



CHEMISTRY & BIOCHEMISTRY

SEMINAR PROGRAM

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY
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We Are Pleased to Announce A Seminar
Presented by

Lacey McNally
University of Oklahoma

Friday, March 10, 2023
4:15 pm
NWC 1313

*Development of small molecule-based and nano-based contrast agents for
Optoacoustic Imaging*

Several imaging modalities, PET, MRI, CT, and Ultrasound are currently employed successfully to identify disease both locally and systemically. While each of these modalities have established benefits, they also do not provide the ability to identify multiple biomarkers simultaneously. Optoacoustic imaging is a newly emerging imaging technology which has the potential to detect and monitor disease in a multiplexed fashion with and without exogenous contrast agents. While OAI has been utilized for tumor identification based solely on oxy- and deoxy-hemoglobin in non-surgical clinical settings, our laboratory is conducting the first investigation of Multispectral Optoacoustic Tomography (MSOT) imaging in a surgical setting using oxy- and deoxy-hemoglobin (NCT04365413). In contrast, Optoacoustic imaging has the capability to detect disease at greater depths and has been utilized in human subjects, but lacks tumor specific contrast agents that have specifically been designed for maximum optoacoustic signal. Our objective is to develop disease specific contrast agents, both small molecule-based dyes, as well as disease specific nanoparticles for the improved detection of cancer, inflammation, and other diseases.

Refreshments will be served