



## **Talking Points for the 2019 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 inform solutions to the nation's greatest problems.**

- Biological research is informing responses to important problems, including conservation of biological diversity that maintains our ecosystems and provides clean air and water; combating emerging wildlife diseases that can threaten human health; increasing food production; 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 seek.
- 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 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 2018, an estimated 386,000 people (researchers, postdoctoral fellows, trainees, teachers and students) were supported directly by NSF. Nearly 58,000 graduate students have been supported by NSF Graduate Research Fellowships since 1952.
- Federal research funding has given rise to numerous 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 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 0.7 percent. Over the past decade, federal R&D as a share of the U.S. economy decreased by 30 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 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 \$9 billion in Fiscal Year (FY) 2020.**

- 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 supporting scientific research.**

- The President's FY 2020 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 2020 Budget Numbers Relative to FY 2019 enacted level:**

Agency/Program	President's Request	Senate Bill	House Bill
DOE Science	-16%	NA	+4%
DOE Science-BER	-30%	NA	+4%
EPA	-31%	NA	+8%
EPA Science & Tech	-35%	NA	+1%
IMLS*	-90%	NA	+6%
NASA	-2%	NA	+4%
NASA Science	-9%	NA	+4%
NIH	-12%	NA	+5%
NIST	-30%	NA	+6%
NOAA	-18%	NA	+1%
NSF	-12%	NA	+7%
NSF RRA	-13%	NA	+9%
Smithsonian	-6%	NA	+3%
USDA AFRI	+20%	NA	+7%
USDA ARS	-26%	NA	-17%
USGS	-15%	NA	+7%
USGS Ecosystems**	-10%	NA	+7%

\*Agency slated for closure under President's Budget Request for FY 2020.

\*\*Under the new structure proposed in the agency reorganization plan, the Ecosystems Mission area would be cut by 35%.

**FY 2020 Asks for Federal Agencies and Programs:**

Agency/Office/Program	Our Ask	President's FY 2020 Request	FY 2019 Enacted	House FY 2020 Bill
NSF	\$9 billion	\$7.1 billion	\$8.1 billion	\$8.6 billion
USGS	\$1.2 billion	\$984 million	\$1.16 billion	\$1.24 billion
USDA-ARS	\$1.821 billion	\$1.25 billion	\$1.68 billion	\$1.4 billion
USDA-AFRI	\$445 million	\$500 million	\$415 million	\$445 million
NIH	\$41.6 billion	\$34.4 billion	\$39.1 billion	\$41.1 billion
DOE Science	\$7 billion	\$5.5 billion	\$6.6 billion	\$6.87 billion

DOE: Department of Energy

EPA: Environmental Protection Agency

NASA: National Aeronautics and Space Administration

NIST: National Institute of Standards and Technology

NSF: National Science Foundation

USDA: U.S. Department of Agriculture

AFRI: Agriculture and Food Research Initiative

BER: Biological and Environmental Research

IMLS: Institute of Museum and Library Services

NIH: National Institutes of Health

NOAA: National Oceanic and Atmospheric Administration

RRA: Research and Related Activities

ARS: Agricultural Research Service

USGS: U.S. Geological Survey