



The National Science Foundation Experimental Program to Stimulate Competitive Research

Arkansas EPSCoR

Raising the bar for multi-institutional, collaborative and innovative programs promoting cutting-edge research, workforce development and STEM education

The primary goal of Arkansas EPSCoR's research, workforce development and broader impact programs is to promote the development of good paying, 21st century jobs and a highly trained workforce. Since 1983, the Arkansas Science & Technology Authority (Authority) and the Science Advisory Committee have shepherded approximately \$94.4 million to Arkansas across three major EPSCoR programs: NSF (\$46.1M); NIH (\$38.5M) and NASA (\$9.8M). Overall research dollar awards have also increased over time as indicated in Figure 1.

These investments have launched Arkansas onto the world stage with competitive academic research capabilities and expertise in:

- Bioinformatics & Health Information Systems
- Biotechnology & Biofuels
- Biomedical Engineering
- Nanotechnology & Advanced Materials
- Industry-Minded Workforce Development Programming
- Statewide, Inter-disciplinary Collaborations

Arkansas EPSCoR works to leverage resources to maximize investments. This involves keeping effective lines of communication open between the NSF, NASA, NIH, USDA, DOE and NIST program offices on a regular basis and enacting partnerships whenever possible for the good of Arkansas's current and future Science, Technology, Engineering and Mathematics (STEM) workforce.

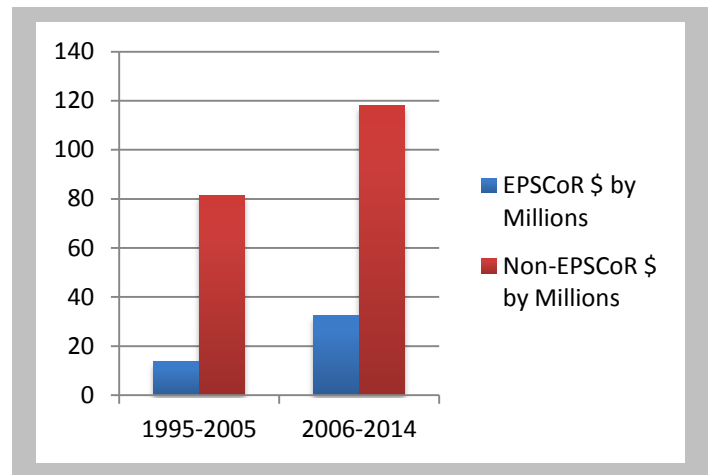


FIGURE 1: NSF DOLLARS AWARDED TO ARKANSAS

NSF EPSCoR in Arkansas

Branded as the Advancing and Supporting Science, Engineering & Technology (ASSET) Initiative, Arkansas's NSF EPSCoR office plays a key role in centralizing and leveraging efforts to improve the statewide research infrastructure and capacity. The Arkansas Science & Technology (S&T), as well as the Research & Development (R&D) Plans reside at the Authority as well as the team that works to secure match funding at the state level when required for large federal investments. Members of the NSF EPSCoR office also serve on a variety of state and national committees and boards to insure that information flows as smoothly as possible at each level of the state's STEM network. The NSF EPSCoR office also maintains the Arkansas Multi-User Instrument Database (www.amuidb.org) as a resource to encourage research and industry collaborations using our growing infrastructure investments. In Arkansas, the NSF EPSCoR group strives daily to perfect the art of collaboration despite geographic distance with active investigators involved with research in three virtual centers stretched across seven college and university campuses.

www.arepscor.org



NIH/NIGMS Institutional Development Award (IDeA) Program in Arkansas

Through the National Institutes of Health IDeA Program, Arkansas has three COBRE grants and one INBRE grant. The COBRE grants fund the Center for Protein Structure and Function, the Center for Translational Neuroscience, and the Center for Microbial Pathogenesis and Host Inflammatory Responses. These Centers support the recruitment and development of junior faculty and the development of critical scientific core facilities. The Arkansas INBRE is a network of research intensive and primarily undergraduate institutions across the state. The emphasis is on building biomedical research infrastructure at the primarily undergraduate institutions. The COBRE-funded Centers and the Arkansas INBRE work collaboratively to leverage resources invested in faculty and student development as well as in core facilities.

<http://brin.uams.edu/>

NASA EPSCoR in Arkansas

The Arkansas NASA EPSCoR provides seed funding that will enable our state to develop and academic research enterprise directed toward long-term, self-sustaining, nationally competitive capabilities in aerospace and related research. This program establishes partnerships with government, higher education, and industry that are designed to improve its national R&D competitiveness. The Arkansas NASA EPSCoR is open to all four-year colleges and universities in the state.

The two components of NASA EPSCoR are:

1. EPSCoR Research Infrastructure Development (RID) enables the state to build and strengthen relationships with NASA researcher.
2. EPSCoR Research awards are topic -specific proposals addressing high- priority NASA research and technology development needs.

COBRE MAGNETIC RESONANCE CORE LABORATORY AT UNIVERSITY OF ARKANSAS-FAYETTEVILLE

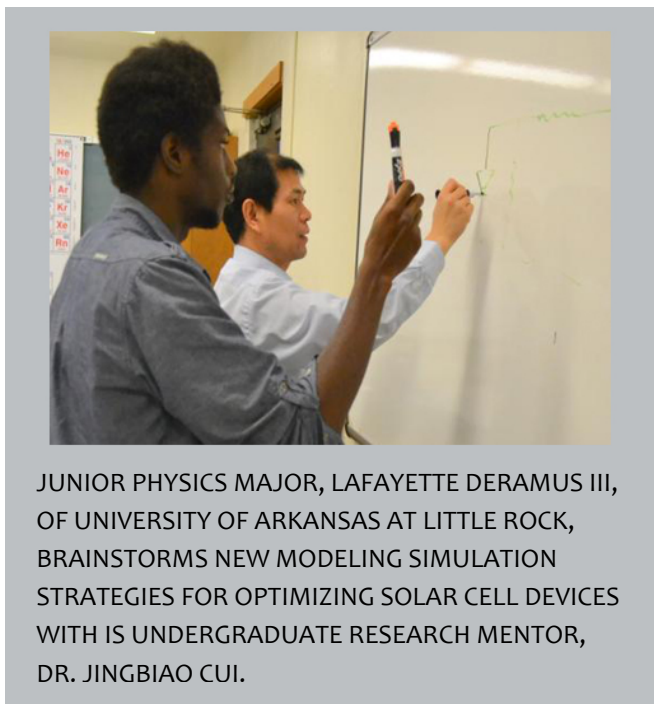


JUNIOR CHEMISTRY MAJOR, CHELSEA ESSARY, OF HARDING UNIVERSITY LAYING OUT THE OPTICS DESIGNED FOR THE SPECTROGRAPH THAT WILL BE ENTERED IN THE NATIONAL STUDENT SOLAR SPECTROGRAPH COMPETITION SPONSORED BY MONTANA SPACE GRANT CONSORTIUM COMPETITION HELD IN BOZEMAN, MT

<http://asgc.ualr.edu/nasa-epscor/>



HIGH SCHOOL STUDENTS BUILD CIRCUITS AND DESIGNING SYSTEMS POWERED BY RENEWABLE ENERGIES AT THE C.A.B.S. ACADEMY SPONSORED BY THE [ARKANSAS SCHOOL FOR MATHEMATICS, SCIENCES & THE ARTS](#), [UNIVERSITY OF ARKANSAS AT LITTLE ROCK](#) AND THE [UNIVERSITY OF CENTRAL ARKANSAS](#) WITH FUNDING FROM THE [WINTHROP ROCKEFELLER FOUNDATION](#).



JUNIOR PHYSICS MAJOR, LAFAYETTE DERAMUS III, OF UNIVERSITY OF ARKANSAS AT LITTLE ROCK, BRAINSTORMS NEW MODELING SIMULATION STRATEGIES FOR OPTIMIZING SOLAR CELL DEVICES WITH IS UNDERGRADUATE RESEARCH MENTOR, DR. JINGBIAO CUI.

Arkansas Louis Stokes Alliance for Participation (Ark-LSAMP)

Ark-LSAMP is a cross-cutting program that supports the diversity and inclusion goals of the NSF, NIH and NASA EPSCoR programs. As the Ark-LSAMP headquarters, the University of Arkansas at Pine Bluff oversees the eight institution alliance which works to increase the number of underrepresented minority students in STEM majors and graduates from participating campuses. Participants are required to attend regular weekly meetings. Paid research experiences are offered during the Fall and Spring semesters in compliance with grant guidelines for the program. While the Ark-LSAMP program is not EPSCoR-funded, it is a vital link for the practice of diversity and inclusion in Arkansas.

<http://uapbstem.com>

Highlights

- [Plant Powered Production Center \(P3\)](#)
- [Vertically-Integrated Transformative Center for Energy Research \(VICTER\)](#)
- [GREEN Solar Cells Research Center \(GREEN\)Wireless Nanosensors and Systems \(WiNS\)](#)
- [Center for Translational Neuroscience](#)
- [Center for Protein Structure and Function](#)
- [Center for Microbial Pathogenesis and Host Inflammatory Responses](#)

Arkansas EPSCoR Key Personnel

- ❖ **Dr. Gail McClure**, Director of Arkansas NSF EPSCoR and Principal Investigator
- ❖ **Dr. Lawrence Cornett**, Director of NIH IdeA Programs in Arkansas, (Arkansas INBRE)-Principal Investigator
- ❖ **Dr. Keith Hudson**, Director of NASA/Arkansas Space Grant Consortium and Principal Investigator
- ❖ **Dr. Mary Benjamin**, Director of NSF Louis Stokes Alliance for Minority Participation and Principal Investigator (Ark-LSAMP)