

Engineering Novel Biosensors and Complex Biological Models to Study Cancer and Beyond

**Monday,
September 26, 2022
10:30 AM
EB1 1011**



Dr. Adam Melvin

**Louisiana State
University**

Host: Dr. Jason Haugh

Refreshments will be served
from 11:40-12:00 in
EB1 2014 (Student Lounge)

Cancer is a heterogeneous disease with differences between patients (intertumor heterogeneity) and among cells in the tumor (intratumor heterogeneity) requiring a multi-faceted approach to obtain a better fundamental understanding of this complex disease. This talk will highlight ongoing research by my group to develop new bioanalytical techniques to study drug resistance in multiple myeloma and creating better preclinical models to study metastatic breast cancer. These include long-lived, cell-permeable fluorescent biosensors to measure enzyme activity in intact cells and microscale approaches to study how cancer cells manipulate healthy cells, and their environment, to drive cancer progression.

Biography: Adam Melvin obtained a BS in Chemical Engineering and a BA in Chemistry from the University of Arizona, a MS in Chemical Engineering (with a minor in Biotechnology) and a Ph.D. in Chemical Engineering from North Carolina State University. He was an NIH postdoctoral fellow at the University of North Carolina at Chapel Hill in the Departments of Chemistry and Biomedical Engineering. In August of 2013, he joined the faculty in the Cain Department of Chemical Engineering at Louisiana State University. His research interests focus on biochemical/biomedical engineering including the design of peptide-based biosensors and therapeutics and the development of novel microfluidic platforms to model the breast cancer tumor microenvironment. He is an NSF CAREER awardee and has received numerous teaching and mentoring awards during his time at LSU.

