



Society for Analytical Chemists of Pittsburgh

NOVEMBER MEETING

Monday, November 6, 2017



DUQUESNE
UNIVERSITY



in Pittsburgh

Social Hour – 5:00 PM – Shepperson Suite
Dinner – 6:30 PM – Power Center Ballroom C
Technical Program – Power Center Ballroom C
Business Meeting – Power Center Ballroom C
Student Affiliate Meeting – Shepperson Suite

Deadline for Dinner Reservations: Monday, October 30, 2017

[ONLINE RESERVATION FORM](#)

TECHNICAL PROGRAM



Vicki Hopper Wysocki Ph.D.

Ohio Eminent Scholar Faculty
Professor, Department of Chemistry and Biochemistry
Ohio State University

"Native MS in Structural Biology"

Characterization of the overall topology and inter-subunit contacts of protein complexes, and their assembly/disassembly and unfolding pathways, is critical because protein complexes regulate key biological processes, including processes important in understanding and controlling disease. Conventional structural biology methods such as X-ray crystallography and nuclear magnetic resonance provide high-resolution information on the structures of protein complexes. However, other emerging biophysical methods that provide lower resolution structural data (e.g. stoichiometry and subunit connectivity) on the structures of the protein complexes are also important. Native mass spectrometry is an approach that provides critical structural information with higher throughput on low sample amounts. The power of native MS increases when coupled to ion mobility (IM-MS), a technique that measures rotationally averaged collisional cross sections and thus direct information on conformational changes, or to high resolution mass spectrometry (HRMS). This presentation illustrates surface-induced dissociation/ion mobility SID/IM MS and SID HRMS for characterization of topology, intersubunit connectivity, and other structural features of multimeric protein complexes. Data for a number of protein-partner complexes are under investigation, where the partner can be small molecule ligand, protein, DNA, or RNA.

BIOGRAPHY: Vicki Wysocki received her PhD from Purdue University in 1987, under the direction of Professor Graham Cooks. Following a National Research Council postdoctoral appointment at the US Naval Research Laboratory, she became an Assistant Professor at Virginia Commonwealth University. She joined the University of Arizona in 1996 and eventually served as Chair of the Department of Chemistry and Biochemistry. In 2012 she moved to The Ohio State University where she is Ohio Eminent Scholar of Macromolecular Structure and Function and Director of the Campus Chemical Instrument Center. In 2009, she received the Distinguished Contribution to Mass Spectrometry Award from the American Society for Mass Spectrometry, jointly with Professor Simon Gaskell.

She is the 2017 ACS Field and Franklin Awardee for Outstanding Contributions to Mass Spectrometry. Her laboratory is part of the Waters Center of Innovation program. She is an associate editor for the ACS journal *Analytical Chemistry*. She has completed two years as Vice President for Programs of the American Society for Mass Spectrometry and assumed a two-year tenure as ASMS President in July, 2016.

Professor Wysocki's research interests include bioanalytical mass spectrometry, peptide fragmentation mechanisms, proteomics and metabolomics (Invasive Aspergillosis, non-small cell lung cancer, pre-eclampsia; Salmonella), ion-surface interaction chemistry, and instrument development for improved dissociation and characterization of non-covalent protein complexes.

DINNER RESERVATIONS: Please complete the [Online Dinner Reservation Form](#) NO LATER THAN Monday, October 30, 2017. The form is also located under the Meeting Notice on website www.sacp.org. Should you not be able to access the form, please call 412-825-3220, ext 204 the SACP Administrative Assistant to make your dinner reservation. The entrée choices for November are Turkey (A Thanksgiving Dinner) or Cheese Ravioli with Sage Goat Cheese Sauce. Please let us know if you have any dietary restrictions. Dinner will cost \$10 (\$5 for undergraduate students). Checks can be made payable to the SACP.

PARKING: Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage, you will need to get a parking ticket and drive to upper floors. Bring your parking ticket to the dinner or meeting for a validation sticker. Should any difficulties arise, please contact Duquesne University.