SEMINAR

Indiana CTSI Access Technology Program presents:

# "Lipidomics: high-throughput exploratory analysis guided by chemical functionalities"

Christina Ferreira, PhD, Lipidomics Research Scientist
Metabolite Profiling Facility, Bindley Bioscience Center

Hosted by: Metabolite Profiling Facility, Bindley Bioscience Center
Bruce R. Cooper, PhD, Director
Purdue University

Friday, April 9
12:00 pm – 1:00 pm

Please register to receive the ZOOM meeting link:
https://redcap.link/CTSI_Technology_Seminar

Description: In this seminar we will present a method for the exploratory analysis of lipids named multiple reaction monitoring (MRM)-profiling. The method employs a different analytical strategy compared to untargeted lipidomics by LC-MS. First, there is no liquid chromatography; the lipid extracts are injected directly into the source of the mass spectrometer, which confers speed to the analyses. We then trust the mass spectrometer to do the separation of the ions "internally" by using scan types that can profile chemical functionalities, and specific combinations of parent (intact) and fragment ions related to specific lipid classes. The parent-fragment ion scan is known as the MRM scan, and it is the most sensitive scan type in mass spectrometry. The MRM scan data on lipids is analyzed as a chemical profile, hence, the name MRM-profiling. We will also discuss the lipidomics capabilities, including LC-MS, available at the Metabolite Profiling Facility at Bindley Bioscience Center at Purdue University.



Access Technology Program
Indiana Clinical and Translational Sciences Institute