



May 25, 2022

The Honorable Patty Murray
Chair
Subcommittee on Labor-HHS-Education
Senate Appropriations Committee
Washington, DC 20510

The Honorable Roy Blunt
Ranking Member
Subcommittee on Labor-HHS-Education
Senate Appropriations Committee
Washington, DC 20510

Dear Chair Murray and Ranking Member Blunt,

We are writing to respectfully request that your subcommittee include robust funding for the National Institutes of Health (NIH) to fund the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative in Fiscal Year 2023.

Brain disorders such as Alzheimer's disease, Parkinson's disease, autism, epilepsy, depression, addiction, and traumatic brain injury, are projected to be some of the most disabling and costly chronic diseases in the 21st century. One in three Americans will have a brain or nervous system disorder sometime in their life and the cost of treating neurologic disorders is more than \$800 billion each year. These statistics are grave, but they pale in comparison to the real-life impact that these diseases have on millions of Americans and their loved ones each day. Regrettably, we do not currently know enough about the brain to begin to meet this dire health and economic challenge. Fortunately, the BRAIN Initiative seeks to change that.

The complexity of the brain's 100 billion cells and 100 trillion connections were once thought to be beyond the realm of human understanding. However, the BRAIN Initiative – an interdisciplinary program that funds the research of some of the nation's greatest scientists – has demonstrated how to achieve this unimaginable goal. For instance, the BRAIN Initiative has led to the most detailed “digital brain atlas” to date as a result of high-resolution neuroimaging combined with genetic-based cell mapping. This tool has been made available to both scientists and the public.

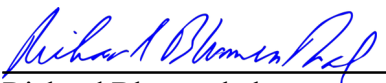
It is hoped that going forward the technologies developed through the BRAIN Initiative will reveal the underlying pathology of brain disorders – both neurologic and psychiatric – and lead to a new era of discoveries of treatments, cures, and modes of prevention of these disorders that afflict up to 50 million of our fellow Americans. One example is a BRAIN Initiative funded study that used brain signals recorded from epilepsy patients to program a computer to mimic natural speech. This breakthrough technology could potentially help patients communicate who suffer from neurologic conditions that limit speech function.

The NIH BRAIN Initiative is now rolling out three large transformative projects that will (1) build a comprehensive atlas of cell types in the human brain, (2) develop and scale up the tools necessary to complete a microconnectivity map of an entire mammalian brain, and (3) provide tools

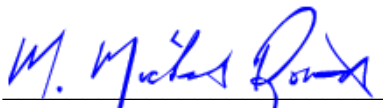
for precision access to the identified cell types to allow interrogation and modulation of neural circuits. Together, these tools will enable the eventual development of novel interventions—including molecular and gene-editing therapies—for human circuit disorders. Continued robust funding of the NIH, and subsequently the BRAIN Initiative, will enable the United States to remain a leader of biomedical research and to address the devastation wrought by neurologic disorders.

Thank you for your attention to this important matter, and we look forward to the subcommittee's effort to successfully fund this critical initiative.

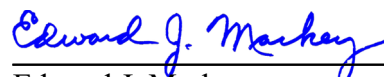
Sincerely,



Richard Blumenthal
United States Senator



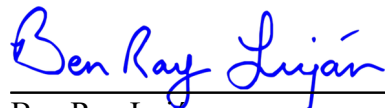
M. Michael Rounds
United States Senator



Edward J. Markey
United States Senator



Chris Van Hollen
United States Senator



Ben Ray Lujan
United States Senator



Sherrod Brown
United States Senator



Dianne Feinstein
United States Senator



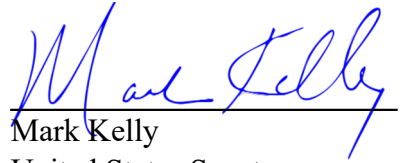
Benjamin L. Cardin
United States Senator



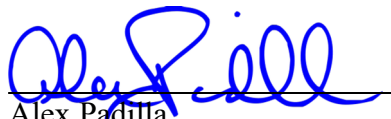
Amy Klobuchar
United States Senator



Kyrsten Sinema
United States Senator



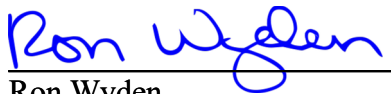
Mark Kelly
United States Senator



Alex Padilla
United States Senator



Sheldon Whitehouse
United States Senator



Ron Wyden
United States Senator



Kirsten Gillibrand
United States Senator



Maria Cantwell
United States Senator



Roger Marshall, M.D.
United States Senator



James Lankford
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Kevin Cramer
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