Applying Neurobiological Insights on Stress to Foster Resilience Across the Lifespan: A Workshop

Committee

Huda Akil

Co-Chair

Huda Akil, Ph.D., is the Gardner Quarton Distinguished University Professor of Neuroscience and Psychiatry at the Michigan Neuroscience Institute (MNI) in the University of Michigan. Dr. Akil work focuses on the neurobiology of emotions, mood and temperament. She and her colleagues have made seminal contributions to our understanding of the brain biology of stress, anxiety, and substance abuse. Dr. Akil provided the first physiological evidence for a role of endorphins in the brain and showed that endorphins are activated by stress and modify pain perception. Her laboratory has developed new genetic animal models of temperament and shown their relevance to human disorders, including addiction and depression. She is engaged in large-scale collaborative studies to discover genes, proteins and neural circuits that cause vulnerability to major depression and bipolar illness. Her work has uncovered the role of the Fibroblast Growth Factor (FGF) family in depression and established its functions in the development and control of emotions. Dr. Akil has served on several national and international organizations to promote scientific and brain health awareness nationally and globally. She is a past President of the Society for Neuroscience the largest neuroscience organization in the world. Dr. Akil's contributions to science have been recognized with numerous honors and awards. 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. She has served on the council of the NAM and is currently on the council of the NAS. She has received two honorary doctorates, and is the recipient of the 2023 Gruber Neuroscience Prize. In October 2023, she received the US President National Medal of Science.

Eric J. Nestler

Co-Chair

Eric Nestler, M.D., Ph.D., is the Nash Family Professor of Neuroscience at the Icahn School of Medicine at Mount Sinai in New York, where he serves as Director of the Friedman Brain Institute, Dean for Academic Affairs, and Chief Scientific Officer. He received his B.A., Ph.D., and M.D. degrees, and psychiatry residency training, from Yale University. He served on the Yale faculty from 1987-2000 where he was the Elizabeth Mears and House Jameson Professor of Psychiatry and Neurobiology and Director of the Division of Molecular Psychiatry and moved to Dallas in 2000 where he was the Lou and Ellen McGinley Distinguished Professor and Chair of the Department of Psychiatry at The University of Texas Southwestern Medical Center until moving to New York in 2008. Dr. Nestler is a member of National Academy Medicine (1998) and a Fellow of the American Academy of Arts and Sciences (2005). He is a past President of the American College of Neuropsychopharmacology (2011) and the Society for Neuroscience (2017). He is a founder and SAB chair for PsychoGenics. Dr. Nestler also chairs the SABs for One Mind, the Hope for Depression Research Foundation, and the Rainwater Foundation's Tau Consortium. The author of >725 publications and five books, Dr. Nestler's research studies the molecular basis of drug addiction and depression.

Deanna M. Barch

Member

Deanna Barch, Ph.D., is a clinical scientist whose research focuses on understanding normative patterns,cognitive function and brain connectivity and the mechanisms that give rise to the challenges in behavior and cognition found in illnesses such as schizophrenia and depression, utilizing psychological, neuroimaging and computational approaches across the lifespan. She is the Vice Dean of Research in Arts & Sciences at Washington University. She is also the Couch Professor of Psychiatry and a Professor of Radiology. She is Deputy Editor at Biological Psychiatry and Editor-in-Chief of Biological Psychiatry: Global Open Science. She is also the President of the Psychology Section of the American Association for the Advancement of Science. Dr. Barch is on the scientific boards of the Brain and Behavior Research Foundation, the One Mind Foundation, and the Stanley Foundation. Dr. Barch was on the Executive Committee of the Association for Psychological Science and the Scientific Council of the National Institute of Mental Health. She is a Fellow of both the Association for Psychological Science and the American College of Neuropsychopharmacology, a member of the Society for Experimental Psychology, and a member of the National Academy of Medicine and the American Academy of Arts & Sciences.

Indida Birto

Member

Indida is a dedicated professional in the Atlanta area, specializing in mental health, harm reduction education, case management, and peer navigation. She presently works as the Service Plan Coordinator for Here’s to Life Inc, and as a Research Assistant for Emory Rollins School of Public Health’s EMpower Research Team. Her personal journey through co-occurring pain and behavioral health disorders, as well as her experiences within the US prison system, foster care, and experiencing substance use disorder while unhoused , have profoundly shaped her mission. Overcoming these barriers inspired Indida to work tirelessly toward building resilient communities and supporting individuals facing similar challenges.

Nadine Burke Harris

Member

Nadine Burke Harris, M.D., is an award-winning physician, researcher and public health leader currently serving as Senior Advisor to the ACE Resource Network. As California Surgeon General, she successfully launched a first-in-the-nation statewide effort to train over 40,000 primary care providers on how to screen for risk of toxic stress and respond with evidence-based, trauma-informed care. Dr. Burke Harris' career has been dedicated to serving vulnerable communities and combating the root causes of health disparities.

In 2005 she founded a clinic in one of San Francisco's most underserved communities, Bayview Hunters Point. It was there that Burke Harris identified Adverse Childhood Experiences as a major risk factor affecting the health of her patients and applied research from the CDC and Kaiser Permanente to develop a novel clinical screening protocol. She then founded the Bay Area Research Consortium on Toxic Stress and Health and led the first-ever randomized-controlled trial to validate ACE screening and assess treatment of toxic stress.

Dr. Burke Harris is the recipient of the David G. Nichol Health Equity Award presented by the American Pediatric Society and the American Board of Pediatrics, the Arnold P. Gold Foundation Humanism in Medicine Award presented by the American Academy of Pediatrics and the Heinz Award for the Human Condition.

Dr. Burke Harris completed her MPH at Harvard School of Public Health and residency at Packard Children's Hospital at Stanford. She served as a committee

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member and co-author for the National Academies of Sciences, Engineering and Medicine for the consensus report Vibrant and Health Kids: Aligning Science, Practice and Policy to Advance Health Equity, published in 2019; and as a member of the American Academy of Pediatrics' National Advisory Board for Screening.

Brian Dias

Member

Brian Dias, Ph.D., is a South Asian-American Associate Professor with Tenure in the Department of Pediatrics at the USC Keck School of Medicine and directs a research laboratory at Children's Hospital Los Angeles (CHLA). Dr. Dias and his team study how legacies of stress echo across generations. From their discoveries, they aim to inform therapeutic and policy interventions to mitigate multi-generational legacies of stress.

A recipient of a CIFAR Azrieli Global Scholar Award from the Canadian Institute for Advanced Research (CIFAR), Dr. Dias is a Fellow in CIFAR's Child & Brain Development Program. Committed to educating the next generations of scientists to create diverse, equitable and inclusive communities, Dr. Dias has been awarded an HHMI Gilliam Fellowship in partnership with one of his graduate students and mentors high-schoolers through the Latine & African American High School Internship Program (LA-HIP) at CHLA.

Sought after as a thought leader and gifted science communicator, Dr. Dias recently spoke about legacies of trauma on stage (TEDx), radio (NPR) and TV (Your Fantastic Mind - PBS). Complementing his research, Dr. Dias is deeply invested in knowledge mobilization. He teaches Neuroscience to Tibetan Buddhist monastics through the Emory Tibet Science Initiative and consults on the N.E.A.R. (Neurobiology, Epigenetics, Adversity, Resilience) education curriculum for FamilyWise Services - a Minnesota-based organization that aims to strengthen families by promoting wellbeing of children.

See www.diaslab.weebly.com for more information.

Andrew J. Fuligni

Member

Andrew Fuligni, Ph.D., researches the interaction between sociocultural experiences and biobehavioral development among adolescents from diverse ethnic, immigrant, and economic backgrounds, with a current focus on youth's prosocial behavior, contributions to their social worlds, and sleep.

As the Co-Director of the UCLA Center for the Developing Adolescent, Dr. Fuligni also works to translate and disseminate the science of adolescence to policy-makers and practitioners to support efforts that promote the healthy development of diverse youth.

Receiving his Ph.D. in Developmental Psychology at the University of Michigan, Dr. Fuligni previously was an associate professor of Psychology at New York University. Dr. Fuligni was a recipient of the American Psychological Association's Boyd McCandless Award for Early Career Contribution to Developmental Psychology, a William T. Grant Faculty Scholars Award, a FIRST award from NICHD, and he is a Fellow in the American Psychological Association and the Association for Psychological Science.

Frances E. Jensen

Member

Frances Jensen, M.D., is Professor of Neurology and Chairman of Neurology at the Perelman School of Medicine, University of Pennsylvania, and Co-Director of Penn Translational Neuroscience Center. She was formerly Professor of Neurology, Harvard Medical School, Director of Translational Neuroscience and senior neurologist at Boston Children's Hospital and Brigham and Women's Hospital. She is a graduate of Cornell Medical College and obtained her neurology residency training at the Harvard Longwood Neurology Residency Program. Her research focuses on mechanisms of epilepsy and stroke, and the mechanistic interaction of epilepsy with other disorders such as autism and dementia, with specific emphasis on elucidating new therapies for clinical trials development. Dr. Jensen received the 2007 Director's Pioneer Award from the NIH to explore the interaction between epileptogenesis and cognitive dysfunction, and was elected as a member of the National Academy of Medicine in 2015. Dr. Jensen was President of the American Epilepsy Society in 2012 and has served on a number of other leadership boards including the Council for the Society for Neuroscience and the Council at NICHD. She currently serves on the Board of the American Neurological Association, the scientific advisory panel at NIH for the BRAIN Initiative, and on a number of charitable foundations for neuroscience research. She has authored over 150 manuscripts on subjects related to her research and has been continuously funded by NIH since 1987. Dr. Jensen has trained numerous clinical and basic research fellows who now hold independent faculty positions nationally and internationally. Dr. Jensen is a Trustee of the Franklin Institute in Philadelphia and is involved in community outreach for brain research and education. In addition, Dr. Jensen is an advocate for awareness of the adolescent brain development, its unique strengths and vulnerabilities, as well as their impact on medical, social, and educational issues unique to teenagers and young adults, and author of the book "The Teenage Brain", released by Harper Collins in 2015/16, translated and published in over 25 languages worldwide.

Catherine Jensen Peña

Member

Catherine Jensen Peña, Ph.D., is an Assistant Professor in the Princeton Neuroscience Institute. Her primary focus is understanding how stress impacts brain development and risk for psychiatric disease, from molecular to circuit to behavioral levels. While her team primarily uses mouse models of stress across the lifespan, they also collaborate to examine developmental stress in vulnerable human populations and perform cross-species molecular comparisons.

The main toolkit of Dr. Peña's lab to-date includes cell-type-specific transcriptomic and epigenomic analyses, cellular activity tagging and manipulation, and computational analyses of behavior. Major awards received by Dr. Peña include the 2024 Society for Neuroscience Young Investigator Award, 2021 Society for Behavioral Neuroendocrinology Frank Beach Early Career Award, and Associate Membership in the American College of Neuropsychopharmacology. She also served on the Allen Institute Next Generation Leaders Council.

Dr. Peña earned her BA from the University of Pennsylvania working with Dr. Tracy Bale, her PhD from Columbia University working with Dr. Frances Champagne, and trained as a postdoc at Mount Sinai with Dr. Eric Nestler.

John H. Krystal

Member

John Krystal, M.D., is the Robert L. McNeil, Jr., Professor of Translational Research; Professor of Psychiatry, Neuroscience, and Psychology; and Chair of the Department of Psychiatry at the Yale University. He is also Chief of Psychiatry and Behavioral Health at Yale-New Haven Hospital. He is a graduate of the University of Chicago, Yale University School of Medicine, and the Yale Psychiatry Residency Training Program. He has published extensively on the neurobiology and treatment of schizophrenia, alcoholism, PTSD, and depression. Notably, his laboratory discovered the rapid antidepressant effects of ketamine in humans. He is the Director of the NIAAA Center for the Translational Neuroscience of Alcoholism and the Clinical Neuroscience Division of the VA National Center for PTSD. Dr. Krystal is a member of the U.S. National Academy of Medicine and a Fellow of the American Association for the Advancement of Science. He is also the former co-director of the Neuroscience Forum of the U.S. National Academies of Sciences, Engineering, and Medicine; and editor of Biological Psychiatry (IF=13.38). He has chaired the NIMH Board of Scientific Counselors and served on the national advisory councils for both NIMH and NIAAA. Also, he is past president of the American College of Neuropsychopharmacology (ACNP) and International College of Neuropsychopharmacology (CINP).

Disclosure: Dr. Krystal is a consultant for 26 for-profit companies in the psychiatry and/or neuroscience field.

Husseini K. Manji

Member

Husseini Manji, M.D., is a Professor at Oxford University, Visiting Professor at Duke University, and Co-Chair of the UK Government Mental Health Mission. Dr. Manji is also past Global Therapeutic Head for Neuroscience at Janssen Research & Development pharmaceutical companies, and Global Head, Science for Minds, J&J. He has been inducted into the National Academy of Medicine (NAM, formerly IOM), is a member of the National Institutes of Health Novel and Exceptional Technology and Research Advisory Committee, the World Dementia Council, the World Economic Forum (WEF) Global Future Councils, the Board of Mass General-Brigham Incorporated; the Board of Trustees of Harvard University/McLean Hospital, Scientific Advisory Board of the Stanley Center at the Broad Institute of MIT and Harvard. He is chair of the National Academy of Medicine Neuroscience, Behavior, Brain Function & Disorders group, and has held numerous leadership positions within the NIH, NAM, the FNIH Biomarkers Consortium Executive Committee. Before joining J&J, Dr. Manji was Chief of the Laboratory of Molecular Pathophysiology at the National Institutes of Health (NIH) and Director of the NIH Mood and Anxiety Disorders Program, the largest program of its kind in the world.

The major focus of Dr. Manji’s research is the investigation of disease and treatment-induced changes in synaptic and neural plasticity in neuropsychiatric disorders. Dr. Manji has helped to discover, develop, and launch several new medications for serious neuropsychiatric and neurodegenerative disorders. These include the first novel antidepressant mechanism in over 30 years, the first medication in Neuroscience granted FDA “Breakthrough designation”, a once every 6-month treatment for schizophrenia, novel mechanism(s) for Alzheimer’s Disease, multiple sclerosis among others. Dr. Manji also has been actively involved in developing biomarkers to help refine these multifactorial diseases, and to develop a holistic approach towards neuropsychiatric and neurodegenerative disorders.

Dr. Manji has received a number of prestigious awards, including the NIMH Director's Career Award for Significant Scientific Achievement, PhRMA Research & Hope Award for Excellence in Biopharmaceutical Research, the American Federation for Aging Research Award of Distinction, the A. E. Bennett Award for Neuropsychiatric Research, the Ziskind-Somerfeld Award for Neuropsychiatric Research, the NARSAD Mood Disorders Prize, the Mogens Schou Distinguished Research Award, the ACNP’s Joel Elkes Award for Distinguished Research, the DBSA Klerman Senior Distinguished Researcher Award, the Briggs Pharmacology Lectureship Award, the Caring Kind Alzheimer’s Disease Leadership Award, and the Global Health & the Arts Award of Recognition, and has also been recognized as one of 14 inaugural “Health Heroes” by Oprah magazine.

Michael Milham

Member

Michael P. Milham, M.D., Ph.D., is the Chief Science Officer at the Child Mind Institute and the founding director of the Center for the Developing Brain. He also serves as director of the Center for Biomedical Imaging and Neuromodulation at the Nathan Kline Institute for Psychiatric Research. Dr. Milham's research is focused on using neuroimaging to investigate typical and atypical brain development, as well as pioneering large-scale open science and data-sharing initiatives.

Dr. Milham is a Clarivate Highly Cited Researcher for Neuroscience and Behavior. His notable honors include the Organization for Human Brain Mapping's 1st Annual Open Science Award (2020), the Wiley Young Investigator Award (2014), and the NIMH Outstanding Resident Award in Psychiatric Research (2006). He is a member of the American College of Neuropsychopharmacology.

He earned his MD and PhD degrees from the University of Illinois, where he was inducted into the AOA National Medical Honor Society and Phi Kappa Phi Honor Society.

Aleksandra Vicentic

Member

Aleksandra Vicentic, Ph.D., leads Behavioral Science and Integrative Neuroscience Branch at NIMH bringing over 20 years of research experience in academia and government in basic neuroscience of affect and emotion regulation. She obtained a Ph.D. degree in neuropharmacology through a joint program between Emory University and Loyola University Chicago. Following postdoctoral training, she started a faculty position at Emory where she ran a program on the neurophysiological consequences of early life stress and psychostimulant drug exposure.

Serving as a Principal Investigator on NIH-funded grants and as Branch Chief at NIMH, Dr. Vicentic brings expertise in empirical and computational studies of circuit-level neurobiological mechanisms of stress and resilience, negative and positive valence behaviors and learning and memory. She brings extensive experience with leading cross-cutting neuroscience initiatives that address pressing challenges in mental health research (e.g., NIMH's Interests in Areas of Stress Biology NOT-MH-18-058, NIMH Priorities on Research Using Genetically Modified Nonhuman Primates NOT-MH-22-010, The Neural Mechanisms of Multi-Dimensional Emotional and Social Representation NOT-MH-23-120) via her collaborative efforts with academia, pharmaceutical industry and governmental agencies, and as organizer and Chair over 20 symposia and workshops at International Conferences that she's a member of (e.g., SfN, IBNS, Biological Psychiatry).

She's participated and made significant contributions at NASEM Public Meeting on Nonhuman Primate Models in 2022.