

# Nebraska EPSCoR

## Current Nebraska EPSCoR Funding

### Science and Engineering

NSF funding supports the development of a new class of nanomaterials that could significantly advance sensing and detection capabilities at the nanoscale. This collaborative research, involving 13 faculty members at five Nebraska colleges and universities, could have applications in computing, disease detection and analysis, and combating terrorism.

NSF funding supports a portfolio of workforce development programs designed to nurture the STEM pipeline, including summer science camps for K-12, high school summer internships in university laboratories, and undergraduate internships with private sector STEM businesses. Funding also supports STEM faculty at Nebraska's two tribal colleges.

### Energy

NSF funding supports collaborations between Nebraska and Puerto Rico researchers to study nanomaterials for advanced energy technologies, such as improved catalysts for fuel cells and more energy-efficient electronics. Ten Nebraska faculty members at two universities are collaborating with 10 scientists at the University of Puerto Rico.

### Biotechnology/Commercialization

NSF funding supports the expansion of fundamental knowledge on molecular, biochemical and genetic systems in algae, with an aim to make significant contributions to the national search for alternative fuels. This collaboration involves 12 researchers at three universities and one college.



## Space

NASA funding helps researchers improve performance analysis of NASA's software systems and study photochemical contaminant deposition to improve the design of satellites with solar cells.

### Examples of the Impact of Prior EPSCoR Funding

Research Infrastructure Investment grants supported the hiring of new faculty and postdocs and the purchasing of key instrumentation. These investments strengthened STEM education by establishing new bioinformatics baccalaureate programs in Lincoln and Omaha.

Funds have supported STEM graduate students and postdocs; a total of 677 graduate school years have been supported.

Between 2004 and 2008, NSF and NIH grants totaling \$17.6M went to EPSCoR-affiliated faculty working in computational biology, biochemistry programs or epigenetics.

**FIRST Awards** support early career faculty with seed funding for research and crucial expert reviews of CAREER proposals, helping Nebraska faculty receive this prestigious award.

In 2005, Nebraska EPSCoR pioneered the **University-Industry R&D Partnership Program**. The program provides matching funds of up to \$25,000 for businesses that conduct STEM research and development in collaboration with university faculty.

Through the **Nebraska Engineering, Science and Technology Internship Program**, university students receive matching support for 6-month internships with Nebraska businesses in the STEM fields. Since 2000, over 144 students and 77 businesses have participated in NESTIP.

Prior funding established the **Young Nebraska Scientist Initiative**, a workforce development portfolio that includes summer science camps for K-12 students and summer research experiences for high school students.

The **Molecular Biology for Secondary Classrooms** program provides mobile advanced laboratory equipment and experiments to high school biology classes. The program is in its fifth year and has reached over 1,000 students annually for the past 4 years.

Since 2004, the annual **Nebraska Research and Innovation Conference** has provided a venue for members of industry, academia, government and the public to share knowledge and ideas on issues of importance to Nebraska and the nation. Topics have included renewable energy, biomedical research, and bioinformatics.

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