

# EPSCoR/IDeA Funding in South Carolina:

## Workforce Development

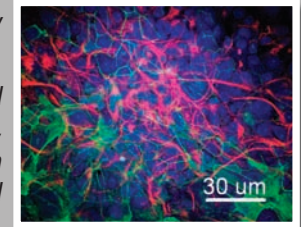
- Enabled the hire of 95 new, tenure-track faculty members in science and technology at six South Carolina colleges and universities
- Engaged 25 institutions of higher education in science and technology research, including all six of SC's four-year Historically Black Colleges and Universities
- Supported the participation of 316 undergraduate students in research experiences, since 2005
- Placed eight postdoctoral fellows in historically black colleges to instruct nearly 200 students in contemporary research practices
- Created a Master of Biotechnology degree at Claflin University and Bachelor, Master and Doctor of Biomedical Engineering degree programs at the University of South Carolina



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## Health

- Developed new biomedical technologies for regeneration of tissue and cells, using a scaffold-free, self-assembly approach to three-dimensional tissue engineering
- Established centers of biomedical research focused on discovering underlying causes of Alzheimer's, Parkinson's, and Huntington's diseases along with investigations into the treatment of cancer, obesity, and cardiovascular disease

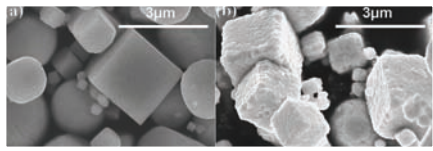


Dr. Xuejun Wen and Clemson University

## Industry/Commercialization

- Invested seed funds in small businesses such as Innegrity, LLC, an advanced fibers manufacturing firm, whose growth will create over 150 new jobs
- Generated \$3.1 million in Phase I and Phase II SBIR and STTR awards for local, high-tech small businesses
- Stimulated the award of 19 patents, contracts and licenses for commercialization to supported companies and faculty

## Energy



Dr. Terry Tritt and Clemson University

- Designed coatings to be applied to nuclear fuels, reducing the amount of dangerous waste and improving the safety of nuclear energy production
- Stimulated collaborations between faculty at Clemson University and research scientists at Oak Ridge and Savannah River National Laboratories

## Science and Engineering Facilities

- Renovated and expanded 225,000 ft<sup>2</sup> of laboratory space at Furman University
- United the state's three research institutions to create the Advanced Tissue Biofabrication Center, a multi-institutional research center specializing in the assembly of human tissues and organs
- Established a 3D computer-aided design and rapid prototyping laboratory at South Carolina State University



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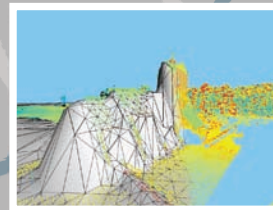
## Space

- Established partnerships among Clemson University, Michelin, Milliken and the NASA Jet Propulsion Laboratory, to design and test rover wheels for lunar and Martian exploration
- Improved renewable fuel cells that provide alternative and efficient sources of energy for manned space travel



Clemson University

## Defense and Homeland Security



Dr. Ronald DeVore and the University of South Carolina  
(Raw Sensor Data: AFRL/MNG VEAA Data Set #1)

- Supported projects that have transitioned from the laboratory to operational use by the US Navy, including an image processing system derived from research at the University of South Carolina, now used for navigation of the Tomahawk II missile

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## Transformative and Translational Research



National Center for  
Research Resources

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