

**Brain Research Through Advancing Innovative Neurotechnologies® (BRAIN)
Multi-Council Working Group (MCWG) Meeting
May 14, 2024**

On May 14, 2024, the National Institutes of Health (NIH) *Brain Research Through Advancing Innovative Neurotechnologies®* (BRAIN) Initiative [Multi-Council Working Group \(MCWG\)](#) met virtually to discuss the current state of the BRAIN Initiative, as well as learn about new and upcoming projects.

[In opening remarks](#), Susan Weiss, PhD, Designated Federal Official of the MCWG, welcomed meeting participants. John Ngai, PhD, Director of the NIH BRAIN Initiative and Chair of the MCWG, then thanked the three departing MCWG members: Karl Deisseroth, MD, PhD, National Institute on Drug Abuse representative; Todd Braver, PhD, National Center for Complementary and Integrative Health representative; and Sameer Sheth, MD, PhD, National Institute of Neurological Disorders and Stroke (NINDS) representative. Dr. Ngai noted the [anticipated departure of Joshua Gordon, MD, PhD](#), Director of the National Institute of Mental Health (NIMH), and thanked Dr. Gordon for [NIMH's leadership and support of the BRAIN Initiative](#). Dr. Gordon will return to Columbia University, New York City, as Chair of the Department of Psychiatry at the Vagelos College of Physicians and Surgeons. Dr. Ngai then introduced new BRAIN Initiative Team Leads: Yvonne Bennett, PhD, NIMH and Megan Frankowski, PhD, NINDS (Team Neural Recording and Modulation/Technology Development and Human Studies), and Ashlee Van't Veer, PhD, NIMH (Team Training, Inclusion, and Equity).

Next, Dr. Ngai provided an overview of the BRAIN Initiative budget, noting that the Fiscal Year (FY)24 budget is \$278 million less than the FY23 budget. In April 2024, Dr. Ngai released a BRAIN Director's Corner blog post to share perspectives on this new budget and guide BRAIN Initiative grantees through an [uncertain budget climate](#); more information on budget-related changes can be found on the [BRAIN Initiative's website](#). Dr. Ngai highlighted many BRAIN-funded investigators and/or working group members who have recently received distinguished recognitions. He announced the 2024 Brain Prize award winners: Larry Abbott, PhD, Columbia University; Terrence Sejnowski, PhD, Salk Institute for Biological Studies; and Haim Sompolinsky, PhD, Harvard University, who received the Brain Prize for their groundbreaking discoveries on molecular mechanisms of brain development and plasticity. He acknowledged the five newly elected American Academy of Arts and Sciences members: Paola Arlotta, PhD, Harvard University; Rashid Bashir, PhD, University of Illinois Urbana-Champaign; Wei Chen, PhD, Northwestern University; Cagla Eroglu, PhD, Duke University; and Martyn Goulding, PhD, Salk Institute for Biological Studies. He also noted the newly elected members of the American Association for the Advancement of Science: Alison Barth, PhD, Carnegie Mellon University; Robert Campbell, PhD, University of Tokyo; Mark Orazem, PhD, University of Florida; Siddharth Ramachandran, PhD, Boston University; and Kevin Staley, MD, Harvard Medical School. Finally, newly elected members to the National Academy of Sciences include: Guoping Feng, PhD, Broad Institute; Oliver Hobert, PhD, Columbia University; and Richard Mooney, PhD, Duke University.

Dr. Ngai highlighted upcoming and previous events, including a workshop on [Advancing Human Neuroscience Through Neural Stimulation and Recording](#) and a related Request for Information ([NOT-NS-24-080](#)). In honor of the BRAIN Initiative's 10th anniversary, the 'BRAIN at 10' blog series features Directors from the 10 NIH Institutes and Centers that participate in the BRAIN Initiative, including the kick-off post from [Walter Koroshetz, MD](#), Director of NINDS, who shared insights into what makes the BRAIN Initiative unique, how it has impacted NINDS's mission throughout the last ten years, and how it has changed the field of neuroscience by allowing scientists to embrace the complexity of the brain.

Finally, the [10th Annual BRAIN Initiative conference](#) will be held on June 17-18, 2024, with an early career researcher networking event to take place on Sunday, June 16.

Dr. Ngai shared BRAIN Initiative program updates. Since its inception in 2014, the BRAIN Initiative has granted more than 1,600 awards supporting 1,705 principal investigators across 265 institutions, leading to 8,478 publications in 1,035 journals. Grant demographics analysis indicates that the BRAIN Initiative has not yet seen improvements in gender or ethnic diversity of funded investigators but continues to work to include diverse perspectives. Toward this aim, the BRAIN Initiative has instated a requirement that all funded studies include a [Plan for Enhancing Diverse Perspectives](#). Finally, Dr. Ngai highlighted two BRAIN-funded projects, including a study that developed new rabies virus vectors to enable multi-scale neural circuit mapping¹ and a study that reconstructed a petavoxel fragment of human cerebral cortex at nanoscale resolution.²

Sarah (Holly) Lisanby, MD, NIMH then presented on the [Brain Behavior Quantification and Synchronization \(BBQS\) Program](#), which has started to issue awards. This program was initiated to develop tools, platforms, theories, computational models, and a cross-disciplinary consortium that support the quantification of behaviors as multi-dimensional responses with high resolution that can establish casual brain/behavior relationships. The program has four emphasis areas: organismal behavior ([RFA-DA-24-042](#)), human clinical neuroscience ([RFA-MH-23-335](#)), sensors technology ([NOT-MH-24-125](#)), and a data archive, coordination, and artificial intelligence center ([RFA-MH-23-130/NOT-MH-12-115](#)). Dr. Lisanby highlighted several funded projects, including one that captured autobiographical memory formation in people in real-world environments.

The meeting concluded with a new initiative concept presentation by Natalie Trzcinski, PhD, NINDS, on promoting equity through BRAIN Initiative technology dissemination partnerships. This concept builds upon previous BRAIN Initiative reports that emphasize collaboration as well as MCWG guidance regarding the importance of ensuring diversity and equity by partnering with under-resourced institutions. An analysis of the BRAIN Initiative portfolio indicated that greater institutional diversity is observed in attendees of BRAIN Initiative workshops and training sessions compared to users of BRAIN Initiative technologies. The overall long-term goal of the concept is to increase the impact of the BRAIN Initiative through dissemination and integration of validated BRAIN Initiative tools to investigators at institutions that historically have not received NIH support. The concept's short-term goal is to support collaborations between resource-limited institutions (RLIs) and BRAIN Initiative technologists. Dr. Trzcinski highlighted several types of resources that do not require capacity-building efforts or state-of-the-art equipment and thus may be more readily applicable for RLIs, such as software tools for complex data analysis, resources to interact with or visualize large-scale, complex data, and next generation tools for neural recording and modulation.

The next MCWG meeting will be held on August 22, 2024, and a [video recording](#) will be available for live viewing and archived.

¹ Bouin, A., Wu, G., Koyuncu, O.O. et al. New rabies viral resources for multi-scale neural circuit mapping. *Mol Psychiatry* (2024). <https://doi.org/10.1038/s41380-024-02451-6>

² Shapson-Coe, A., Januszewski, M., Berger, et al. (2024). A petavoxel fragment of human cerebral cortex reconstructed at nanoscale resolution. *Science* (New York, N.Y.), 384(6696), eadk4858. <https://doi.org/10.1126/science.adk4858>