

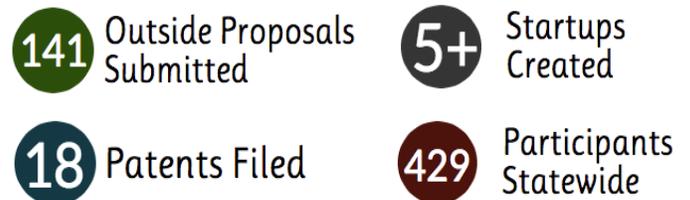
Arkansas NSF EPSCoR Highlights (Established Program to Stimulate Competitive Research)

With the nearly \$65 million in EPSCoR awards the state has received since 2007, EPSCoR researchers have successfully leveraged over \$110 million in additional research funding to Arkansas institutions (see below).

Grant Period	Amount (with State match)	Additional Funds Generated
2007 - 2010	\$13,500,000	\$15,049,719
2010 - 2015	\$24,000,000	\$76,255,721*
2014 - 2017	\$3,150,000	\$436,000*
2015- 2020	\$24,000,000	\$15,307,926

* ~\$40M Pending

Cumulative Data on Projects During 2010 - 2017



ACTIVE PROJECTS

The current Arkansas Track-1 project, **the Center for Advanced Surface Engineering** (CASE) is a \$24 million 5-year project for interdisciplinary research in the topics of surface material science and nanotechnology. CASE supports more than 125 people at 11 institutions statewide.

The center’s overarching goals are to: Reduce costs and environmental impact of manufacturing; Improve recovery for brain trauma patients; Design better filters from forestry byproducts; Develop new surface materials with adjustable properties; Build the nation’s first statewide high performance cloud; and Train the next generation of scientists and STEM skilled workers.

Although the CASE project is only in year 2 of 5, two **spin-off companies** have already been created and several patents have been filed:

- **NuShores** was born in the Center for Integrated Nano Sciences at UALR. Alex Biris and team are creating complex nano-engineered scaffolding material for bone regeneration, and have received several million in funding from the Department of Defense and the US Army Medical Research & Material Command.
- **SurfTec** was created in the UARK lab of CASE Director Min Zou. Zou and mentee Sam Beckford created this company based on a new coating with extremely low friction to replace current methods of industrial lubrication with solid or dry lubrication. SurfTec just received

SBIR funding and is working with some national ball bearing companies on further development.

The current EPSCoR Track-2 project, the **Plant Imaging Consortium** (PIC), is a collaborative plant science project that has received national industry attention in the agriculture sector as it works to advance research and education in plant biology, and to combat crop losses to sources of plant stress such as drought, poor soils, insects and diseases. PIC brings together expertise and facilities that are located throughout Missouri and Arkansas, and supports interdisciplinary collaborations between the two states.

- With support from the Arkansas Corn and Grain Sorghum Board, the PIC team is collaborating with researchers from 18 other states on the Genomes-to-Field (G2F) project, which aims to improve breeders' ability to select for locally-adapted, drought- and heat-tolerant corn.
- Over the course of the project, PIC researchers have secured more than \$4.5 million in additional grants to further address agricultural problems in our region.
- Outreach under this project has engaged more than 9,000 Arkansas K12 students.
- PIC researchers have gained national and international recognition and been featured in *Science*, *Nature*, and *Scientific American*.

Arkansas also secured an EPSCoR Track-3 award that supports **Bridging The Divide**, a program that aims to increase the number of scientists from underrepresented groups in STEM fields (racial and ethnic minorities, first generation college students, students with disabilities and veterans) by providing an intensive training and mentoring environment. The initial award period is for five years and \$750,000. In the past three years, the Bridge Program has provided summer research experiences for 24 students from all over the state, with plans to expand in the coming years.

UPDATES FROM PREVIOUS PROJECT

EPSCoR researchers were able to create several **spin-off companies** during the Track-1 Renewable Energy project during 2010 – 2015, each of which have had continued successful funding:

- **WattGlass** just secured \$680,000 in funding from the Department of Energy in the global SunShot Competition to further commercialize its innovative, high performance antireflective solar panel coating. WattGlass also recently won the 2016 SunRISE TechBridge Challenge, a competition organized by Royal DSM, Fraunhofer, & Greentown Labs to realize innovations in solar energy.
- **Picasolar** received a 2015 Edison Award, which recognizes innovation globally, for their technology that increases solar panel efficiency. Picasolar also received three rounds of DOE SunShot funding, becoming one of few awardees in history to do so.
- **Arktonics**, which manufactures integrated electronic components and semiconductors, received SBIR Phase I and II funding.
- **GeneCoMe**, focusing on avian immunostimulatory enhancers for the poultry industry using genetically engineered plant sources, received SBIR Phase I funding.