



INVEST IN TOMORROW -- SUPPORT RESEARCH TODAY

Research for the 21st Century

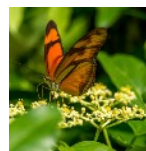
Federal investment in scientific research and development fuels innovation and creates jobs. Biological research funded by the National Science Foundation (NSF) and other federal agencies promotes national security and public well-being by solving challenges, such as the need to improve food security, combat new diseases, and wisely manage natural resources. This federal support also helps the country attract and educate the next generation of scientists by providing them with real life research opportunities.

Biological Research: Meeting Society's Needs

Federally funded research increases our understanding of the living world, and provides solutions to societal problems:



Improving **human health** with individualized and predictive medicine.



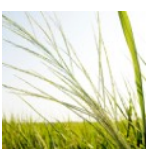
Sustaining **biodiversity and healthy ecosystems** that underpin the livelihoods of communities.



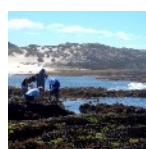
Increasing **food security** by developing crops that grow in changing environments.



Developing **new data analysis tools** to stimulate development of new research fields.



Fueling the economy by improving the sustainability of domestic energy sources.



Predicting, mitigating, and preparing for the **impacts of environmental changes**.

RESEARCH IS AN INVESTMENT IN OUR FUTURE.

50%

Economic growth at private businesses due to R&D in last 50 years

1,800

Number of NSF-funded institutions across the country

44%

Percentage of fundamental research funding provided by the federal government

57,700

Students supported by NSF Graduate Research Fellowships since 1952

3%

Average annual increase in science and engineering employment since 1960, compared to 2% growth rate in total employment

1 in 5

Proportion of biological research proposals funded by NSF, NIH, USDA

The NSF's Biological Sciences Directorate (BIO) provides about 69% of federal grant support for non-medical, fundamental biological research conducted at our universities and nonprofit research centers. Awards are made through a competitive process and proposals are merit-reviewed by scientists, resulting in the most promising research being funded.

Funding for BIO has not kept pace with the demand for research grants. Despite the large number of highly competitive and potentially transformative grant proposals submitted to BIO, **76% of applications were rejected in 2018.**

Research programs that support fundamental biological research have extremely low funding rates. Roughly one in five research proposals are funded by NSF, the National Institutes of Health, and USDA Agriculture and Food Research Initiative. **These funding rates are lower than a decade ago.**

New federal investments are required to ensure that the nation is positioned to remain a global leader in science and innovation. Please help to ensure that federal investments in the biological sciences are sustained.

Fund NSF at \$9 billion in FY 2020 to support important research on understanding the rules that regulate living systems, genetics, energy and food security, and other critical biology-based research.

Support sustained funding levels for other important biological science programs, including the Agriculture and Food Research Initiative, National Institutes of Health, Department of Energy, U.S. Geological Survey, and National Oceanic and Atmospheric Administration.



**American Institute
of Biological Sciences**

Informing Decision-making for Science and Society