

Purdue University Department of Biochemistry Seminar



Dr. Gaurav Moghe, Assistant Professor,
School of Integrative Plant Science,
Plant Biology Section
Cornell University

September 6, 2022
Whistler, RM. 116
3:30- 4:30 p.m.

“Predictive Analysis of Plant Metabolomes and Metabolic Enzymes”

The diversity of plant metabolites is staggering. It is therefore no surprise that we have catalogued only a small portion of this diversity. For example, less than 5% of signals obtained through liquid chromatography mass spectrometry of plant extracts can be identified. At the metabolic pathway level, typically we can predict the functions of only 5-10% of enzymes in many enzyme families. In my talk I will first describe how we used machine learning and information-theory based approaches to characterize metabolic perturbations under abiotic stress in *Brachypodium distachyon*. Secondly, I will describe our phylogenomic and enzymological studies that enabled improved functional predictions and evolutionary understanding of the large BAHD acyltransferase family in plants. These results encourage a broader application of computational methods towards dissecting the complexity of plant metabolism .