NSF EPSCoR Program

NSF EPSCoR in Idaho

The National Science Foundation’s Established Program to Stimulate Competitive Research (NSF EPSCoR) is one of the most important drivers of collaboration among the University of Idaho (UI), Boise State University, Idaho State University and Idaho’s two- and four-year colleges to provide lasting improvements to academic research infrastructure and increase Idaho’s research competitiveness.

Idaho has five active NSF EPSCoR Research Infrastructure Improvement (RII) awards listed below, totaling $24.1 million. The state also submitted a $20 million statewide RII Track-1 proposal to NSF in August 2017 in competition for a new five-year award. A decision on this reviewed proposal is expected in spring 2018.

- “Managing Idaho’s Landscapes for Ecosystem Services” (MILES) (2013-18) is a $20 million, RII Track-1 award. MILES brings together researchers in the biophysical and social sciences to study challenges that arise as Idaho’s mid-sized cities grow. The project’s goal is to help Idaho manage and sustain the benefits humans derive from the natural world — also known as ecosystem services — such as water, forests and air quality.
- “Indigenous STEM Research and Graduate Education” (ISTEM) (2014-19) is a $750,000, RII Track-3 award. Led by UI, this project creates a national network of institutions to increase the number of Native American students obtaining master’s and doctoral degrees in STEM fields.
- Using Biophysical Protein Models to Map Genetic Variation to Phenotypes (2017-21) is a $3 million, RII Track-2 award led by Idaho in collaboration with scientists in Vermont and Rhode Island to understand how changes in amino acids lead to changes in the characteristics of a living organism.
- “Using In-cell NMR to Follow 13C-fluxomics in Living Cells” (2017-19, $130,772) and “Investigating Evolutionary Innovations through Metagenomics” (2017-19, $193,997) are two RII Track-4 awards for early career investigators to further develop their individual research by working with premier research centers.

Background

A 16-member committee leads Idaho EPSCoR, with representatives from the public and private sectors, the legislature and across Idaho. The director reports to the Idaho EPSCoR Committee and is supported by a professional staff in the Idaho EPSCoR Office, located in Moscow, Idaho, at UI. The office leads the planning, administration and implementation of EPSCoR RII programs and supports Idaho’s Science and Technology Plan for Higher Education in areas that contribute to the national research agenda through the philosophy of ONEIdaho — an integrated, productive and creative research culture and community of Idaho researchers and educators.

Recent Accomplishments

- Highly successful competitiveness (39 percent proposal success rate) for additional research funding from NSF and other agencies, winning an additional $31.9 million within the first four years.
- Supported 10 new early-career faculty positions since 2013 with scientists who are trained in working effectively across multiple areas of expertise.
- Engaged more than 400 university faculty, staff, undergraduates, graduate students and technicians and nearly 14,000 K-12 students, 230 teachers and dozens of stakeholders in STEM research and education throughout the state.

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FY19 PROGRAMS OF INTEREST

- Raised the profile of STEM career development opportunities to strengthen the enrollment, retention and success of students as they prepare for successful careers. Thirty-three graduate and 63 undergraduate degrees have been awarded, and 19 postdoctoral fellows have been trained.
- Broadened participation of people and institutions in STEM research, including over 100 underrepresented minority students and over 30 students from undergraduate institutions. Additionally, ISTEM has enrolled 10 Native American graduate students in STEM research programs, and awarded three PhD degrees and one Master of Science degree to date.
- Increased research capabilities of 80 participants from 13 institutions across the Western Consortium for Watershed Analysis and Visualization by developing advanced visualization, data and computer-based research tools and technologies to understand changes in snow-dominated watersheds. Results include 61 scholarly articles, 52 professional presentations, 23 graduate and 10 undergraduate degrees awarded.

Upcoming Goals

- Provide a legacy of improved research capacity by establishing and promoting the long-term success of research centers at Idaho’s universities.
- Compete successfully for a new NSF EPSCoR RII Track-1 award to support the next five years of academic excellence in areas of strategic importance to Idaho’s future.
- Sustain strong collaborations among Idaho scientists and provide excellent education and highly relevant STEM research experiences for an ever-more diverse population of Idaho students.

Projected Impact of Continued and Increased Funding

Continued and increased federal funding is essential for Idaho to compete successfully for new research infrastructure improvements to strengthen research capacity. Idaho submitted a $20 million statewide RII Track-1 proposal to NSF in August 2017, in competition for a new five-year award. Idaho researchers are also submitting independent research proposals in 2018 to the NSF EPSCoR RII Track-2 program to build collaborative teams with other EPSCoR states and to the Track-4 program to provide professional development for early career researchers. Idaho directly benefits from NSF EPSCoR funding to train students for the science and engineering workforce and to conduct world-class research that enhances Idaho’s quality of life, environment and economy while expanding partnerships with local communities, agencies and stakeholders.

Accounts: Commerce, Justice, Science Appropriations Bill, National Science Foundation, Research and Related Activities (RRA), Office of Integrative Activities, EPSCoR

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