

BINDLEY BIOSCIENCE CENTER'S OMICS RESOURCES FOR PVM RESEARCH



The Bindley Bioscience Center in Purdue University's Discovery Park provides infrastructure and expertise to support interdisciplinary research with emphasis on health and disease research. The center offers scientific expertise and high-end instrumentation in multiple areas including proteomics and metabolite profiling to the research community at Purdue. Bindley's scientists, Dr. Uma Aryal, director of Bindley's Proteomics facility, and Dr. Christina Ferreira, lipidomics research scientist, will present about Bindley's unique facilities and strengths that can support the existing and new interdisciplinary research initiatives from Purdue University College of Veterinary Medicine.



Dr. Uma Aryal

Proteins are responsible for catalyzing reactions, transmit signals, and create cellular support and metabolism. They are organized in a spatial and temporal manner in a cell. Development in mass spectrometers over the last several years have enabled system-wide analysis of proteome, and proteomics has now become an essential tool for biological research. The Purdue Proteomics Facility (PPF) provides state-of-the-art mass spectrometry analysis of proteins in clinical, environmental and other biological samples. As a shared resource facility, it enables both targeted and global analysis of proteins, their post-translational modifications and analysis of protein complexes and protein-protein interactions. Coupled with different modern mass spectrometers, and advanced scientific and bioinformatics expertise, the facility provides unique opportunities for researchers to perform quantitative proteomics analysis. In this presentation, Dr. Aryal will discuss proteomics resources and technologies at the PPF, its contribution to scientific research on campus with specific examples, and future developments and research collaborations.

The metabolic relevance of lipids, especially regarding signalling pathways and their value as disease biomarkers, is rapidly growing. In this presentation Dr. Ferreira will talk about lipid analysis by mass spectrometry and especially focus on exploratory screening and biomarker discovery. Research projects related to veterinary medicine will be highlighted.



Dr. Christina Ferreira

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