

Internal Webinar

Deciphering Protein-Ligand Interactions Using Integrative Proteomics and Structural Approaches

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My research focuses on understanding protein-ligand interactions using integrative proteomics and structural biology approaches. During my postdoctoral work, I applied thermal proteome profiling to identify molecular targets of biguanide drugs, leading to the identification, purification, and biochemical characterization of ATP synthase as a key target. In a separate project, we developed mass spectrometry-based structural proteomics methods, including LC-FOX, to resolve dynamic protein-ligand interactions at the conformational level. These approaches can be extended to membrane protein systems, particularly to investigate protein-lipid interactions and their role in regulating the stability and function of membrane protein complexes.

Monday, May 4th 2026

09:30 Hrs

