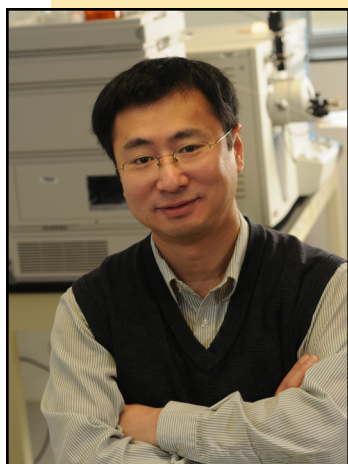




Weidong Zhou, PhD

Research Associate Professor, Center for Applied Proteomics and Molecular Medicine

Education

PhD, Biochemistry, University of Illinois at Urbana-Champaign

Key Interests

Mass Spectrometry | Proteomics | Biomarker Discovery | Cancer Metabolism | Alzheimer's Disease | Infectious Disease | Schizophrenia | Atrial Fibrillation

CONTACT

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SELECT PUBLICATIONS

- Z. M. Younossi *et al.*, An exploratory study examining how nano-liquid chromatography-mass spectrometry and phosphoproteomics can differentiate patients with advanced fibrosis and higher percentage collagen in non-alcoholic fatty liver disease. *BMC Med.* 16, 170 (2018).
- C. DeMarino *et al.*, Antiretroviral drugs alter the content of extracellular vesicles from HIV-1-infected cells. *Sci Rep.* 8, 7653 (2018).
- B. D. Carey *et al.*, Protein phosphatase 1α interacts with Venezuelan equine encephalitis virus capsid protein and regulates viral replication through modulation of capsid phosphorylation. *J Virol.* 92(15), pii: e02068-17 (2018).

Research Focus

Our mass spectrometry lab is equipped with state-of-the-art mass spectrometers. My research is focused on biomarker discovery relevant to cancers and other diseases from serum, tissue and body fluids, using advanced liquid chromatography coupled nano-electrospray tandem mass spectrometry technique. I also collaborate with other researchers to develop effective mass spectrometry methods for protein identification and post-translational modification characterization.

Current Projects

- Protein painting identifies therapeutic targets at protein-protein interfaces. The goal is to use protein painting to discover and validate therapeutic target hotspots for cell surface receptors, cancer cell signaling, oncogene/suppressor genes, and immunotherapy targets.
- Microparticles for directing immune cell trafficking: The goal is to develop a nanoparticle technology based on a hydrogel incorporating affinity baits capable of controlled binding and release of chemokines, providing a predictable manipulation of the lymph node cellular composition.
- Novel biomarkers of lung cancer to guide prevention and early diagnosis: The goal is to develop a quantitative MS assay for previously identified risk markers that are functionally involved in inflammation, genetic instability, autophagy, oxidative stress and innate immunity.