# Congress of the United States
## Washington, DC 20515

March 28, 2019

The Honorable Jose Serrano
Chairman
Subcommittee on Commerce, Justice,
Science, and Related Agencies
H-307, The Capitol
Washington, D.C. 20515

The Honorable Robert Aderholt
Ranking Member
Subcommittee on Commerce, Justice,
Science, and Related Agencies
1016 Longworth House Office Building
Washington, D.C. 20515

Dear Chairman Serrano and Ranking Member Aderholt:

We write to respectfully request that the National Science Foundation (NSF) receive an appropriation of **$9 billion** in the Fiscal Year (FY) 2020 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. The scientific research and educational programs supported by NSF are integral to the continued success of America's innovation enterprise. NSF funded research has produced transformative scientific discoveries that have led to new industries, products, services, and enhanced to lives of all Americans. For example, NSF-funded research has supported technological advancements such as artificial intelligence, nanotechnology, 3-D printing, next generation computer chips, patient-friendly MRI scans, and threat detection devices. It has also funded research that addresses societal challenges such as the opioid epidemic, post-disaster resiliency, learning disabilities and autism. Many more examples of the impact of NSF-funded research are available in the second edition of Transforming the World Through Science.

For the United States to remain a global leader in scientific research, engineering, and technology development, the nation must provide greater investment in its people and overall R&D funding. According to the National Science Board's (NSB) 2018 Science and Engineering Indicators report, "the number of jobs in the United States requiring substantial science, technology, engineering, and mathematics (STEM) expertise has grown nearly 34% over the past decade. As of 2015, nearly one in seven workers with a four-year degree said that their job required a bachelor's level of STEM expertise." Moreover, 16 million skilled technical jobs require significant technical expertise. Given these statistics, it is essential for the United States to invest in NSF's education programs, including K-12 STEM education, undergraduate and graduate education and training, and informal education programs. When making these critical investments in STEM education programs, we must invest in in programs such as NSF INCLUDES and the Established Program to Stimulate Competitive Research (EPSCoR). NSF INCLUDES has provided access to research and STEM education opportunities for women and underrepresented minorities, while EPSCoR has provided similar opportunities to all Americans regardless of where they live in the United States.

In addition to investing in people, the United States must continue to invest in Research and Development (R&D). Competitor nations are making great advancements in science and technology due to their significant investment in R&D. Some Asian and European countries are investing heavily in R&D and the STEM education and training of their workforces. According to the 2018 Science and Engineering Indicators report, "the U.S. investment in R&D of $497 billion was closely followed by China at $409 billion – accounting for 26% and 21%, respectively in R&D funding worldwide." Should that trend continue, the NSB expects China to surpass the United States in R&D investments by the end of 2019. To remain globally competitive, the United States must continue to invest in fundamental scientific research; the very research that NSF funds across the scientific disciplines.

NSF is the only federal research agency that supports fundamental research in these important fields – biology, computer science, economics, engineering, educational research, geosciences, mathematics, and social and behavioral sciences. Given the breath of the research funded by NSF, the 116th Congress must appropriate $9 billion for the agency in FY 2020. It is important to note that one out of every four basic research projects at higher learning institutions across the United States 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 350,000 researchers, including teachers and students nationwide, to address some of our society's most pressing concerns through more than 11,000 competitive awards and 8,400 research grant awards.

For these reasons, we respectfully request your support to ensure that the National Science Foundation receive $9 billion for Fiscal Year (FY) 2020. 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


David B. McKinley, P.E.
Member of Congress

_(signature)_
Donald M. Payne, JR. (NJ-10)

_(signature)_
Alan Lowenthal (CA-47)

_(signature)_
Vicente Gonzalez (TX-15)

_(signature)_
Debbie Dingell
MI-12

_(signature)_
Abby Finkenauer (IA-01)

_(signature)_
Greg Stanton
(AZ-09)

_(signature)_
Madeleine Dean
PA-04

_(signature)_
Ben McAdams
UT-04

_(signature)_
Anna G. Eshoo CA18

_(signature)_
CA-20

_(signature)_
Josh Gottheimer (NJ-05)

_(signature)_
Thomas R. Suozzi
(NY-03)

_(signature)_
Ro Khanna (CA-17)

_(signature)_
Andy Levin (MI-09)

[signature] Lewis
GA-05

[signature] Vela
TX 34

[signature]
MA-04

A. Donald McEachin
VA-04

[signature] Mike
PA-18

[signature] Ann McLane Kuster
NH-02

Chris Pappas
NH-01

Tom O'Halleran
AZ-01

Anthony Brindisi
NY-22

Glenn GT Thompson
PA-15

[signature] Eric Swalwell
CA-15

[signature]

[signature] Jamie Raskin
MD-08

[signature] Kendra S. Horn
OK-05

_(signature)_
CA-41

_(signature)_
NJ-07

_(signature)_
IL-06    Sean Casten

_(signature)_
CA-33

_(signature)_
LA-02

_(signature)_
CA-11

_(signature)_
KY-03

_(signature)_
NY-2

_(signature)_
CA-46

_(signature)_
PA-03

_(signature)_
MA-7

_(signature)_
OR-03

_(signature)_ Katie Porter
CA-45

_(signature)_
VA-08

[signature]                     [signature]
WA-08                           MA-06

Katie Hill              [signature] Ruben Gallego
CA-25                         AZ-07

Brendan F. Boyle          [signature]
PA-02                         VA-03

Steve Watkins           [signature]
KS-02                         NJ-11

[signature]                  Susan A. Davis
IA-02                         CA-53

[signature]                  Chrissy Houlahan
VA-10                         PA-06

[signature]                  [signature]
CO-07                         CT 04

*[signature]*
NM-01

*[signature]*
VA-07

*[signature]*
NY-25

*[signature]*
NV-04

*[signature]*
MD-04

Tulsi Gabbard
HI-02

*[signature]*
IL-10

*[signature]*
CA-24

*[signature]*
CO-02

*[signature]*
CTUS

*[signature]*
FL-05

*[signature]*
CA-19

*[signature]*
CT-01

Ron Kind
WI-03

_[signature]_
FL - 09

_[signature]_
CA-02

_[signature]_
WA-07

_[signature]_
TN-5

_[signature]_
NJ-03

_[signature]_
KS-03

_[signature]_
MN-05

_[signature]_
PA-07

_[signature]_
PR - At Large

Mike Levin
CA-49

_[signature]_
FL-7

Brian K. Fitzpatrick
PA-01

Ami Bera
CA-07

Ted S. Yoh
FL-03

_Kathy Castor_
FL-14

_Steve Cohen_
TN-09

_Diana DeGette_
CO-01

_Jerrold Nadler_
NY-10

_André Carson_
IN-07

_Peter Welch_
VT-A.L.

_Terri Sewell_
AL-07

_Jim Langevin_
RI-02

_Stephen F. Lynch_
MA-08

_Rick Larsen_
WA-02

_Peter DeFazio_
OR-04

_Danny K. Davis_
IL-7

_Jared Golden_
ME-02

_Suzanne Bonamici_
OR-01

_Carolyn B Maloney_
NY-12

_Richard E. Neal_
MA-1

_Doris Matsui_
CA-06

_Don Young_
AK-00

_Ben R. Lujan_
NM03

_Linda T Sanchez_
CA-38

_[signature]_
WA-01

_[signature]_
NY-18

_Emanuel Cleaver_
MO-5

_Joe Courtney_
CT-02

_[signature]_
CA-52

_[signature]_
CA-36

_Marcia L. Fudge_
OH-11

_Daniel Lipinski_
IL-03

*[signature]*
TX-09

*[signature]*
FL-20

*[signature]* Bill Foster
IL. 11

*[signature]* Jan Schwz
IL-09

*[signature]* John Garamendi
CA-03

*[signature]* Paul D. Tonko
NY-20

*[signature]* John P. Sarbanes
MD-03

*[signature]* Stacey E. Plaskett
VI-00

*[signature]* Rosa L. De Lauro
CT-03

*[signature]* Robin L Kelly
IL-02

*[signature]* Judy Chu
CA-27

*[signature]* Eliot L. Engel
NY-16

*[signature]* Wm Lacy Clay
MO-1

*[signature]*
NY-08

*[signature]* IL-01

*[signature]* OL-AL

*[signature]* Nydia M. Velázquez
NY-07

*[signature]* Andy B
KY-06

*[signature]* Conor Lamb
PA-17

*[signature]* Jesús Chuy García
IL-04

*[signature]*
CA-39

*[signature]* Elijah E. Cummings
MD-07

*[signature]*
IN-07

*[signature]* Donald Norcross
NJ-01

*[signature]*
NY-19

*[signature]* Cheri Bustos
IL-17

*[signature]*
VA-02

*[signature]* David Scott
GA-13

_David N. Cicilline_
RI-01

_Steve Stivers_
OH-15

_A. Donald McEachin_
VA-11

_Juan Vargas_
CA-51

_Hank Johnson_
GA-04

_Gwen Moore_
WI-04

_Adam Smith_
WA-09

_Jerry McNerney_
CA-09

_Julia Brownley_
CA-26

_Albio Sires_
NJ-08

_Adam B. Schiff_
CA-28

_Joyce Beatty_
OH-03

_[signature]_
NC-12

_[signature]_
NC-7

_[signature]_
FL-24

_[signature]_
WA-10

_[signature]_
NV-01

_[signature]_
CA-13

_[signature]_ Tony Cárdenas
CA-29

_[signature]_
NY-1

_[signature]_
FL-22

_[signature]_
NY-26

_[signature]_ Jackie Speier
CA-14

_[signature]_
MA-9

*Pete Stau*
MN-08

*Elissa Slotki*
MI-08

*Raúl M. Grijalva*
AZ-03

*Mary Gay Scanlon*
PA-05