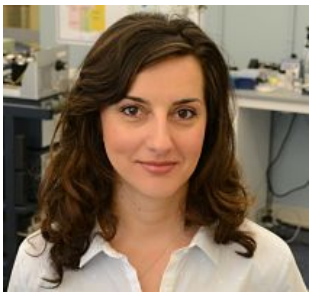
TWO DAY SHORT COURSE, Saturday and Sunday
11 Protein Structural Analysis by Mass Spectrometry: Hydrogen Exchange and Covalent Labeling

Instructors

Mark Chance
Case Western Reserve



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Northeastern University

Janna Kiselar
Case Western Reserve

Thomas E. Wales
Northeastern University

This course is designed for those who wish to understand protein structure with mass spectrometry. We will focus on covalent labeling for half of the course and on hydrogen exchange for the second half. There will be a discussion of the theory behind each labeling method as it relates to proteins in solution, the general methodological steps one takes to do these analyses, and a guide on how to process and interpret the resulting data. There will be a discussion of the pitfalls one can encounter during these experiments. Specific examples of protein structure analysis will be provided in applications like enzymology, protein-ligand interactions, protein dynamics, and membrane proteins. Course participants will receive a copy of a new book from Wiley edited by the course instructors providing detailed additional background on all the approaches.

Continuing education will be available through the hydrogen exchange and covalent labeling special interest group of ASMS, which will provide participants with additional learning opportunities during the meeting, as well as updates after the course.

Prerequisite: Working knowledge of analytical chemistry, protein structure, and peptide/protein mass spectrometry.