SOCIETY for NEUROSCIENCE

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January 24, 2017

President Donald J. Trump
1600 Pennsylvania Ave NW
Washington, D.C. 20500

Dear President Trump:

On behalf of the 37,000 members of the Society for Neuroscience (SfN) we are writing to express our strong support for continuing to make brain research a top national priority as part of the overall federal investment in biomedical research. You are taking office at a time of tremendous opportunity for advancing our understanding of the brain and nervous system—and applying that understanding to improve the health and wellbeing of tens of millions of Americans and our nation's future. I know you saw considerable suffering among the American people during your long campaign across the country, from depression, PTSD, addiction, Alzheimer's disease, among many other devastating conditions. Progress in helping our fellow citizens is only possible with robust and sustained federal support.

As you take office, you have an early opportunity to support this investment and help the American people through the FY 2017 spending package. We urge you to support a spending bill that adopts the Senate Appropriations Committee-approved $34.1 billion for the National Institutes of Health (NIH) and to ensure that NIH remains a national priority moving forward.

Creating scientific knowledge benefits society and spurs progress. At the heart of that progress is a strong infrastructure to support basic research. Federal investments in basic research result in improved health, create sustainable economic advantages and establish the U.S. as the world leader in biomedical research. These advantages can only be realized through consistent and reliable funding to key research institutions, such as the National Institutes of Health (NIH) and the National Science Foundation (NSF), and the hundreds of institutions throughout the country that receive grants from these agencies. Robust funding pushes research forward and strengthens our country.

America's status as the preeminent leader in biomedical research developed over decades of investment. Now, other countries are actively strengthening their investments in biomedical research to capitalize on its advantages. The result is an emerging investment-innovation gap in the U.S. that we can close if we invest strongly in research. The philanthropic and private sectors cannot close this gap. The time lag between discovery and profitability means that the pharmaceutical, biotechnology, and medical device industries need federally-funded basic (also known as fundamental) research to develop products and treatments. The foundation that basic research provides is at risk if federally-funded research declines. According to Research!America the "innovation sector" employs 1 million U.S. citizens, generates $84 billion in wages and salaries, and exports $90 billion in goods and services. NIH spending in 2011 alone produced $62.13 billion in new economic activity. Moreover, U.S. leadership is crucial for global competitiveness and scientific advancement.

Recent federal investments in science acknowledge the brain as the next frontier of science. From addiction to dementia, never has the need and opportunity for progress been greater. One example of an important federal investment is the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, a

public/private collaboration involving NIH, NSF and other federal agencies. BRAIN Initiative programs promote future discoveries across many areas of neuroscience and other research disciplines. The BRAIN Initiative has already borne fruit in the field of scientific tool development. There's now a strong sense that this initiative will catalyze discoveries across the broader field of neuroscience and spark ingenuity in this new scientific generation to guide future progress.

An investment in BRAIN, as part of an overall commitment to biomedical research through NIH, NSF, and other agencies, can catalyze a new era of scientific research with the potential to move the field of neuroscience forward, advancing our understanding of the nervous system and eventually leading to treatments for those in need.

Major investment in basic and translational neuroscience fuels knowledge creation and provides an essential foundation for understanding and treating diseases that strike nearly one billion people worldwide. There are more than 1,000 debilitating neurological and psychiatric diseases that directly affect over 100 million Americans each year. This, in turn, produces severe hardship for millions of families and costs the U.S. economy at least $760 billion a year, with future expenses reaching the trillions looming for several conditions. The impact of these conditions is as great or greater than diseases such as heart disease or cancer. Advances made possible by publicly-funded research will help us maintain, and perhaps someday restore, healthy brain function.

We live at a time of extraordinary opportunity in neuroscience. Questions once thought impossible to consider are now within reach because of new technologies, an ever-expanding knowledge base, and a willingness to embrace many disciplines. Basic research provides the path to bridge understanding of disease with new therapeutics.

We look forward to working with your administration to prioritize strong and consistent funding for brain research through NIH, NSF and other federal agencies. By focusing on the need for federally supported biomedical research, you can help ensure the long-term health of Americans and people around the world.

Thank you.

Sincerely,

Eric J. Nestler, MD, PhD
President

Enclosure: SfN Policy on Neuroscience Funding

cc:
Rep. Tom Price
Rep. Mick Mulvaney
Rep. Paul Ryan
Rep. Nancy Pelosi
Sen. Mitch McConnell
Sen. Chuck Schumer

SfN Policy on Neuroscience Funding

SfN's mission is to advance the understanding of the brain and nervous system. We believe that creating scientific knowledge benefits society and spurs progress. At the heart of progress is a strong infrastructure to support basic research. Federal investments in basic research result in improved health, create sustainable economic advantages and establish the U.S. as a leader in biomedical research. These advantages can only be realized through consistent and reliable funding to key research institutions, such as the National Institutes of Health (NIH) and the National Science Foundation (NSF), and the institutions that receive grants from these agencies. Robust funding pushes research forward and strengthens our country.

The basic research conducted by universities and other research institutions forms the foundation of scientific discovery. Scientists use a wide range of experimental systems and animal models to understand fundamental biological processes. That work leads to deeper understanding of the human brain and the diseases that affect it. The scientific community builds on this platform to identify new biological targets and to discover novel ways to treat the brain disorders that affect countless people around the world.

National Institutes of Health

NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.

Advances made possible by NIH-supported research are unlocking the mysteries of brain-related disorders. The major investment in basic and translational neuroscience at NIH is not only fueling an enduring and vital scientific endeavor, it is the essential foundation for understanding and treating diseases that strike nearly one billion people worldwide. There are more than 1,000 debilitating neurological and psychiatric diseases that strike over 100 million Americans each year. Today's discoveries in the lab will pave the way for tomorrow's treatments.

NIH has historically enjoyed strong bipartisan support. Both political parties have recognized that future discoveries depend on continued investments. Despite this awareness, years of stagnant funding have weakened the national research enterprise. The recent increased investments have not offset years of stagnant funding. The biomedical research community is now losing ground against the rising costs of innovation.

Sustained investment in biomedical research stimulates innovation and contributes to economic well-being. Funding for research supports quality jobs and increases economic activity. Every dollar of research money from the NIH generates approximately $2.21 in economic output. NIH supports approximately 400,000 jobs and $58 billion in economic output nationwide. Eighty-five percent of NIH's budget funds research in communities located in every state.

The National Science Foundation

NSF's mission is to promote the progress of science; to advance the national health, prosperity,

and welfare; and to secure the national defense; and for other purposes. NSF envisions a nation that capitalizes on new concepts in science and engineering and provides global leadership in advancing research and education.

NSF invests in high-risk, cutting edge science and engineering at the frontiers of knowledge. The emphasis on integrative and interdisciplinary research positions the NSF to advance brain science. NSF-funded research enabled non-invasive methods for imaging the human brain. The discoveries from these approaches have highlighted potential links between human and computer cognition. NSF has a long history of funding research that leads to the development of life-changing neurotechnologies. Insights from these technologies are being leveraged by a dynamic, global neuroscience community that draws on the fields supported by NSF: life science, computer science, math, physics, chemistry, and engineering. As such, NSF-funded research lays the foundation for advances in neuroscience.

The science infrastructure made possible through NSF support is essential for progress. NSF is the funding source for approximately 24 percent of all federally supported basic research conducted by America's colleges and universities. It provides critical support to those at all stages of their scientific career, from students considering research careers to the senior researchers who train them. Without sustained investment in this infrastructure, the competitive advantages it confers to the U.S. is at risk.

<u>The BRAIN Initiative</u>

History reveals the immense value of deepening our understanding of disease to improve human health. Recent federal investments in science acknowledge the brain as the next frontier of science. From addiction to dementia, never has the need and opportunity for progress been greater. One example of an important federal investment is the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, a public/private collaboration involving NIH, NSF and other federal agencies. BRAIN Initiative programs promote future discoveries across many areas of neuroscience and other research disciplines. The BRAIN Initiative has already borne fruit in the field of scientific tool development. There's now a strong sense that this initiative will catalyze discoveries across the broader field of neuroscience and spark ingenuity in this new scientific generation to guide future progress.

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<u>The Need for Sustained, Robust Investment</u>

America's status as the preeminent leader in biomedical research developed over decades of robust investment. Now, other countries are actively strengthening their investments in biomedical research to capitalize on its advantages. The result is an emerging investment-innovation gap in the U.S. that we can close if we invest strongly in research. The philanthropic and private sectors cannot close this gap. The time lag between discovery and profitability means that the pharmaceutical, biotechnology, and medical device industries need federally-funded basic (also known as fundamental) research to develop products and treatments. The foundation that basic

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