



Department of Chemistry and Biochemistry Colloquium Speaker



Prof. Jiaoyang Jiang, PhD

University of Wisconsin-Madison
School of Pharmacy

"Specificity, Function and Regulation of Protein O-GlcNAc Modification"

Abstract: The N-acetylglucosamine (O-GlcNAc) modification is a unique glycosylation that dynamically modulates protein functions and regulates numerous biological pathways in human physiology and disease. This modification is added by O-GlcNAc transferase (OGT) and removed by O-GlcNAcase (OGA). Despite recent progress, challenges remain to decipher the biological role of O-GlcNAc modification and its regulation by OGT and OGA on a broad range of substrates that lack apparent sequence motifs. In this talk, I will present our recently solved crystal structure of a human OGA that represents the first model of eukaryotic glycoside hydrolases in the GH84 family. We further determined a series of OGA:substrate complex structures, revealing a molecular basis underlying OGA's principle in substrate recognition. Moreover, we developed novel chemical probes to expedite the characterization of OGT-substrate recognition and the discovery of genuine substrates that weakly or transiently interact with OGT.

Friday March 2nd, 2018

4:00 pm

WO 1205

**Inquiries can be made of:
Dr. Peter R. Andreana @ 419-530-1930
peter.andreana@utoledo.edu**