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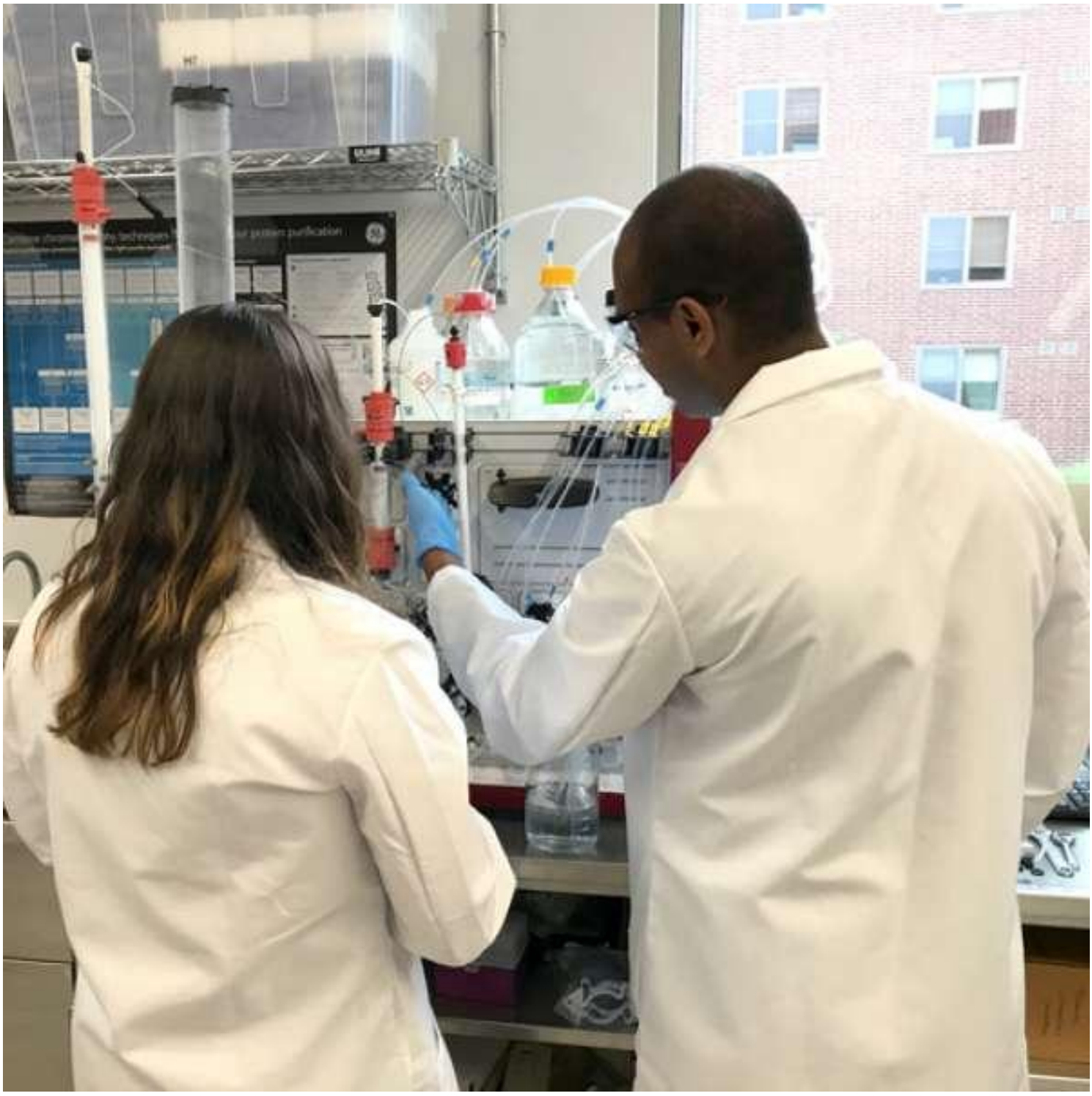
First Annual Seed Grant Recipients Announced by the Center of Excellence in Industrial Biotechnology

Seed Grant funding allows faculty at Penn State to initiate research in novel areas of biotechnology.



The Center of Excellence in Industrial Biotechnology has awarded seed funding grants to five projects that support research initiatives in the broad area of industrial biotechnology. The awards, totaling $81,173, will support researchers and students from three colleges and four different departments; most will make direct use of the CSL Behring Fermentation Facility, a user facility on campus that houses state-of-the-art equipment for production of biomolecules and analysis of microbial processes.

"The Seed Grant funding allows faculty at Penn State to initiate research in novel areas of biotechnology," said Andrew Zydney, director of the Center. "This support enables them to generate the type of preliminary data needed to develop highly competitive research proposals for federal, state, or industrial sponsors. We were particularly interested in the proposals that involved students in the earliest stages of exciting new research initiatives."

The first annual seed grant principal investigators and their research projects are:

Altering Arabinoxylan Feruloylation in Maize by *In Plant* Co-Expression of Cell Wall Degrading Enzymes for Sustainable Biofuel Production—Marcia Maria de Oliveira Buanafina, Biology; Tom L. Richard, Agricultural and Biological Engineering

Study of a Novel Co-Culturing Fermentation for Bacterial Cellulose Nanocomposite Production—Jeffrey Catchmark, Agricultural and Biological Engineering; Ali Demirci, Agricultural and Biological Engineering

Structural Visualization of Archaeal RNA Polymerase Transcription Initiation and Regulation—Katsuhiko Murakami, Biochemistry and Molecular Biology

Generation of Mutants in *Brachypodium* (Switchgrass) with Altered Cellulose Degree of Polymerization for Biofuel Production—Ming Tien, Biochemistry and Molecular Biology; Marcia Maria de Oliveira Buanafina, Biology

Purification of Cas9-RNA Complexes for Gene Therapy Applications Using Membrane Ultrafiltration—Andrew Zydney, Chemical Engineering

The Center of Excellence in Industrial Biotechnology will offer a new seed funding initiative in the fall of 2019, with a specific focus in supporting of research collaborations with industrial partners in biotechnology. The Center was established in 2018 with a $4.92 million gift from CSL Behring that also provided funds to revitalize equipment in the CSL Behring Fermentation Facility, a major core facility that is an engine for collaboration and innovation in biological training and research.