



NEWS RELEASE

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SMART Business Accelerate Initiative funds projects to prove commercial viability

Leveraging Mississippi's research capabilities, emerging technologies, and human capital to create new high demand jobs specifically to keep Mississippi's top talent in the state is the goal behind the SMART Business Accelerate Initiative. This program is designed to stimulate economic growth and job creation by translating the State of Mississippi's intellectual property into new commercially viable emerging technologies. These technologies will be a sustainable source of innovations that through licensing from the State of Mississippi may be used in the creation of new technology-based companies, and products or services for existing companies.

The SMART Business Accelerate Initiative recently awarded \$1.27 million to support the development of state-owned intellectual property developed at the universities. Ten projects were funded.

The SMART Business Accelerate Initiative is an extension of the Strengthening Mississippi Academic Research Through (SMART) Business Act, which was adopted by the Mississippi Legislature in 2013 to encourage Mississippi companies to engage with public universities to conduct research. The Act provides \$3.5 million per year for a rebate to businesses who contract with a university for research. A company can receive 25% of the cost of the research back as a rebate up to \$1 million per year.

The Act was amended in 2021 to allocate \$1.5 million per year for SMART Business Accelerate Initiative grants. The grants provide university researchers with funding needed to prepare their inventions or innovations to be sold in the marketplace.

The projects funded this year include:

Jackson State University

- Caries Finder: Handheld Raman Imaging Probe for Early Dental Caries Detection, an imaging system for early-stage dental caries detection
 - Principal Investigator: Dr. Shan Yang
- Development of Therapeutics Against Alphaviruses through investigation of small molecule inhibitors to treat encephalitic diseases caused by emerging viruses called alphaviruses
 - Principal Investigator: Dr. Victor Ogungbe

Mississippi State University

- Scalable Manufacturing of Lignin-based Graphene Nanomaterials for Concrete Property Enhancement, to demonstrate the manufacturing process of kraft lignin to advanced high-value products are scalable for high-value production
 - Principal Investigators: Dr. Jilei Zhang and Dr. Xuefeng Zhang
- Renewable Fuel Production from Biogas on a Mobile Trailer, validation of patented catalysts for converting biogas into liquid fuels
 - Principal Investigator: Dr. Fei Yu

University of Mississippi

- Wireless/Wearable Vibrotactile Prosthetic Device for People who Stutter, a prosthetic device that effectively provides a person who stutters with a fluency enhancing vibrotactile second speech signal
 - Principal Investigator: Dr. Greg Snyder

University of Mississippi Medical Center

- Virtual Immersive Sensorimotor Testing Device, a virtual reality testing device and associated methods to deliver sensorimotor tests to an individual
 - Principal Investigator: Dr. Jennifer Reneker
- Efficacy and Immunogenicity of ELP-VEGF, a Novel Biologic for Treatment of Preeclampsia, validating the use of the Elastin-like Polypeptide drug delivery system for therapeutics during pregnancy
 - Principal Investigator: Dr. Gene Bidwell, III

University of Southern Mississippi

- Infrared Photoresponsive Conjugated Polymers and Devices for Emerging Optoelectronics, validation of state-owned intellectual property associated with conducting polymers and respective photodetectors applications.
 - Principal Investigator: Dr. Jason D. Azoulay
- Advanced Aerospace Matrix Polymerization Reactor, validate commercial viability of state-owned intellectual property associated with conducting polymers and respective photodetector applications
 - Principal Investigator: Dr. Jeffrey Wiggins

University of Southern Mississippi Research Foundation

- Enhance Oral Suction Device, validating patented device to protect patients and health professionals by minimizing the risks of infection due to aspirations and sputum overflow
 - Principal Investigator: Dr. Nina McLain

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