Written Statement
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Subcommittee on Labor, Health and Human Services, Education and Related Agencies
Appropriations Committee
In Support of FY25 Appropriations for the National Institutes of Health

Chair Aderholt, Ranking Member DeLauro, and members of the Subcommittee, on behalf of the Society for Neuroscience (SfN), I am honored to present this testimony in support of robust appropriations for biomedical research at the National Institutes of Health (NIH). SfN urges you to provide at least $51.393 billion, an increase of $4.312 billion, in base-level funding for the NIH for FY25 and $740 million for the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. For researchers across the nation, the ability to make life-changing advancements in the field of neuroscience is contingent upon significant and sustained federal funding.

One area of my lab's research at the Department of Psychiatry at Yale School of Medicine focuses on the role of single molecules in complex behaviors related to addiction, depression, feeding, and learning. With key NIH funding, my lab recently discovered neurons that respond consistently to a primary reward, such as opioid drugs, and that the response of these neurons scale with the size of the reward. Our research is now clarifying the role these neurons and others play in behavior and motivation. Basic research, like my own, provides understanding about the brain at a deep level, which paves the way for the development of novel therapeutics that will prevent and treat debilitating medical disorders. Continued progress depends on sustained federal funding at a level that at a minimum, keeps pace with inflation.

The Importance of the Research Continuum

SfN believes strongly in the research continuum—a pipeline, in which basic science leads to clinical innovations, which leads to translational uses impacting the public's health, reducing long-term medical costs and generating new jobs across the country. Basic science is the foundation upon which all health advances are built. To cure diseases, we need to understand them through fundamental discovery-based research. SfN is grateful to Congress for its investments in biomedical research, but it is critical that funding is sustained to achieve the goals of these investments.

NIH funding for basic research is not only critical for facilitating groundbreaking discoveries; it is essential for building our scientific workforce. For the United States to remain the world leader in biomedical research, Congress must continue to provide funding to fuel discoveries as well as the economy. Neuroscientists use a wide range of experimental, animal, and human models not used elsewhere in the research pipeline. These opportunities create discoveries – sometimes unexpected discoveries – expanding knowledge of biological processes. This level of discovery reveals new targets for research to treat all kinds of brain disorders affecting millions of people in the United States and beyond.

NIH basic research funding is also a key economic driver of science in the United States through funding universities and research organizations across the country and generates jobs in all states across the nation. Federal investments in scientific research fuel the nation's pharmaceutical, biotechnology, and medical device industries. The private sector utilizes basic scientific

discoveries funded through NIH to improve health and foster a sustainable trajectory for America's research and development enterprise. Basic science generates the knowledge needed to uncover the mysteries behind human diseases, which leads to private sector development of new treatments and therapeutics. Industry typically does not fund research on this important first step given the long-term path of basic science and pressure for shorter-term return on investments. Congressional investment in basic science is irreplaceable for development of drugs, biologics, devices, and other treatments for brain-related diseases and disorders.

The BRAIN initiative is an example of NIH's success by developing remarkable technologies for the entire research community enabling discoveries across neuroscience and related scientific disciplines that would have previously been un-imaginable. By including funding in 21st Century Cures, Congress helped maintain the momentum of this endeavor, but these funds should not supplant appropriations for NIH. There is no substitute for robust, sustained, and predictable funding for NIH. SfN appreciates Congress' ongoing investment in the BRAIN Initiative and urges its increased funding in FY25.

Scientists Identify a New Pain-Relief Pathway

NIH funded research has greatly advanced our understanding of pain pathways in the brain. Recent work by researchers at the University of Chicago Biological Sciences Division found an alternative signaling pathway that showed no signs of inducing tolerance or withdrawal symptoms for pain relief. This discovery can help scientists develop new pain relief treatments that limit the risk for addiction and scientists believe this is a viable path for developing effective pain relief that does not rely on opioids. This study used animal models, specifically mice, and was supported by NINDS grants. `

Congress & NIH Must Support Access to Models Necessary for Neuroscience Discovery

SfN urges the Committee to appropriate funding for biomedical research without restriction against the use of animal models. Adequate NIH funding is necessary to advance our understanding of the brain; however, full realization of this funding's promise requires appropriate access to research models, including non-human primates and other animal models. Animal research is highly regulated to ensure the ethical and responsible care and treatment of the animals. SfN and its members take their legal and ethical obligations related to this research very seriously. While SfN embraces the goal of the reduction, refinement, and eventual replacement of non-human primate models in biomedical research, much more research and time is needed before such a goal is attainable. Premature replacement of non-human primate and other animal models may delay or prevent the discovery of treatments and cures—not only for neurological diseases like Alzheimer's disease, addiction, and traumatic brain injury, but also for communicable diseases and countless other conditions. There are currently no viable alternatives available for studying biomedical systems that advance our understanding of the brain and nervous system; or when seeking treatments for diseases and disorders like depression, addiction, epilepsy, neurodevelopmental disorders like autism, neurodegenerative disorders, and post-traumatic stress disorders. SfN urges Congress to work with the NIH to ensure this important well-regulated research with animal models can continue.

Funding in Regular Order

SfN joins the biomedical research community supporting an increase in NIH funding to at least $51.303 billion for existing NIH Institutes and Centers in FY25. Continued cuts to discretionary spending would have a devastating impact on medical research especially as the NIH caught up to its 2003 level of funding, when accounting for inflation, and would hurt the country's ability to maintain its international competitiveness in this space. Equally important as providing a reliable increase in funding for biomedical research is ensuring funding is approved in a timely manner. Long-term continuing resolutions have significant consequences on research, including restricting NIH's ability to fund new grants and to fully fund continuation grants. For some of our members, this means waiting for a final decision to be made on funding before knowing if their perfectly scored grant will be realized or operating a lab at a diminished capacity until appropriations are final, which can be devastating for trainees seeking to begin their careers. All the positive benefits research provides in this country are negatively impacted by these real time considerations. SfN strongly supports the appropriation of NIH funding in a timely manner, in order to avoid delays in approving new research grants or reductions in funding for already approved research projects.

SfN thanks the subcommittee for its continued support of biomedical research and looks forward to working with you to ensure the United States remains the global leader in neuroscience research and discovery. Collaboration among Congress, the NIH, and the scientific research community has created great benefits for not only the United States but also for people around the globe suffering from brain-related diseases and disorders. On behalf of the Society for Neuroscience, we urge you to continue your strong support of biomedical research.