

Congress of the United States
Washington, DC 20515

March 16, 2018

The Honorable John Culberson
Chairman
Subcommittee on Commerce, Justice,
Science, and Related Agencies
H-310, The Capitol
Washington, D.C. 20515

The Honorable José Serrano
Ranking Member
Subcommittee on Commerce, Justice,
Science, and Related Agencies
2354 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Culberson and Ranking Member Serrano:

We write to respectfully request that the National Science Foundation (NSF) receive at least \$8.45 billion in funding in the Fiscal Year (FY) 2019 Commerce, Justice, Science, and Related Agencies Appropriations bill.

The NSF is an independent federal agency created by Congress in 1950 to promote the progress of science, secure the national defense; and to advance the nation's health, prosperity, and welfare. Ensuring the NSF has robust resources to carry out its mission has never been more important. More than 20 percent of jobs in our country require training in science, technology, engineering, and mathematics (STEM) fields which are projected to experience the highest growth in coming years. At the same time, the United States lags behind other nations in STEM training; our nation ranks 38th in mathematics and 24th in science performance. Nearly one-third of our country's adults have less than basic mathematics skills. To remain globally competitive, we must invest in the NSF as it is the only federal agency specifically responsible for supporting essential education and research across all science and engineering fields.

According to the Center on Education and the Workforce, there will be a shortage of five million STEM professionals by 2020. To meet our nation's workforce needs, support research and development, and compete in the world economy, Congress must fully fund the NSF. One out of every four basic research projects at higher learning institutions across the U.S. is supported by the NSF. All NSF grant proposals are critically reviewed to ensure they meet the intellectual merit and broader impacts criteria. The NSF's expert merit review process is the international gold-standard for the review and evaluation of grant proposals and relies upon the expertise and knowledge of leading scientists and engineers to ensure that the best research is being funded across the scientific disciplines. Full funding of the NSF will enable more than 360,000 researchers, including teachers and students nationwide, to address some of our society's most pressing concerns through more than 11,000 individual NSF awards.

NSF research has led to scientific and technological breakthroughs that have generated positive change in society and long-term economic benefits. Many of those discoveries have been expanded upon and applied commercially by domestic companies, benefiting the private sector and spurring our nation's economy. Advanced rechargeable batteries, facial recognition software that can read emotions, new cybersecurity technologies and strategies, and sunscreens that are more protective are examples of commercial products that have roots with the NSF, have created jobs, and have helped businesses grow.

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Each day NSF-supported inventions like those that detect chemical and biological weapons and models and management strategies for storms and disaster situations make our lives better and safer. Other breakthroughs have assisted our military through stealth camouflage, helped veterans transition home through advanced trauma research, and helped counter violent extremism. Scientists supported by the NSF are currently developing breakthroughs including treatments for resistant prostate cancer, sensors to detect lung cancer, new lightweight body armors, and zero resistance energy flows to improve energy efficiency.

The NSF helps support our nation's brightest minds in their endeavors to address our most challenging problems. Funding for the NSF makes investments at all education levels to develop a modern and resourceful workforce that will enable our country to remain competitive in emerging industries.

For these reasons, we respectfully request your support to ensure that the National Science Foundation receive at least \$8.45 billion for Fiscal Year (FY) 2019. This amount is the minimum level of funding needed to ensure future generations of Americans are prepared to help our nation remain a world economic leader.

Thank you very much.

Very truly yours,



G. K. Butterfield
Member of Congress



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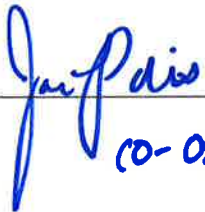
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