U.S. National Science Foundation

IOWA

FY 2023 Fast Facts

$74,288,000
Total NSF Awards to Iowa

$66,648,000
Invested in Fundamental Research in Iowa

$7,440,000
Invested in STEM Education in Iowa

$4,050,000
Invested in Iowa Businesses

Top NSF-funded Academic Institutions for FY 2023

Iowa State University	University of Iowa	University of Northern Iowa
$47,923,000	**$15,297,000**	**$2,732,000**

NSF By The Numbers

The U. S. National Science Foundation (NSF) is an $9.06 billion independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

DID YOU KNOW? NSF has funded the work of **261** Nobel Prize winners over 75 years.

$9.06B
FY 2024 Total Enacted

93%
Funds research, education and related activities

11K
Awards

1.9K
Institutions

353K
People

**Data represents FY 2023 Actuals unless otherwise indicated*

Expanding the Frontiers of Science

With approximately 300 times the global warming potential of carbon dioxide (CO_2), nitrous oxide (N_2O) contributes to 7% of U.S. greenhouse gas emissions in 2020. 74% of N_2O emission comes from agricultural fertilizer applications. To address this source of harmful emissions, an NSF Research Infrastructure Improvement Track-2 Focused Established Program to Stimulate Competitive Research (EPSCoR) collaboration award led by **Iowa State University of Science and Technology (ISU)** brings together a multidisciplinary team of scientists from ISU and Wichita State University to explore and examine green urea (a common source of nitrogen in fertilizers) that could enable a shift in fertilization toward N_2O- and CO_2-relieved farming and ranching. The success of this EPSCoR project will enable an electro-manufacturing system powered by renewable wind and solar energy to produce green nitrogen fertilizers that are fundamentally different from current thermo-manufacturing processes that consume non-renewable fossil energy, alleviating agriculture's impact on climate change. Capturing waste nitrogen and CO_2 will also help protect ecological and environmental systems in Midwest areas from being stressed by existing non-sustainable practices, ensuring long-term economic thriving and prosperity.

STEM Education and Broadening Participation

The growing demand for skilled bioscience lab technicians is important to the future economic success of Iowa and is a vital factor in the U.S. economy and national interests. A three-year project from **Des Moines Area Community College (DMACC)**, funded by the NSF Advanced Technological Education program, allows for high school students to interact directly with biotechnology industry professionals through classroom visits, career fairs and on-site tours, exposing them to the many career options available within the field. Alongside high school outreach activities, a business and industry leadership team will be established to evaluate and modify DMACC's biotechnology curriculum. This team will ensure that students completing the Biotechnology Laboratory Methods Certificate receive high-quality, hands-on technical training that is directly applicable to entry-level careers in biotechnology and develop an educational foundation to support future growth in their roles within the biotechnology industry. Additionally, a summer workshop will educate high school teachers on the use of biotechnology methods and bioinformatics in the classroom. As a result of outreach and education provided through these grant activities, 85 students are expected to complete DMACC's AS/Biotechnology Laboratory Methods Certificate combination degree.

Regional Innovation Engines

U.S. National Science Foundation Regional Innovation Engines (NSF Engines) Development Awards help organizations create connections and develop their local innovation ecosystem within two years to prepare a strong proposal for becoming a future NSF Engine. The program seeks regional teams rooted within industry, academia, government, nonprofits, civil society and communities of practice to catalyze and foster innovation ecosystems across the U.S. to advance critical technologies, address national and societal challenges, promote economic growth and job creation, spur sustainable regional innovation and nurture diverse talent.

To stay in the loop about future funding calls and opportunities to engage, sign up for the NSF Engines newsletter.

EPSCoR

COMPETITIVE RESEARCH | Iowa is one of 28 U.S. states or territories under the NSF Established Program to Stimulate Competitive Research (EPSCoR). **$14,542,977** in awards have been made to Iowa academic institutions through EPSCoR in FY 2023. For more information, visit Iowa's EPSCoR state web page.

NCSES

According to the NSF National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, 31% of science, engineering and health doctorates conferred in Iowa are made in life sciences. Visit Iowa's science and engineering state profile to learn more!

32.47% of **Iowa's** higher education degrees are concentrated in S&E fields.

4.12% of **Iowa's** workforce is employed in S&E occupations.

7.71% of **Iowa's** total employment is attributable to knowledge - and technology - intensive industries.

Learn More

CHIPS & SCIENCE – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. For more information, please visit the NSF CHIPS and Science website.

RESEARCH SECURITY – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. To learn more, please visit the NSF Research Security website.

CONNECT WITH NSF – For more information on NSF's impact in your state, please contact the NSF Office of Legislative and Public Affairs at congressionalteam@nsf.gov.