U.S. National Science Foundation

NSF 75 YEARS OF INNOVATION

2025 marks the 75th anniversary of NSF. Throughout the year, the agency will host in-person and virtual activities to commemorate this significant milestone. For more information, visit: nsf.gov/75years

VERMONT

FAST FACTS

$21,225,000
Total NSF Awards to Vermont

$18,520,000
Invested in Fundamental Research in Vermont

$2,706,000
Invested in STEM Education in Vermont

$750,000
Invested in Vermont Businesses

TOP NSF-FUNDED ACADEMIC INSTITUTIONS

University of Vermont and State Agricultural College
$16,332,000

Norwich University
$2,046,000

Middlebury College
$1,798,000

NSF BY THE NUMBERS

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

DID YOU KNOW? NSF has funded the work of **268** Nobel Prize winners over 75 years.

$9.06B
FY 2024 Total Enacted

92%
Funds research, education and related activities

11K
Awards

1.9K
Institutions

358K
People

"Data represents FY 2024 Actuals unless otherwise indicated"

www.nsf.gov

INNOVATION | *Generating new knowledge that provides a greater understanding of the world around us*

zebraMD is using an NSF Small Business Innovation Research Phase I award to improve the diagnosis and management of patients with rare diseases. About 1 in 10 people — half of whom are children — are affected by a rare disease worldwide, and 30% of them will die within the first five years of their life due to their disease. Today, on average, it takes 12-15 years from the onset of symptoms to be diagnosed with one of the more than 10,000 currently known rare and genetic diseases. Patients with rare diseases are seen by all medical specialties, but it is not possible for any physician, not even a specialist, to acquire and maintain expertise in all these diseases, leading to preventable adverse patient outcomes. Therefore, this project aims to develop an electronic health record integrated artificial intelligence system that can predict rare diseases in undiagnosed patients based on their patient data alone and give evidence-based, personalized treatment recommendations to already diagnosed patients.

EXPANDING FRONTIERS | *Generating institutional capacity, new technologies and societal impact*

Climate change is affecting communities across the United States, causing water shortages for drinking and farming and making it harder to keep water clean. These issues impact everyone but are particularly harsh on communities without the proper infrastructure to prepare for, adapt to, and recover from water management problems. To address these challenges, the **University of Vermont and State Agricultural College** is leading an NSF Research Infrastructure Improvement Track-2 Focused EPSCoR Collaboration project to create intelligent and affordable systems to monitor water quantity and quality. The collaboration, called Advancing Quality and Climate-Resilient Water Management with Community Partnerships and Enhanced Sensor Network, provides the Lakota Tribe in South Dakota, the Navajo Tribe in New Mexico, and flood-prone farming communities in Vermont with easy-to-use sensors to detect and measure pollutants in real time. The collaboration enables coordination among Native American communities, farmers, students, teachers, industry groups, state agencies and nonprofits. In addition, it supports the career development of about 350 people, including 25 faculty researchers, 12 graduate students, 25 undergraduates and 300 middle and high school students.

EDUCATION AND WORKFORCE | *Supporting our STEM talent of today and tomorrow*

The NSF CyberCorps® Scholarship for Service (SFS) funds proposals for establishing or continuing scholarship programs in cybersecurity to develop a superior cybersecurity workforce. Following graduation, scholarship recipients are required to work in cybersecurity for a federal, state, local or tribal government organization for the same duration as their scholarship support. **Norwich University** leads a recently renewed NSF CyberCorps® SFS proposal whose goals include increasing the participation of underrepresented populations in cybersecurity; equipping scholars with artificial intelligence and machine learning through an integrated bachelor's/master's program; and expanding undergraduate research opportunities that establish a science of cybersecurity. The project also engages the public through outreach activities such as cyber camps and research presentations, thereby improving public scientific literacy and advancing AI research and education integration.

COMPETITIVE RESEARCH

VERMONT is one of 28 U.S. states or territories under the NSF Established Program to Stimulate Competitive Research (EPSCoR) and recently received an award through NSF's new E-CORE program. For more information, visit **VERMONT'S EPSCoR state web page**.

NCSES

The National Center for Science and Engineering Statistics (NCSES) within the U.S. National Science Foundation is the nation's leading provider of statistical data on the U.S. science and engineering enterprise. As a principal federal statistical agency, NCSES conducts nationally representative surveys and publishes objective data and reports on topics related to research and development, the science and engineering workforce, and STEM education. For example, in FY 2024, **Vermont** invested **$679,000,000** on research and development.

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

LEARN MORE

- **BROUGHT TO YOU BY NSF** – NSF has invested in discoveries, inventions, and innovations that have shaped the modern world, including the internet, 3D printing, American Sign Language, Magnetic Resonance Imaging (MRI), deep sea exploration, Doppler radar and more. For more information on NSF impacts, please visit: nsf.gov/impacts.

- **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 NSF's Research Security website.

- **FOSTERING INNOVATION** – Every year, NSF funds around 400 companies across nearly all technology areas to create prototypes and commercialize technologies. Learn more at seedfund.nsf.gov.