ABSTRACT:
Over 1.7 million persons sustain a traumatic brain injury (TBI) in the U.S. alone. TBI is initiated by a mechanical injury and leads to a biochemical injury that is largely responsible for long-term functional and cognitive deficits. However, adequate diagnosis and treatment of TBI patients is still a serious problem for the medical field. For example, current diagnostic techniques for TBI are excellent in detecting gross morphological alterations; yet, they do little to detect the immediate molecular alterations. Even more concerning is the limited clinical therapeutic treatment options currently available for TBI patients where notably none address the underlying pathology and only alleviate secondary symptoms (i.e. edema, intracranial pressure, etc). This talk will focus on bioengineering approaches for improving the detection and promote regeneration/repair after TBI.

BIOGRAPHICAL:
Dr. Sarah Stabenfeldt received her B.S. in Biomedical Engineering from Saint Louis University and her Ph.D. in Bioengineering from Georgia Institute of Technology. She was awarded an NIH NRSA pre-doctoral fellowship for her doctoral thesis research on developing neural tissue engineering therapies for traumatic brain injury. As a NIH post-doctoral fellow at Emory University School of Medicine and Georgia Tech, she investigated fibrin-derived peptide-protein binding interactions, designing fibrin-based wound healing therapeutics. She joined Arizona State University’s School of Biological and Health Systems Engineering as an Assistant Professor in 2011 and leads her research team in developing regenerative medicine strategies for acute neural injury. Since joining ASU, Sarah has been awarded the Arizona Biomedical Research Consortium Early Stage Investigator Award, the NIH Director’s New Innovator Award, and NSF CAREER Award.

DATE • TIME • LOCATION:
Tuesday, October 20th 11:00 AM, Ketcham Auditorium

The Food for the 21st Century (F21C) program at the University of Missouri (MU) was established in the mid-1980’s through state funding. The overall goal of the program is to help Missouri food producers and processors maintain their competitive edge in the global marketplace by conducting cutting-edge research in a number of food-related areas. The program involves faculty researchers from multiple colleges including College of Agriculture, Food and Natural Resources; College of Arts and Sciences; College of Engineering; School of Medicine; College of Human Environmental Sciences; and College of Veterinary Medicine. Based on the research emphases, the researchers are grouped into four Clusters: Plant Biotechnology; Animal Reproduction; Bioprocessing and Biosensing Center; and Human Nutrition.

Bioprocessing and Biosensing Center was formed in 1986. The Center currently consists of 27 faculty members, plus collaborators, support staff, and graduate students from six departments in the College of Agriculture, Food and Natural Resources and College of Engineering. These departments include Bioengineering; Food Science; Animal Sciences; Chemical Engineering; Electrical Engineering; and Mechanical and Aerospace Engineering. This seminar is one of the educational activities in the Bioprocessing and Biosensing Center.