SD EPSCoR
RESEARCH. EDUCATION. ECONOMIC DEVELOPMENT.

Linking South Dakota's Future to Science & Technology

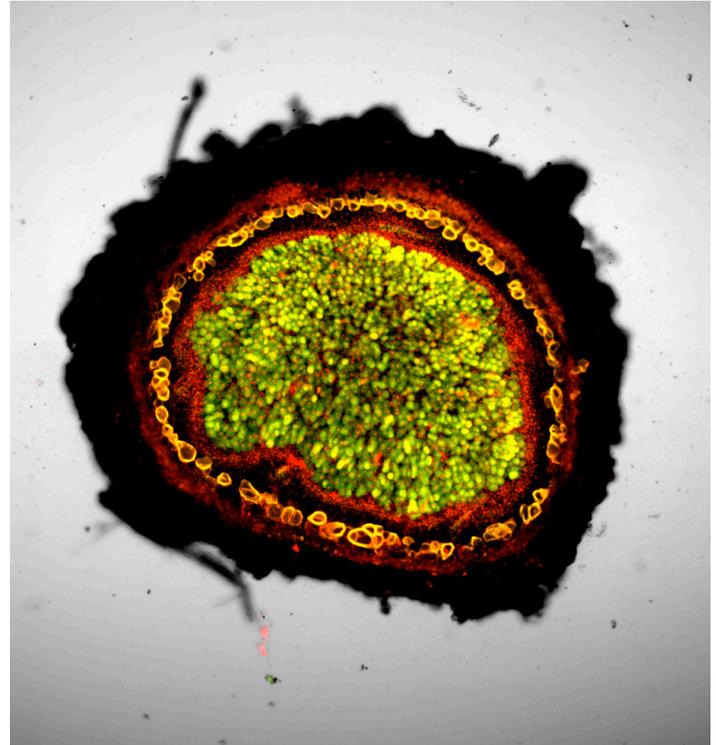## National Science Foundation (NSF)

www.sdepscor.org

Increasing South Dakota's Science & Technology Research Capacity

BioSNTR – The Biochemical Spatiotemporal NeTwork Resource (BioSNTR) is a statewide, multidisciplinary group of scientists and researchers with three core areas: computational science, cell imaging, and biomaterials. BioSNTR will use cutting-edge scientific technologies with applications to build a knowledge-based bioeconomy in South Dakota.

DakotaBioCon – A collaboration of scientists and engineers in South Dakota and North Dakota who are developing processes for producing high-value chemicals from grass, forestry byproducts, and other renewable raw materials.

Supporting South Dakota

Workforce Development

In partnership with the state of SD, SD EPSCoR has created the Dakota Seeds Internship Program to help bridge the technology transfer and workforce gap between university and industry.

Education and Outreach

SD EPSCoR's Director of STEM Partnerships is leading a statewide effort with industry partners to strengthen STEM programs in K-20 education that emphasizes the role of women and underrepresented minorities in the state's higher education community and state workforce.

Sustainability

South Dakota's first science & technology plan, the *2020 Vision: The South Dakota Science and Innovation Strategy*, provides direction for all state, higher education, and private sector communities to coordinate South Dakota's capacity to create and grow knowledge-based companies, generate higher wage jobs, and build the capability to sustain the prosperity they create.

Researchers at South Dakota State University are studying root nodules of soybeans and their interaction with bacteria found in the soil. The image shows a cross-section of a nodule with staining of plant cells (red) and bacteria (green). The localizing of bacteria within the plant root nodule allows the plant to transform nitrogen from the soil into a usable form, alleviating the use of chemical fertilizers. (Photo Credit: Mason Thorstad, Graduate student, SDSU)

A History of Achievements

- Built partnerships between public, private, and tribal colleges and universities
- Connected all rural schools to high-speed Internet
- Connected higher education to industry through the Dakota Seeds Internship Program
- Gained international attention through the development of security printing using invisible ink
- Established a state VEX Robotics tournament, providing STEM activities for middle and high school students
- Facilitated the development of the *2020 Vision: The South Dakota Science & Innovation Strategy*, South Dakota's science & technology plan