that can reduce rural health disparities.

Register for free at: www.eventbrite.com/e/2021-nih-rural-health-day-seminar-tickets-164036849633. The event is organized by the Rural Health Special Interest Group. Learn more at: <https://nimhd.nih.gov/news-events/conferences-events/rural-health.html>.

Second Town Hall on Achieving Racial and Ethnic Equity Set

The second Virtual Town Hall on Achieving Racial and Ethnic Equity at NIH will be held on Wednesday, Nov. 17 from 11 a.m. to noon ET. On the agenda: accomplishments since the launch of UNITE, how UNITE fits within both the HHS and federal government’s efforts to advance racial and ethnic equity, what we have learned from our analysis of NIH workforce data, and what motivated a member of the NIH anti-racism steering committee to join this NIH-wide effort. Frequently asked questions submitted in advance will be addressed too.

Set to participate:

- Francis Collins, NIH director
- Lawrence Tabak, NIH principal deputy director and UNITE co-chair
- Marie Bernard, NIH chief officer for scientific workforce diversity and UNITE co-chair
- Kenneth Gibbs, chief of the Undergraduate and Predoctoral Cross-Disciplinary Training Branch, NIGMS, and member of the UNITE I committee
- Alfred Johnson, NIH deputy director for management and UNITE co-chair
- Yi He, scientific support for NHLBI’s Protein Expression Facility and member of the NIH anti-racism steering committee

To join the Webinar, go to <https://nih.zoomgov.com/j/1608825879?pwd=STFVNk1lZlNaTWR-SWVWVUvNA4ZFJLQTO9>.

Open Enrollment for NIH Leave Bank

Fall Open Enrollment for the NIH Leave Bank has started and runs until Monday, Dec. 13. The membership period will begin on Sunday, Jan. 2, 2022.

The Leave Bank is a pooled bank of donated annual and restored leave available to eligible members. It acts like a safeguard for your paycheck and amounts to paid leave for members who have exhausted all of their own sick and annual leave and are affected by a personal or family medical condition.

To become a Leave Bank member, access the Integrated Time and Attendance System during open enrollment and select “Leave Bank Membership” to enroll. If you are a 2021 Leave Bank member, your membership will automatically continue into 2022, unless you opt out. The yearly membership contribution is one pay period’s worth of annual leave accrual. The membership contribution will be waived automatically if you lack sufficient leave.

For more information, visit <http://hr.nih.gov/leavebank>, call (301) 443-8393 or email LeaveBank@od.nih.gov.

Spirit

CONTINUED FROM PAGE 1

of the patient's wishes," said Song. "They often do not know what's acceptable to their loved ones when it comes to end-of-life treatment. And, [when they're running out of time], surrogates are unprepared for decision-making during emotional turmoil."

Think of advance care planning as a mental rehearsal for making EOL decisions, to get ready before that nerve-wracking time comes, before it's too late, said Song.

• • •

"SPIRIT helps families move on with their lives instead of ruminating and wondering: 'Did I do the right thing?'"

-DR. MI-KYUNG SONG

• • •

In SPIRIT, the clinician leads a guided discussion with the patient and surrogate, first asking them how the patient's illness has affected their lives. That serves as the basis for a more detailed EOL discussion.

"A patient's understanding or beliefs about their illness may or may not be medically correct, but it's critically important to explore their representations first," said Song.

Then the clinician can address gaps and concerns and, in this compassionate framework, help the patient accept and cope with new information.

The first SPIRIT trial enrolled open-heart surgery patients. The intervention helped put patients and surrogates on the same page and reduced their anxiety.

The next trial enrolled African Americans with end-stage renal disease (ESRD). The syndrome, which disproportionately affects Black people, requires renal replacement therapy.

"It wasn't so much about whether to start or undergo aggressive procedures because these patients already are living on dialysis," said Song. "Rather, it was important to have

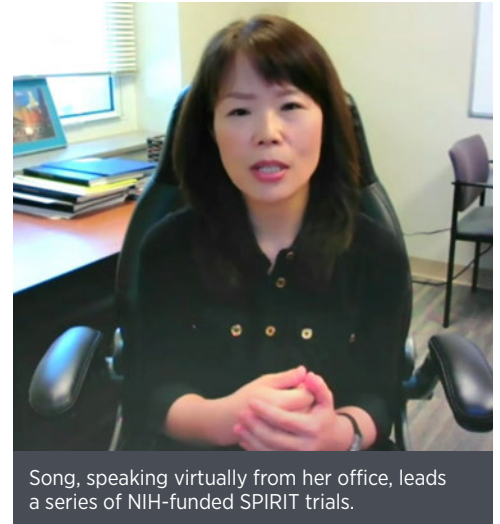
a conversation about living on dialysis and when it would be appropriate to consider stopping [it]."

A follow-up study looked at longer-term outcomes in the

same group of dialysis patients. Interestingly, most surrogates felt confident in understanding the patient's wishes but less than a third correctly predicted them.

"Surrogates are, in general, overly optimistic about their ability to serve as a surrogate without knowing that they in fact do not know their loved one's wishes," Song said.

Next came a full-scale efficacy trial with ESRD patients exploring the surrogate's post-bereavement outcome at various intervals after the patient's death.



Song, speaking virtually from her office, leads a series of NIH-funded SPIRIT trials.

Those following the SPIRIT intervention showed greater agreement on goals of care at the end of life and higher surrogate decision-making confidence.

"The anxiety, depression and post-traumatic stress symptoms increase shortly after the patient's death, understandably so," she added. "But then the intervention family member's symptom score returned to baseline or got even lower by 3 months, while the control scores remained much higher."

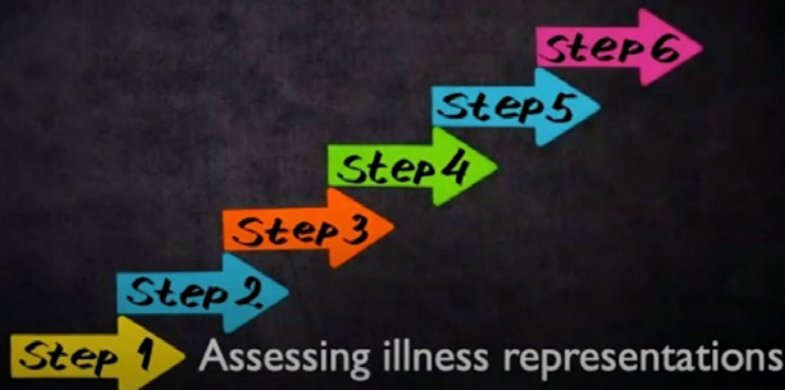
For Song, this was revealing. The results suggested "SPIRIT helps families move on with their lives instead of ruminating and wondering: 'Did I do the right thing?'"

Song is now pilot-testing SPIRIT with dementia patients, which has unique challenges. Can dementia patients coherently articulate EOL wishes? "Is the cognitive window of opportunity still open to meaningfully participate in end-of-life discussions with family members?" asked Song.

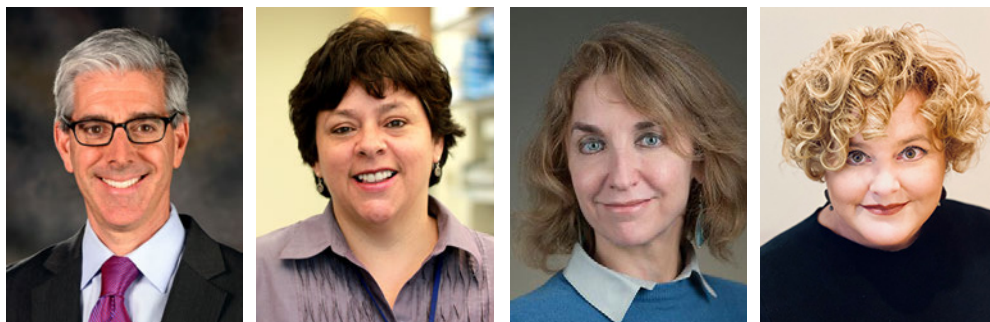
One observation so far, she noted, is that sessions took much longer with dementia patients who kept pausing to gather their thoughts. Investigators found, though, that all patients were able to articulate EOL wishes, even those with moderate dementia. Another pilot trial is underway to explore this dynamic in dementia patients with ESRD, who must navigate choices surrounding dialysis despite cognitive impairment.

In the end, said Song, "All families who experienced less distress at the end of life had one thing in common: They knew their loved one's wishes ahead of time." **R**

Process of SPIRIT



SPIRIT facilitates EOL discussions for people with chronic conditions and their caregivers. The six-step approach first assesses how the patient's illness has affected their lives.



NIH'ers recently elected to NAM are (from l) Dr. John Balbus, Dr. Carolina Barillas-Mury, Dr. Mariana Kaplan and Dr. Shannon Zenk.

BALBUS IMAGE: STEVE MCCAW, NIEHS

NIH'ers Among Newest NAM Electees

The National Academy of Medicine (NAM) recently announced the election of 100 new members, including four NIH'ers.

Election is considered one of the highest honors in the fields of health and medicine and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service.

The new members bring NAM's total membership to more than 2,200.

NIH'ers recently elected to NAM and their election citations are:

Dr. John Balbus, interim director of the Office of Climate Change and Health Equity in HHS's Office of the Assistant Secretary for Health and NIEHS senior advisor for public health. For leadership in confronting the health challenges of climate change—from developing the first risk assessment approaches to working at the interface of science and U.S. national policy.

Dr. Carolina Barillas-Mury, distinguished investigator, NIAID Laboratory of Malaria and Vector Research. For discovering how plasmodium parasites manipulate the mosquito immune system to survive, and how these interactions maintain global malaria transmission.

Dr. Mariana Kaplan, NIAMS deputy scientific director and chief of the Systemic Autoimmunity Branch. For seminal contributions that have significantly advanced the understanding of the pathogenic role of the innate immune system in systemic autoimmune diseases, atherosclerosis and immune-mediated vasculopathies.

Dr. Shannon Zenk, NINR director. For research on the built environment in racial/ethnic minority and low-income neighborhoods that enriched understanding of the factors that influence health and contribute to health disparities, demonstrating the need for multilevel approaches to improve health and achieve health equity.

Established in 1970 as the Institute of Medicine, NAM is an independent organization of eminent

professionals from diverse fields including health and medicine; the natural, social and behavioral sciences; and beyond. It serves alongside the National Academy of Sciences and the National Academy of Engineering as an advisor to the nation and the international community.

VOLUNTEERS

Experiencing Fatigue? NINR Wants You

NINR seek individuals who are experiencing fatigue. Researchers want to understand the specific types of fatigue and the causes that may trigger it. Knowing more about fatigue may help us to develop different ways to treat it. Compensation may be provided. For more information call the Office of Patient Recruitment at (866) 444-2214 (TTY users dial 7-1-1) or email ccopr@nih.gov. <https://go.usa.gov/xVxdA> Refer to study 19-NR-0098.

Newly Diagnosed with Covid-19?

NIMHD researchers are recruiting adults newly diagnosed with Covid-19 (within 72 hours) for a remote study. This is a remote study with no in-person visits. The study will collect physical health data using a temperature patch and digital wristband that will be provided to each patient. Collected data will be uploaded to an app using a smartphone that will help researchers gain a better understanding of how Covid-19 progresses in patients and its long-term effects in patient groups with different demographics and risk profiles. To learn more, contact the NIH Clinical Center Office of Patient Recruitment at (866) 444-2214 or prpl@cc.nih.gov. Refer to study #000315-MD. (TTY: 800-877-8339) <https://go.usa.gov/x676m>.

VIRTUAL LECTURE The Interconnectedness of Culture and Science

NOVEMBER 17, 2021, 2:00 PM ET

THRO Native American Heritage Month Observance Planned, Nov. 17

Join NIH's Tribal Health Research Office (THRO) on Wednesday, Nov. 17 from 2 to 3 p.m. ET for a National Native American Heritage Month event honoring and celebrating American Indian and Alaska Native ingenuity and culture.

Dr. Donald Warne, director, Indians Into Medicine and Public Health Programs and associate dean of diversity, equity and inclusion at the University of North Dakota, will offer a virtual lecture about the interconnectedness of culture and science.

Warne is chair of the department of indigenous health and professor of family and community medicine at the School of Medicine and Health Sciences at UND and principal investigator for the UND Indigenous Trauma & Resilience Research Center. He also serves as the senior policy advisor to the Great Plains Tribal Leader's Health Board in Rapid City, S.Dak.



Dr. Donald Warne

Warne is a member of the Oglala Lakota tribe from Pine Ridge, S.Dak., and comes from a long line of traditional healers and medicine men.

He received his M.D. from Stanford University School of Medicine in 1995 and his M.P.H. from Harvard School of Public Health in 2002. Warne's work experience includes several years as a primary care and integrative medicine physician with the Gila River Health Care Corp., in Sacaton, Ariz., and 3 years as an NIH staff clinician in Phoenix, where he conducted diabetes research and developed diabetes education and prevention programs in partnership with tribes.

View the event at <https://videocast.nih.gov/watch=44044>.

Mentor

CONTINUED FROM PAGE 1

Mentoring: Perspectives from a Biomedical Engineer.”

Mueller is an assistant professor in the Fischell department of bioengineering at the University of Maryland, College Park, and a member of its Marlene and Stewart Greenebaum Comprehensive Cancer Center. Her interdisciplinary training places her at the intersection of global health and biomedical sciences. Her research focuses on cancer diagnostics and therapeutics via the use of low-cost, translational technologies that can be used easily in low- and middle-income countries.

She credits one of her first mentors with guiding her to her fields of interest.

A bioengineering major with a minor in global health at Rice University, Mueller found herself struggling to understand how engineering would prove useful in global health. Dr. Rebecca Richards-Kortum helped Mueller realize how bioengineering could be applied to help people and solve global health problems.

When the time came for Mueller to decide between graduate school and a career in the corporate world, she sought out Richards-Kortum’s advice again.

“A career in global health can be like a highway, with lots of potential exits,” Richards-Kortum explained. “If you’re unsure of what you want to do, one potential approach is to stay on the highway until you see the exit that you want, and then take it.”

The “stay on the highway” approach is what Mueller took. That brought her to Duke University’s biomedical engineering graduate program. She worked with both peer and faculty mentors at Duke as both a graduate student and postdoc.

“The process of learning from someone who’s one step ahead of you can be really valuable,” she said of her peer mentor Dr. J. Quincy Brown, who is now an

assistant professor at Tulane University. Faculty mentors at Duke—including Drs. Nimmi Ramanujan, David Katz, Rebecca Previs and Tamara Fitzgerald—helped direct Mueller to her current pursuit of cancer research.

As a postdoc, she helped Ramanujan develop a “Pocket colposcope,” which is a smaller, more affordable and easy-to-use version of a tool used to screen women for cervical cancer and pre-cancer. “Getting to work with Nimmi on the Pocket colposcope



*“Identify your passion
and find or build the road to get there.”*

—DR. JENNA MUELLER



and see a device transform from prototype to a commercial product has been an incredible thing to be a part of,” she said.

Throughout her talk, Mueller emphasized the importance of mentorship on career development. “Mentorship can play a powerful role, particularly in retaining women and minorities,” she stressed.

Female representation in biomedical engineering is close to equal in undergraduate populations, but plummets in master’s and doctorate programs. Having more visible female professionals may be encouraging to students. Good mentorship has been linked with benefits such as improved academic performance, social integration and sense of belonging and academic retention rates.

When it comes to finding mentors, Mueller recommended actively seeking them out. This may look like attending talks and initiating contact with speakers who interest you—that’s how Mueller started her relationship with Richards-Kortum.

Mentorship can mean different things to different people, Mueller cautioned, and your idea of what you need from a potential mentor might differ from what they have in mind.

“Instead of talking about mentoring and hoping that everyone means the same thing, let’s shift our thinking and our language and focus on these two questions: What do you need? And how can you get your needs met?”

Those who are seeking to become mentors themselves should think about their own values and what aspects of mentorship they found to be most helpful, Mueller advised. She also recommends the online training programs offered by the National Center for Faculty Development and Diversity that cover topics such as time management and building mentoring networks, and the NCI Team Science Toolkit.

Ultimately, she said, individuals should strive to seek out many mentors and become attentive and supportive mentors themselves.

“Pass on your inheritance,” Mueller advised. “Identify your passion and find or build the road to get there.”

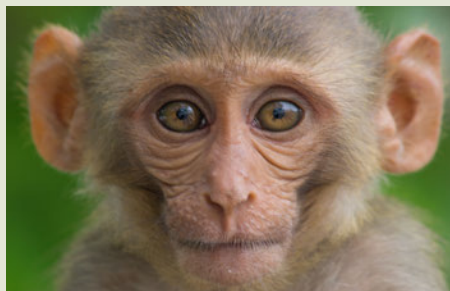
The archived lecture can be viewed at <https://videocast.nih.gov/watch=43873>.



Covid-19 Vaccine Booster Increases Antibody Response in Macaques

Researchers report that a booster dose of the Moderna Covid-19 vaccine given to rhesus macaques enhanced their immune response, providing protection against all known circulating SARS-CoV-2 variants.

Several variants of concern show reduced sensitivity to vaccine-elicited immunity. And, vaccine-induced antibody responses wane over time. Both



An mRNA booster protected macaques against circulating SARS-CoV-2 variants.

PHOTO: ROBERT ROSS/SHUTTERSTOCK

factors contribute to the continuing pandemic.

A team led by scientists at NIAID's Vaccine Research Center set out to test whether a booster dose could improve antibody responses, especially against variants of concern, including Delta. The study results appeared in *Science*.

Researchers gave the primary two-dose regimen of the Moderna

Covid-19 vaccine to the macaques. Six months later, they received a booster dose of the same vaccine, which increased levels of neutralizing antibodies.

Nine weeks after the boost, the monkeys were exposed to the SARS-CoV-2 Beta variant. Viral load was negligible in their lungs and substantially reduced in their noses compared to unvaccinated monkeys. These data suggest that a booster triggers a strong immune memory response and longer-lasting immunity.

The researchers focused on the Beta variant because it has consistently proven highly resistant to neutralization. While the Delta variant is highly transmissible, it has only an intermediate ability to resist neutralization.

The results suggest that an mRNA booster vaccine in people could improve the duration and potency of protection against upper and lower airway infection by any of the circulating variants, thus protecting against severe disease and potentially limiting mild infection and virus transmission. Boosters may be especially beneficial for high-risk groups including the elderly, people with pre-existing conditions and those who responded poorly to primary vaccination.

Could Water Pill Be Treatment for Alzheimer's?

A commonly available FDA-approved oral diuretic pill may be a potential candidate for an Alzheimer's disease treatment for those who are at genetic risk, according to findings published in *Nature Aging*.

The research included analysis showing that those who took bumetanide—a commonly used, potent diuretic—had a significantly lower prevalence of Alzheimer's disease compared to those not taking the drug. The NIA-funded study advances a precision medicine approach for individuals at greater risk of the disease due to their genetic makeup.

The research team analyzed information in databases of brain tissue samples and FDA-approved drugs, performed mouse and human cell experiments and explored human population studies to identify bumetanide as a leading drug candidate that potentially may be repurposed to treat Alzheimer's.

Knowing that one of the most significant genetic risk factors for late-onset Alzheimer's is a form of the apolipoprotein E gene called APOE4, researchers analyzed data derived from 213 brain tissue samples. Next, they compared the APOE4-specific Alzheimer's signatures against those of

more than 1,300 known FDA-approved drugs. Five drugs emerged with a gene expression signature that potentially might help neutralize the disease, the strongest of which was bumetanide.

The researchers then validated the data-driven discoveries by testing bumetanide in mouse models and induced pluripotent stem cell-derived human neurons. Researchers found that treating mice that expressed the human APOE4 gene reduced learning and memory deficits. The neutralizing effects were also confirmed in the human cell-based models, which led to the hypothesis that people already taking bumetanide should have lower rates of Alzheimer's.

To test this, the team pared down electronic health record data sets from more than 5 million people to 2 groups—adults over age 65 who took bumetanide and a matching group who did not take the drug. The analysis showed that those who had the genetic risk and took bumetanide had a 35 to 75 percent lower prevalence of Alzheimer's disease compared to those not taking the drug.

Rare Disease Research: NIH, FDA, Private Sector Collaborate

A single rare disease affects small numbers of people, but rare diseases collectively affect millions. NIH, FDA, 10 pharmaceutical companies and 5 nonprofit organizations have partnered to accelerate development of gene therapies for the 30 million Americans who suffer from a rare disease. While there are approximately 7,000 rare diseases, only 2 heritable diseases currently have FDA-approved gene therapies.

The newly launched Bespoke Gene Therapy Consortium (BGTC), part of NIH's Accelerating Medicines Partnership (AMP) managed by the Foundation for the National Institutes of Health (FNIH), aims to optimize and streamline the gene therapy development process to help fill the unmet medical needs of people with rare diseases.

"Most rare diseases are caused by a defect in a single gene that could potentially be targeted with a customized or 'bespoke' therapy that corrects or replaces the defective gene," said NIH director Dr. Francis Collins.

However, gene therapy development for rare diseases is highly complex, time-consuming and expensive. A standardized therapeutic development model that includes a common gene delivery technology (a vector) could allow for a more efficient, cost-effective approach to gene therapies.

To improve and accelerate the process, the BGTC program will develop a standard set of analytic tests to apply to the manufacture of viral vectors and support multiple clinical trials, each focused on a different rare disease. BGTC also will explore methods to streamline regulatory requirements and processes for FDA approval of safe and effective gene therapies.

NIH and private partners will contribute approximately \$76 million over 5 years to support BGTC-funded projects, including about \$39.5 million from the participating NIH institutes and centers, pending availability of funds.

"Because any given rare disorder affects so few patients, companies often are reluctant or unable to invest the years of research and millions of dollars necessary to develop, test and bring individualized gene therapy treatments for a single disease to market," said Dr. Joni Rutter, NCATS acting director. "BGTC aims to...incentivize more companies to invest in this space and bring treatments to patients."



People taking bumetanide had significantly lower prevalence of Alzheimer's.

PHOTO: FIZKES/SHUTTERSTOCK

OBSSR's Riley To Retire

Dr. William (Bill) T. Riley, NIH associate director for behavioral and social sciences research and director of the Office of BSSR for the past 7 years, will retire from NIH at the end of December 2021.

"Bill has done an outstanding job advancing understanding of the field and integrating BSSR into broader biomedical research efforts," said NIH director Dr. Francis Collins, in an NIH-wide email message. "Bill has led OBSSR during a time of a great change in the field."



Dr. Bill Riley

The integration of BSSR with the neuroscience, genetics and "omics" fields is beginning to shed light on the many complex interactions between the brain, behavior and the environment, Collins noted. Advances in measurement science and technologies are providing data on the influence of human behavior on health at levels of detail previously unimaginable. Expanding sources of integrated population-level data provide both the platform to better monitor the behavioral and social influences on health, and the ability to assess population-level interventions more rigorously.

"As we have seen clearly during Covid-19," he continued, "the health of the nation is heavily influenced by behavior and social influences, and research in this area provides the tools to help people modify their behaviors to improve their health. OBSSR, under Bill's direction, has played a key role in that effort."

Riley's research interests have included behavioral assessment, psychosocial health risk factors, tobacco use/cessation, and the application of technology to help prevent and manage chronic disease. He has been involved with applying new technologies, particularly mobile and wireless technologies, in behavioral measurement and intervention.

Prior to OBSSR, he served in various roles at NCI, NIMH and NHLBI. Riley earned his Ph.D. in clinical psychology from Florida State University and has experience in both academic medicine and the private sector.

'GIANT IN THE FIELD'

Renowned Immunologist Waldmann Is Mourned

NIH distinguished investigator Dr. Thomas A. Waldmann, chief emeritus of the Lymphoid Malignancies Branch in the Center for Cancer Research at NCI, died on Sept. 25.

Considered a giant in the field, Waldmann was a renowned immunologist whose more than

60-year career at NCI led to numerous high-impact discoveries that advanced the fields of organ transplantation, autoimmune disease and cancer. He was a leader in the study of cytokines and their receptors and of monoclonal antibodies, now a dominant form of cancer immunotherapy.

He received his M.D. from Harvard Medical School in 1955 and joined NCI in 1956 after residency at Massachusetts General Hospital. At NCI, he started by studying how the body metabolizes proteins, including immunoglobulins, in the blood. By 1959, he had become a senior investigator and his research had expanded to include work with patients with primary immunodeficiency diseases and disorders of lymphatic channels. Waldmann became chief of the Metabolism Branch, now the Lymphoid Malignancies Branch, in 1971.

Waldmann's pivotal studies revolutionized understanding of the roles played by the interleukin-2 (IL-2) receptor and interleukin-15 (IL-15) receptor cytokine systems in the life and death of T lymphocytes.

In characterizing the first cytokine receptor, IL-2, his team set the stage for understanding the biology and biochemistry of this family of molecules and then demonstrated that antibodies specific for the IL-2 receptor were useful in treating adult T-cell leukemia, prolonging survival of transplant recipients and treating multiple sclerosis.

In 1994, Waldmann and his team co-discovered the cytokine IL-15. Like IL-2, IL-15 triggers the production of immune cells that attack and kill cancer cells. Waldmann's group initiated the first-in-human IL-15 clinical trial in 2011. Waldmann initiated clinical trials to evaluate IL-15's capacity to augment antibody-dependent cellular cytotoxicity when administered with tumor directed monoclonal antibodies. The work exemplified his passion for developing therapeutics for cancer and AIDS.

Waldmann is remembered for other accomplishments as well. Prior to 1980, he studied the metabolism of serum proteins, which led him to identify a rare disorder of the gastrointestinal tract now known as Waldmann's disease. In 1981, he helped treat the first patient with AIDS at NIH. And in 2016, the Food and Drug Administration approved daclizumab, the antibody he discovered, for use in the therapy of relapsing multiple sclerosis.

Waldmann once said in an interview with the *Washington Post*, "Science is a river. You're always building on the past. You might be able to turn over a rock and find something exciting; you don't want to give up and say, 'This is all there is...' It's like planting a fruit tree that has a long duration, and when it comes time to harvest the oranges or whatever, you don't want to leave."

While Waldmann's many landmark contributions are well known, "his greatest legacy may be the vast number of outstanding scientists in their own

right who owe their success at least in part to Tom's mentoring," said NCI Vaccine Branch chief Dr. Jay Berzofsky, whom Waldmann mentored for nearly 28 years.

"Tom was the consummate scientist's scientist," says Berzofsky. "He was an encyclopedia of knowledge and constantly came up with valuable insights, bringing diverse sources of knowledge to bear on any question. All of us in the branch improved our science as well as our presentations because of Tom's mentoring. He was a great friend, collaborator and father-figure to his entire scientific family. We will all miss him tremendously."

"Tom was one of the most influential mentors in my career," noted Lymphoid Malignancies Branch chief Dr. Louis Staudt. "When I arrived at NCI in 1988, I was a 'dyed-in-the-wool' basic scientist, though I had trained in internal medicine. Tom insisted that I attend his clinical rounds every week where I witnessed his deep commitment to patient-oriented research. It took a while to sink in, but years later I found myself following in Tom's giant footsteps, for which I am grateful."

"Tom was one of the brightest scientists and clearest thinkers I have ever had the pleasure to work with in my many years at the NIH," said Dr. Robert Yarchoan, chief of the HIV and AIDS Malignancy Branch. "When I was a fellow in Dr. Waldmann's branch, I came away with a real sense of how to go back and forth between the lab and the patient and this has been the focus of my career since."

Waldmann's career was full of tremendous originality and scientific novelty.

He contributed to the acceleration of progress in cancer research that has major implications for future discoveries.

His more than 880 publications and 100-plus named honorary lectures or keynote addresses have had an enduring impact on the work of others and have led to his receipt of countless honors, including but not limited to the HHS Career Achievement Award, the Bristol-Myers Squibb Award for Distinguished Achievement in Cancer Research, the Paul Ehrlich Medal and the Service to America Career Achievement Award.

Waldmann was also a member of several societies, including the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences and the Hungarian Academy of Sciences. He was an honorary fellow of the Royal Society of the Medical Sciences (U.K.). Moreover, Waldmann was an enthusiastic photographer and former president of the NIH Camera Club.

Waldmann was predeceased by his wife of 62 years, Dr. Katharine Spreng Waldmann. He is survived by his children Richard, Robert and Carol and seven grandchildren. In lieu of flowers, the family requests donations to a memorial fund to benefit the International Medical Corps.



Dr. Thomas Waldmann



NCI's Dr. Thomas Waldmann (c) at the 2009 Sammies ceremony

PHOTO: SAM KITTNER/KITTNER.COM

Waldmann's public obituary is posted at www.pumphreyfuneralhome.com/obituaries/Dr-Thomas-Alexander-Waldmann?obId=22538215.

NIBIB Mourns Friauf

Walter "Walt" Friauf, former chief of the electrical and electronic engineering section of the Biomedical Engineering and Instrumentation Program (BEIP), died Oct. 5, at age 93.

Friauf was admired for his sophisticated and innovative circuit designs, numerous publications—including a hardcover book published by McGraw-Hill on *Feedback Loop Stability Analysis*—and a dozen patents in biomedical engineering. He joined NIH's former Division of Research Services (DRS) in 1962, becoming a section chief in 1969 and remained at NIH until his retirement in 1995. He won an NIH Merit Award in 1979.

Friauf received a bachelor's degree from MIT and a master's degree from the University of Virginia, both in electrical engineering. Before graduation, he and his brother bicycled across the U.S., a feat recounted in a 2014 article titled "Early 20th Century Crossers" in *Adventure Cycling*.

Early in his career, Friauf worked in the engineering departments of the Santa Fe and Southern Pacific railroads. In the Korean War, he was a platoon leader in the 2nd Engineer Combat Battalion, 2nd Infantry Division. Later, he was a senior engineer and section chief at an electronics firm, where he worked on early transistorized implementations of a seismic system and an analog-to-digital converter.

Among his many achievements, Friauf and Dr. Gerald Vurek of NHLBI's Laboratory of Technical Development created an electro-optical device in 1971 for the continuous measurement of blood oxygen levels during use of an artificial lung. The instrument was selected by Industrial Research, Inc., in its international competition as one of the 100 most significant technical products of the year.

Friauf, along with two other members of BEIP—Horace Casio and Dr. Stephen Leighton, collaborated with Dr. Victor Sank of the CC and Drs. Giovanni Di Chiro and Rodney Brooks of what was then NINCDS to develop an advanced positron emission tomography (PET) scanner, dubbed the "Neuro-PET" for its ability to produce clearer, more precise images of the brain. Its increased resolution and sensitivity enabled delineation of neurological

structures that were not identifiable with other PET scanners.

Friauf and BEIP members supported phase 1 and phase 2 trials of photodynamic therapy (PDT) for treatment of ovarian cancer and mesothelioma, as part of a multi-year collaboration with Drs. Angelo Russo, Tom Delaney, Bill Sindelar and Harvey Pass of NCI.

As a member of the PDT team, Friauf participated in the operating room to treat approximately 100 patients. He and staff provided essential expertise in developing fiber-optic probes for delivery of laser radiation to the abdominal and thoracic cavities. They also implanted photodetectors, connected via an interface to a computer, to record dosages and ensure uniformity across patient cohorts.

"I recall that Walt had a unique, creative way of starting an electronic design," said Dr. Hank Eden, retired NIBIB deputy scientific director. "Although it was traditional to design a circuit, then design an enclosure for it, Walt reversed the process. He

began by thinking of the end product's enclosure, i.e., its external switches, control knobs, input and output jacks, indicator bulbs, etc., because these encapsulated the device's desired operational features. Next, he designed the circuit. This insightful initial design step was literally outside-of-the-box thinking."



Walter Friauf led the BEIP electrical and electronic engineering section, 1969-1995. The section was a forerunner component of NIBIB's IRP.

PHOTO: MEDICAL ARTS & PHOTOGRAPHY BRANCH, DRS

Friauf lived in Bethesda since 1966. He and his wife bought an organic hobby farm in central Virginia in the early 1970s, where they spent many pleasurable weekends and vacations with family and friends. His hobbies included pets, collecting and restoring old toy electric trains, building doll houses and contra dancing.

Friauf also was a dedicated family man and was very proud of his late wife Ida and children Ken and Linda.

His daughter, Linda Fischetti, followed in his footsteps in working at NIH and became a nurse in the CC pediatric oncology unit. She and her father enjoyed sharing breakfast or lunch at the CC whenever they were able to break away from their research.

Former NCI EEO Director Richardson Is Mourned

BY LINDA MORRIS

Maxine Richardson, NCI EEO director from 1980 to 1996, died on Oct. 19, in Raleigh, N.C., where she had moved in May. She was 85 years old.

Richardson managed an active and innovative institute EEO program that informed minorities and women of the many NIH opportunities in need of their talent. She was the first institute EEO director to create a Federal Equal Opportunity Recruitment Plan based on NCI-specific occupations in need of diversification.

She sent NCI human resources, scientific and EEO staff to the first federal Hispanic recruitment conference, held in Puerto Rico during the Carter administration, to recruit nurses and nursing students for intramural and extramural opportunities.

Richardson's office adopted an initiative created in the National Heart, Lung and Blood Institute EEO office to recycle medical textbooks and publications, previously discarded by NCI, to the historically Black colleges and universities and a community college on the Rosebud Indian Reservation in South Dakota. Her office developed a K-12 educational outreach program, Invitation to Careers in Research, that extended age-appropriate opportunities for students to interact with NCI researchers. She appreciated the commitment of the NCI directors to the EEO Program.



Maxine Richardson, in an NIH Record photo in 1980 and more recently



Born in Waukegan, Ill., Richardson worked at the Great Lakes Naval Base prior to relocating to Washington, D.C. Before coming to NCI, she was an EEO specialist for the National Institute on Drug Abuse at Parklawn. In 1985, Richardson

received the NIH Merit Award. She understood that she had to cultivate the support of senior management to be a successful change agent.

Former NCI employee Shirl Brinson recalled asking Richardson to accompany her to a meeting with NCI management officials where she perceived there would be a power imbalance that would make her uncomfortable.

"Maxine demonstrated a highly effective professional demeanor, which had a positive outcome in my case," Brinson recalled.

Kay Johnson, diversity and inclusion strategist in NIH's Office of Equity, Diversity and Inclusion, commented, "I am really saddened to hear of Maxine's passing. She was my mentor, sponsor, supervisor and friend. I will be forever grateful for her selfless commitment to mentoring the next generation in civil rights and EEO."

Richardson is survived by her daughter, Carolyn Kennedy Calhoun of Clayton, N.C., and son, Logan Kennedy of Weehawken, N.J.

Expressions of sympathy may take the form of donations to the American Cancer Society in remembrance of Richardson.

READERS RESPOND
'Art' of Coping Inspires

The *NIH Record* asked readers to tell us how they're handling life at the moment. So many responses inspired us. Such concise beauty. A few made us laugh. Clever puns and wordplay. And the images! Here are some of the earliest we received.

Hear ye this, procrastinators! There's still time to send in a haiku, short verse (25 words or fewer), original art or photo. We'd love a selfie as well. Email submissions to nihrecord@nih.gov.

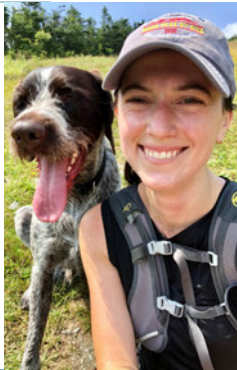
(Not) Coping

I am very numb
Telework forever please
This plague drains my soul

Sunshine, Novels and Canines

Romp around outside
Blast good tunes and read good books
Snuggle with the dog

**AMY KENNEY (W/FINNEGAN), IMMIGRATION SPECIALIST,
ORS DIVISION OF INTERNATIONAL SERVICES**



Coping

A day at a time
Finding the beauty in it
Giving myself grace

DR. MIA ROCHELLE LOWDEN, OD DIVISION OF COMPARATIVE MEDICINE

Zoom and Teams, no prob.
Still no good with time zone math.
Sorry, RML!

**CATHERINE RIBAUDO, RADIATION SAFETY OFFICER & DIRECTOR,
ORS DIVISION OF RADIATION SAFETY**

Hamster inspired...
Get on, sprint, stop, breathe, repeat...
Running on treadmills.

DR. DAVID A. KOSUB, OER HEALTH SCIENCE POLICY ANALYST

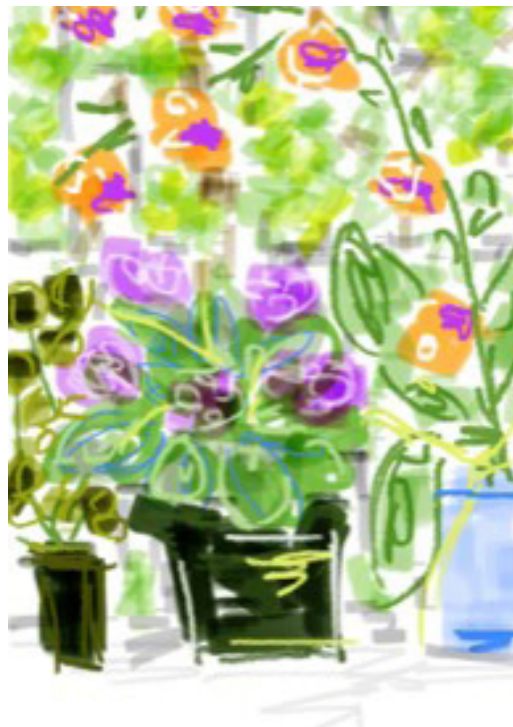
Uncertainty now
What's to come is more of that
Mask your emotions

Groundhog day we live
Our shadows are our company
Spring always arrives

**DAVID ROSEN, CHIEF, OER WEB
DEVELOPMENT & TECHNICAL BRANCH**

Glory is fragrant
Blooming a season of hope
Life, peace, joy and love.

ART & HAIKU: DR. SHILPA AMIN, ORWH CLINICAL RESEARCH SECTION



Audacity helps. Coping with Covid.

PHOTO & CAPTION: NIMH DIRECTOR DR. JOSHUA GORDON

Grace and compassion
Soaking up time with my kids
Thankful for blessings

**SOUJANYA GIAMBONE, MANAGEMENT ANALYST, OD
DIVISION OF LOGISTICS SERVICES**

