



Talking Points for the 2018 Biological Sciences Congressional District Visits

This information is provided for your reference and to help you craft a clear and well-informed message. You do not need to repeat these points verbatim; use those that are appropriate or comfortable for you and convey them in your own words.

- **Investments in biological research advance our understanding of life and the world we live in, and inform solutions to the nation's challenges.**

- Biological research is helping to inform responses to important problems, including conserving biological diversity that maintains our ecosystems and helps provide clean air and water; managing costly invasive species; combating emerging wildlife diseases that can threaten human health; increasing food security; developing new medical therapies; and informing wise management of our natural resources.

- **High quality science education is vital to our nation.**

- Science education and training programs ensure that the next generation has the scientific, technical, and mathematical skills employers are seeking.
- Federal agencies support research fellowship programs that provide K-12, undergraduate, and graduate students with hands-on research experience, which is one of the best ways to develop scientific and technical skills.

- **Public investments in research yield a positive rate of return.**

- Since 1960, growth in U.S. employment in science and engineering has increased by an average rate of 3 percent per year, outpacing the 2 percent annual growth rate in total employment.
- 19.4 million U.S. jobs require science or engineering expertise at the bachelor's level.
- With few exceptions, workers in science and engineering occupations have for decades had lower unemployment than workers in other kinds of jobs.
- In FY 2017, an estimated 359,000 people (researchers, postdoctoral fellows, trainees, teachers and students) were supported directly by NSF. Nearly 56,000 graduate students have been supported by NSF Graduate Research Fellowships since 1952.
- Federal research funding has given rise to numerous successful companies, such as Genentech, Allylix, Chromatin, and Google – to name just a few. Federal investments have also spawned entire new fields, such as genomics and its applications in forensics, agriculture, and medicine.

- *Include an example from your state.*
- **Federal research programs are an important funder of biological research.**
 - NSF provides about two-thirds of federal support for fundamental biological and environmental research conducted at colleges, universities, and non-profit research centers across the nation.
 - *Speak about the federal program that funds your research.*
- **All scientific disciplines contribute to innovation and economic growth.**
 - Research is increasingly an interdisciplinary endeavor where tools from one field are borrowed by another field, and insights from one discipline help guide research in another (e.g. neuroscience, psychology, artificial intelligence and systems biology).
 - To enhance our global competitiveness, we need a strong foundation of basic research across all scientific disciplines.
- **Federal support for research has been shrinking.**
 - Since 1976, federal investment in research and development (R&D) as a share of Gross Domestic Product has declined from 1.23 percent to 0.67 percent. Over the past decade, federal R&D as a share of the U.S. economy decreased by 32 percent.
 - Meanwhile, other countries are boosting investments in science. China, India, and other countries in Asia are ramping up investments in R&D.
- **Sustained investment in research is required if we are to solve our greatest problems.**
 - Fluctuations in funding can result in a backlog of unfunded but highly competitive research. This demoralizes researchers and slows the pace of discovery. Predictable annual investments allow federal research managers, scientists, and industry executives to plan wisely in setting research priorities.
- **We urge you to fund the National Science Foundation at \$8.45 billion in Fiscal Year (FY) 2019.**
 - NSF funding is essential to our nation's research infrastructure, such as natural history museums/collections, biological field stations, and ecosystem research centers.
 - Please also support federal funding for other important biological science programs, including the Agriculture and Food Research Initiative (AFRI) and programs administered by the National Institutes of Health, Environmental Protection Agency (Office of R&D), the Department of Energy, the U.S. Geological Survey, and the National Oceanic and Atmospheric Administration.
- **Thank you for rejecting the President's proposed cuts to science and research.**
 - The President's FY 2019 budget request would cut many research programs by 20% or more. Such cuts would seriously hinder America's capacity to innovate.
 - We urge you to support increased federal investments in scientific research and education.

FY 2019 Budget Numbers Relative to FY 2018 level:

Agency/Program	President's Request	Senate Bill	House Bill
DOE ARPA-E	-100%	+6%	-8%
DOE Science	-14%	+6%	+5%
DOE Science-BER	-26%	+6%	0%
EPA	-23%	0%	-1%
EPA Science & Tech	-36%	0%	-9%
IMLS	-90%	+1%	0%
IMLS OMS	-100%	0%	0%
NASA	-4%	+3%	+4%
NASA Science	-5%	+3%	+7%
NIH	-7%	+5%	+3%
NIST	-47%	-13%	-18%
NOAA	-23%	-7%	-13%
NSF	-4%	+4%	+5%
NSF RRA	-3%	+4%	+5%
Smithsonian	-8%	0%	+1%
Smithsonian-NMNH*	0%	0%	-
USDA AFRI	-6%	+1%	+4%
USDA ARS	-24%	-3%	+4%
USGS	-25%	0%	+2%
USGS Ecosystems	-39%	0%	0%

*This reflects the Salaries and Expenses account. The President has requested \$3.5 million in additional funds under the Facilities account for renovations at NMNH, which have been approved by the House and Senate so far.

FY 2019 Asks for Federal Agencies and Programs:

Agency/Office/Program	Our Ask	President's Request	Senate Bill	House Bill
DOE Science	\$6.6 billion	\$5.39 billion	\$6.65 billion	\$6.6 billion
IMLS OMS	\$38.6 million	\$0	\$34.7 million	\$34.7 million
NIH	\$39 billion	\$34.6 billion	\$39 billion	\$38.3 billion
NOAA OAR	\$510.6 million	\$322 million	\$508 million	\$462 million
NSF	\$8.45 billion	\$7.47 billion	\$8.06 billion	\$8.17 billion
USDA AFRI	\$525 million	\$375 million	\$405 million	\$415 million
USDA ARS	\$1.35 billion	\$1 billion	\$1.3 billion	\$1.39 billion
USGS	\$1.2 billion	\$860 million	\$1.15 billion	\$1.17 billion

DOE: Department of Energy
 BER: Biological and Environmental Research
 IMLS: Institute of Museum and Library Services

ARPA-E: Advanced Research Projects Agency-Energy
 EPA: Environmental Protection Agency
 OMS: Office of Museum Services

NASA: National Aeronautics and Space Administration
NIST: National Institute of Standards and Technology
OAR: Office of Oceanic and Atmospheric Research
RRA: Research and Related Activities
USDA: U.S. Department of Agriculture
AFRI: Agriculture and Food Research Initiative

NIH: National Institutes of Health
NOAA: National Oceanic and Atmospheric Administration
NSF: National Science Foundation
NMNH: National Museum of Natural History
ARS: Agricultural Research Service
USGS: U.S. Geological Survey