Is Pleased To Announce A Seminar
Presented By

Joseph A. Loo
University of California-Los Angeles

Proteomics and Mass Spectrometry:
From Structure to Binding to Biomarkers

Friday, February 5, 2016
At 3:45pm
Astellas Conference Room
SLSRC 3410/3430

Mass spectrometry (MS) is a technique that weighs molecules, but this simple measurement can reveal much more than size. MS has capabilities to offer structural biologists layers of insight into the details of protein complexes. Mass measurements deliver information on stoichiometry of binding partners directly, even for multi-ligand hetero-complexes and molecular machines with masses beyond 1 MDa. It can be used to generate topological information for large proteins and complexes and to probe ligand/drug-binding sites. MS is a key technology for proteomics, the large-scale study of proteins. Proteomics-based platforms can be used to discover new drug entities to combat human diseases. And the quantitative detection of protein biomarkers for human diseases and conditions can be aided by mass spectrometry and proteomics. Updates to our MS work on neurodegenerative diseases and traumatic brain injury will be presented.

Refreshments will be served at 3:15 PM

(Biography on back)
Biography: Joseph A. Loo is a Professor in the Department of Biological Chemistry, David Geffen School of Medicine, and in the Department of Chemistry & Biochemistry at the University of California, Los Angeles (UCLA). He is also a member of UCLA/DOE Institute for Genomics and Proteomics and the UCLA Molecular Biology Institute. His interests include analytical chemistry, the mass spectrometry characterization of peptides and proteins and post-translational modifications, and their application for proteomics and disease biomarkers. He is the author of over 280 scientific publications. He is on the Editorial Boards of several scientific journals; currently he is the Editor-in-Chief for the Journal of the American Society for Mass Spectrometry. He has held leadership and advisory positions with scientific organizations, including the American Society for Mass Spectrometry (ASMS) and the US Human Proteome Organization (US HUPO). Before he joined UCLA, he was an Associate Research Fellow and Group Leader of the Biological Mass Spectrometry and Proteomics Teams at Parke-Davis Pharmaceutical (currently Pfizer Global Research), Ann Arbor, MI. He received his Ph.D. in analytical chemistry from Cornell University with Professor Fred W. McLafferty, working on the development of high resolution mass spectrometry for bioanalytical applications. He carried out post-doctoral research, and later as a Senior Scientist, at Pacific Northwest National Laboratory, Richland, WA with Dr. Richard Smith on the development of mass spectrometry and capillary electrophoresis for protein characterization.