

## Brain Research through Advancing Innovative Neurotechnologies® (BRAIN)

### Multi-Council Working Group (MCWG) Meeting

February 12<sup>th</sup>, 2019

The NIH BRAIN Initiative [Multi-Council Working Group](#) (MCWG) held its 12<sup>th</sup> meeting on Tuesday, February 12, 2019. Dr. Susan Weiss, the MCWG Designated Federal Official, welcomed everyone to the meeting.

Drs. Walter Koroshetz (Director, NINDS) and Joshua Gordon (Director, NIMH) began the meeting by providing an overview of the current state of the NIH BRAIN Initiative. They highlighted recent BRAIN Initiative-funded studies, including research describing a new imaging technique that combines expansion microscopy and lattice light-sheet microscopy. They highlighted how the [National Academy of Sciences recently awarded two BRAIN-funded investigators and one BRAIN MCWG member](#). Further, they described BRAIN diversity outreach efforts, including a symposium at the 2018 Annual Biomedical Research Conference for Minority Students ([ABRCMS](#)). Investments in BRAIN have increased as a result of the 21<sup>st</sup> Century Cures Act, which is set to support the Initiative through 2026. Drs. Koroshetz and Gordon described recent leadership changes at the NIH level, with new IC directors coming on board, as well as changes to BRAIN leadership teams. They also discussed current global BRAIN Initiative efforts, particularly in the area of neuroethics.

Dr. John Maunsell (Co-chair, ACD NIH BRAIN Initiative Working Group; University of Chicago) presented an update on the [ACD BRAIN Working Group \(WG\) 2.0](#), which will present its recommendations for the next phase of the BRAIN Initiative to the NIH Director's Advisory Council in June. The WG 2.0 has hosted a number of scientific and public meetings and workshops to gather input for what the next phase should focus on. Dr. Maunsell described the pillars, or [priority areas](#), of the current BRAIN Initiative, reviewing progress to date in each area and suggesting opportunities for BRAIN 2.0. The flagship accomplishment of the BRAIN Initiative has been in the area of identifying cell types in the brain. The [BRAIN Initiative Cell Census Network \(BICCN\)](#) was launched in 2017 to help advance these efforts. Future opportunities in this area include complete identification of cells in the human brain, generating protein-based tools, and correlating cell types to functions. Dr. Maunsell noted that while the newly developed tools and techniques should start moving into human neuroscience, it will also be important to continue efforts in creating new technology. Two other areas he noted were ways to improve the multidisciplinary aspect of BRAIN by encouraging early career researchers in fields such as theory and physics and increasing efforts in public outreach.

Dr. Hank Greely (Co-chair, Neuroethics Working Group; MCWG Member; Stanford Law School) provided updates from the Neuroethics Working Group, which had met the previous day. The [theme of that meeting was data sharing and privacy](#). The Working Group conducted a portfolio analysis of funded projects that revealed eight primary themes, each of which could be potential workshop or publication topic. Dr. Greely noted that there will be an upcoming publication about consent, and a workshop is currently being planned about data sharing and privacy. He also described a recent paper by the Neuroethics Working Group, outlining [a set of guiding principles](#) for this area.

Dr. Greg Farber (Director, Office of Technology Development and Coordination, NIMH) next discussed BRAIN Data Infrastructure and Data Sharing, describing efforts underway to manage and store the massive amount of data being collected by BRAIN Initiative researchers. The two primary components of [BRAIN Initiative informatics](#) are infrastructure, which refers to data archives and standards for data collection, and research/theory, which refers to ways to use the data in analytical tool development. Dr. Farber noted there are barriers to adopting data sharing technology, such as storing information in “the cloud.” He also discussed [a recent notice that will require data sharing for all BRAIN grants submitted after March 2020](#).

The last presentation during the open session of the meeting was an FY18 overview of the BRAIN Initiative, and it was led by Dr. Farber. The BRAIN Initiative has been steadily growing, with more funding opportunities, applications, and increased investment, every year since it began in FY14. The success rate for BRAIN Initiative applications in FY18 was 26.8 percent. There was an increase in the number of applications submitted by New Investigators and Early-Stage Investigators and many of those scored well. Between FY14-18, NIH received 27 applications from intramural researchers and six of those have been awarded. A geographic analysis revealed a difference between locations of performance sites and where applications were coming from, indicating the collaborative nature of BRAIN. A second analysis revealed that there are many states across the United States where neuroscientists are conducting research, but are not participating in the BRAIN Initiative, suggesting those areas may benefit from increased outreach efforts from NIH to inform the scientists about the program. Dr. Farber also noted that many BRAIN funding opportunities are open to foreign investigators and that 11 countries received BRAIN awards in FY18.

The meeting proceeded with a closed session of the MCWG members and federal staff to discuss proposed funding plans for the first round of FY19 Requests for Applications.