The National Academies of SCIENCES ENGINEERING MEDICINE

Forum on NEUROSCIENCE and NERVOUS SYSTEM DISORDERS

Neuroscience Training: Developing a Nimble and Versatile Workforce—A Virtual Workshop Series

Topic #2: Neuroscience Training in Challenging Times

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Panelist Biographical Sketches

Huda Akil, Ph.D., is the Gardner Quarton Distinguished University Professor of Neuroscience and Psychiatry and the Co-Director of the Molecular & Behavioral Neuroscience Institute (MBNI) at the University of Michigan. Dr. Akil and her colleagues have made seminal contributions to the understanding of the brain biology of emotions, including pain, stress, anxiety and substance abuse. Her early work demonstrated the role of endorphins in pain and stress. Her current research investigates the genetic and neural mechanisms underlying addiction and mood disorders. Dr. Akil has mentored numerous students and postdoctoral fellows who have gone on to make remarkable contributions to neuroscience research, education and leadership. She has served on many national and international organizations to promote neuroscience discovery and brain health awareness locally and globally. Her contributions have been recognized with numerous honors and awards, including honorary doctorates. She is a past President of the Society for Neuroscience the largest neuroscience organization in the world. She is an elected member of to the National Academy of Medicine (NAM), the American Academy of Arts and Sciences, and the US National Academy of Sciences.

AZA Stephen Allsop, M.D., Ph.D., is a first-generation American who grew up in Trinidad before living in a number of different states on the east coast. He studied Biology, Philosophy, and Jazz Studies at North Carolina Central University before carrying out social neuroscience research training in the Tye lab at MIT as part of the Harvard Medical School-MIT M.D.-Ph.D. program. He studies how social information is computed, integrated, and biased in the brain and the resulting impact on cognition and behavior. He also studies the mechanisms by which music and mindfulness modulate social connectedness and stress management. His research is guided by the belief that deconstructing these mechanisms will provide a better understanding of how social groups function and offer critical insights into enhancing the development and function of society at large. AZA is a multi-instrumentalist who is deeply rooted in the experience of music from the African Diaspora. He engaged in formal studies of gospel and jazz music in college and as a Ph.D. student was awarded MIT's Emerson Scholarship to study at Berklee College of Music and has released multiple projects of his original music. He teaches music and mindfulness as tools that help enhance empathy, social justice, health equity, and wellness. To that end, he co-founded Renaissance Entertainment LLC, a company that operates at the intersection of music, science, and community building to promote a culture of wellness. He does research and provides clinical care as a resident in the Department of Psychiatry at Yale University.

Rita Balice-Gordon, Ph.D., is the Chief Scientific Officer of Muna Therapeutics, a biotech company focused on disease modifying therapies for neurodegenerative diseases and neuroinflammation, with seed funding secured. She is also an Entrepreneur-in-Residence at Novo Ventures/NovoSeeds, developing R&D and financial strategies for biotech startup companies. She is a Director on the Board of Collegium Pharmaceutical, and serves on the Scientific Advisory Boards of several neurology focused

biotech companies. Prior to taking on these roles, Rita was the Global Head, Rare and Neurologic Diseases Research Therapeutic Area at Sanofi, Inc. for several years. She led groups scientists based in Boston and Paris working on pre-clinical and early development stage projects using small molecules, antibodies and gene therapy as modalities for innovative and transformative therapeutics for patients with rare genetic disorders including lysosomal storage disorders, inborn errors of metabolism and renal and musculoskeletal diseases; Multiple Sclerosis; Parkinson's Disease and other neurodegenerative diseases. While at Sanofi, she worked with business development colleagues to in license a BTK inhibitor, currently in Phase3 for Multiple Sclerosis, and partner with Denali to develop a RIPK1 inhibitor for MS, ALS and Alzheimer's, currently in Phase2. Before joining Sanofi, she was Vice-President and Head of Circuits, Neurotransmitters and Signaling in Pfizer's Neuroscience and Pain Research Unit, led the psychiatry and pain portfolios, including bringing several assets to the clinic, and was Head of the Worldwide Research and Development Postdoctoral Program at Pfizer. Prior to her career in biopharma, Rita was Professor of Neuroscience and Chair of the Neuroscience Graduate Group in the Perelman School of Medicine at the University of Pennsylvania, where she currently holds an appointment as Adjunct Professor. Rita and her laboratory have studied the cell-cell signaling mechanisms underlying synapse formation and maintenance, mechanisms underlying neuromuscular development and disease, and pathophysiologic mechanisms underlying autoimmune CNS disorders affecting cognition and behavior. She was continuously funded by the NIH for more than 30 years, authored more than 100 scientific papers, received several awards and honors, has given hundreds of invited research talks around the world, has chaired or served on many NIH, national and international committees, study sections, editorial boards and research organization advisory boards. Rita is an elected Fellow of the American Association for the Advancement of Science.

Cori Bargmann, **Ph.D.**, an internationally recognized neurobiologist and geneticist, leads the Chan Zuckerberg Initiative's Science work. Dr. Bargmann is also the head of the Lulu and Anthony Wang Laboratory of Neural Circuits and Behavior and the Torsten N. Wiesel Professor at The Rockefeller University in New York. Dr. Bargmann is a member of the National Academy of Sciences and the American Philosophical Society. She received the 2012 Kavli Prize in Neuroscience and the 2013 Breakthrough Prize in Life Sciences, among many other scientific honors. She also co-chaired the National Institutes of Health committee that set goals and strategies for President Obama's Brain Research through Advancing Innovative Neurotechnologies (BRAIN Initiative). Dr. Bargmann is a former Howard Hughes Medical Institute Investigator and holds a Ph.D. in Biology from the Massachusetts Institute of Technology.

Katja Brose, Ph.D., is a Science Program Officer at the Chan Zuckerberg Initiative. The goals of Chan Zuckerberg Science Initiative are to support basic science and technology that will make it possible to cure, prevent, or manage all diseases by the end of the century. Before joining CZI, she was part of the editorial team at Cell Press for 17 years where from 2004-2017 she was Editor-in-Chief of *Neuron* and a Publishing Director at Cell Press-Elsevier. During her tenure as Editor, Neuron undertook a major expansion of its scope building on its historical strengths in molecular and cellular neuroscience to cover all areas of neuroscience from molecular/cellular mechanisms to systems and cognitive neuroscience, genetics, neurological and psychiatric disease, theoretical neuroscience and emerging technologies. As Publishing Director, she was responsible for Cell Press strategy for review content, including oversight of the Trends family of review journals. She also led Cell Press' efforts around rigor and reproducibility. She has been an active committee member at the Society for Neuroscience, as a member of the Professional Development and Neuroscience Training Committees. She speaks frequently on topics related to scientific publishing and communication, including publication ethics and rigor and reproducibility in science. She earned her undergraduate degree in 1990 from Brown University, with a

double concentration in Biology and European History. She received her Ph.D. in Biochemistry from the University of California-San Francisco (1994-2000). For her graduate work, she worked in the laboratory of Dr. Marc Tessier-Lavigne focusing on axon guidance mechanisms in the developing spinal cord.

Daniel L. Gonzales, **Ph.D.,** is a HHMI Hanna Gray postdoctoral fellow in the Weldon School of Biomedical Engineering at Purdue University. He currently works in the Nano-Neurotechnology Laboratory under Dr. Krishna Jayant, developing tools to probe neural activity at the nanoscale. He received his Ph.D. in Applied Physics from Rice University, where he worked with Dr. Jacob Robinson to integrate bioelectronics and microfluidics to study millimeter-sized model organisms. He is also a first-generation college student and received his B.S. in Physics from Angelo State University. His scientific goals are to further our understanding of neural circuits and cognition by developing creative tools that leverage fundamental principles of physics. Inseparable from his research aims, he believes the definition of scientific excellence encompasses empowering mentorship and advocating for historically excluded groups.

Walter J. Koroshetz, **M.D.,** was selected Director of the National Institute of Neurological Disorders and Stroke (NINDS) in 2015. Dr. Koroshetz joined NINDS in 2007 as Deputy Director, and he served as Acting Director from October 2014 through June 2015. He has held leadership roles in a number of NIH and NINDS programs including the NIH's BRAIN Initiative, the Traumatic Brain Injury Center collaborative effort between the NIH intramural program and the Uniformed Health Services University, and the multi-year work to develop and establish the NIH Office of Emergency Care Research to coordinate NIH emergency care research and research training Before joining NINDS, Dr. Koroshetz served as Vice Chair of the neurology service and Director of stroke and neurointensive care services at Massachusetts General Hospital (MGH). He was a professor of Neurology at Harvard Medical School (HMS) and led neurology resident training at MGH between 1990 and 2007. Over that same period, he co-directed the HMS Neurobiology of Disease Course with Drs. Edward Kravitz and Robert H Brown. A native of Brooklyn, New York, Dr. Koroshetz graduated from Georgetown University and received his medical degree from the University of Chicago. He trained in internal medicine at the University of Chicago and Massachusetts General Hospital. Dr. Koroshetz trained in neurology at MGH and later at the Harvard neurobiology department. A major focus of his clinical research career was to develop measures in patients that reflect the underlying biology of their conditions.

Kelsey C. Martin, **M.D., Ph.D.**, is Professor of Biological Chemistry and Professor of Psychiatry and Biobehavioral Sciences at UCLA, where she also serves as Dean of the David Geffen School of Medicine. Under her leadership, the school is focused on bridging traditionally disparate disciplines to translate scientific discoveries into life-saving cures, understand and address health care injustice, and train the next generation of medical and scientific thought leaders. Dr. Martin's career path has uniquely prepared her to tackle medicine's most pressing challenges. After receiving her undergraduate degree at Harvard University, she served as a Peace Corps volunteer in the Democratic Republic of Congo. She then entered the M.D-.Ph.D. program at Yale University and went on to do her postdoctoral training with Nobel Laureate Eric Kandel at Columbia University. Dr. Martin joined the UCLA faculty in 1999, and over the last 20 years her lab has made groundbreaking discoveries on the biology of memory. Dr. Martin is a member of the American Academy of Arts and Sciences and the National Academy of Medicine.

Marc Tessier-Lavigne, Ph.D., pioneering neuroscientist and former biotechnology leader, he became Stanford University's 11th president on September 1, 2016. He returned to Stanford after serving as president of The Rockefeller University, a graduate biomedical research university in New York City. From 2001 to 2005, he was professor of biological sciences at Stanford, where he held the Susan B. Ford Professorship in the Humanities and Sciences; he previously held faculty positions at the University of California, San Francisco. He also served as executive vice president for research and chief scientific officer at biotechnology firm Genentech Inc., where he directed disease research and drug discovery, and helped oversee the development of eight FDA-approved drugs for cancer and immune disorders. Dr. Tessier-Lavigne and his colleagues have performed pioneering work on the mechanisms that direct the wiring up of the brain during embryonic development. He has also helped elucidate mechanisms of neurodegeneration. He is the recipient of numerous awards for his scientific contributions, including the 2020 Gruber Neuroscience Prize, and he has been elected to several learned societies, including the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences and the American Philosophical Society.

Cristin Welle, Ph.D., is an Associate Professor in University of Colorado Departments of Neurosurgery and Physiology & Biophysics faculty, where she investigates circuit-level neural structure and function in the context of translational neurotechnology. She is also the Vice-Chair for Research of the Department of Neurosurgery. Before moving to the University of Colorado, Dr. Welle led a research group at the Center for Devices and Radiological Health, Food and Drug Administration, with a focus on safety and performance of novel Brain Computer Interface technology. In addition to her research interests, Dr. Welle works to promote diversity within STEM, and is the Chair of the Neuroscience Program's Faculty Committee on Equity and Inclusion.