

NEWS AND VIEWS



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Announcements

For more information and online registration for any of the conferences listed below, please visit www.asms.org/conferences.

ASMS Sanibel Conference Computational Modelling in Mass Spectrometry and Ion Mobility: Methods for Ion Structure and Reactivity Determination

January 25 - 28, 2018

Hilton St. Petersburg Bayfront Hotel
St. Petersburg, FL

<http://www.asms.org/conferences/sanibel-conference>

Organizers

Iain Campuzano, *Amgen*

Frank Sobott, *University of Antwerp*

Michael van Stipdonk, *Duquesne University*



66th Annual ASMS Conference on Mass Spectrometry and Allied Topics

June 3 - 7, 2018

San Diego, CA

<http://www.asms.org/conferences/annual-conference/annual-conference-homepage>



Awards

Dr. **Barbara S. Larsen** was recognized as an American Chemical Society (ACS) Fellow at the 254th ACS National meeting held August 20-24, 2017 in Washington DC. The ACS Fellows program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to science, the profession, and the Society.



Dr. Larsen has been part of the DuPont Company's Science and Innovation organization for the past 33 years. She received her B.S. degree from University of Santa Clara and her Ph.D. in Physical Chemistry from the University of Delaware, followed by a post-doctoral fellowship at Johns Hopkins School of Pharmacy. She was recognized by the ACS for her contributions to the Science/Profession, particularly for the development of

a novel process to produce safer fluorinated polymer products and an analytical method to confirm consumer safety. The Larsen Method (now EPA-required) has supported product release exceeding \$500 million. In addition, she was recognized for contributions to the ACS Community, having chaired and revived the Delaware Valley Mass Spectrometry Topical Group, for service to the Delaware ACS Local Section Leadership and as a Counselor, and by providing an industrial viewpoint on two editorial advisory boards for *Analytical Chemistry*.

Dr. Larsen's research focuses on the application of mass spectrometry to support the Industrial Biosciences business. She has a keen interest in ionization methods to ensure the continued viability of the technology for biotechnology work. Barbara has a passion in *Fitness for Purpose*: selecting the best measurement technology to provide the critical solutions to a specific problem. For her work to support the biotechnology research, Barbara has developed a digestion protocol for fermentation products that provides coverage of the expressed protein sequence or deep coverage of the organism under investigation. In addition, these methods can be used to provide details on protein modifications. Her interests include using a systems biology approach including metabolomics, proteomics, and transcriptomics to improve enzyme production and probiotic organisms.

Dr. Larsen has previously served the board of the American Society for Mass Spectrometry as Treasurer, Vice President of Programs, and President, and was chair of the Delaware Valley Mass Spectrometry Discussion Group. In addition to having served on the editorial board for *Analytical Chemistry*, she is currently on the editorial board of the *Journal of The American Society for Mass Spectrometry* and on the advisory board for *Spectroscopy*. She has received the Spectroscopist of the Year Award from the Society of Applied Spectroscopy, the American Chemical Society Delaware Section Research Award, and was awarded the DuPont Pederson Medal in 2015.

2015 ASMS Research Award Winner Article "Highlight"

The ASMS annually presents two Research Awards to academic scientists within four years of joining the tenure track faculty or equivalent in a North American university. The purpose of these awards, fully sponsored by Thermo Fisher Scientific and Waters Corporation, is to promote academic research in mass spectrometry by young scientists.

In this month's issue of *JASMS*, we are pleased to highlight a research article by one of the **2015 ASMS Research Award**

recipients, **Dr. Alexander Ivanov**, Associate Professor in the Department of Chemistry & Chemical Biology and Faculty Fellow of the Barnett Institute of Chemical & Biological Analysis at Northeastern University in Boston, MA. Co-authored by Arseniy M. Belov, Rosa Viner, Marcia R. Santos, David M. Horn, Marshall Bern and Barry L. Karger, the article entitled “Analysis of Proteins, Protein Complexes, and Organellar Proteomes Using



Sheathless Capillary Zone Electrophoresis – Native Mass Spectrometry” was supported by Dr. Ivanov’s ASMS Research Award. The work described in this article, conducted by the Ivanov laboratory in collaboration with colleagues from Thermo Fisher Scientific, Sciex and Protein Metrics,

represents one of the first examples of high-efficiency liquid-phase separation directly interfaced online with mass spectrometry under native conditions. In this study, capillary zone electrophoresis (CZE) was coupled online to Orbitrap mass spectrometers using a commercial sheathless interface to enable high-performance separation, identification and structural characterization of limited amounts of proteins, protein complexes and organelle proteome-level samples under native conditions.

An expert in mass spectrometry-based proteomic research, Prof. Ivanov has a long-standing interest in developing and applying analytical technologies to answer challenging biomedical questions and generate new knowledge through enabling biological and clinical studies. His current research focuses on the following areas: (1) technology development to enable deep proteomic profiling of limited availability samples and individual single cells for basic biology studies and personalized medicine applications, (2) comprehensive characterization of protein isoforms, proteoforms, and modifications (e.g., post-translational modifications, chemical modifications, sequence variants, charge variants), including detailed characterization of biopharmaceuticals, (3) characterization of non-covalent protein-protein and protein-ligand interactions using advanced separation techniques coupled to mass spectrometry, and (4) circulating extracellular microvesicles as tools for clinical diagnostics, drug discovery and vaccine development. He received an Academic Excellence Award from the Barnett Institute in 2001, an Outstanding Young Scientist award from the Human Proteome Organization in 2004, and an Outstanding Scientist/Technologist Award in 2009 from Thermo Fisher Scientific. He was a member of the editorial board of *Exosomes and Microvesicles* from 2013-2014 and the *Journal of Circulating Biomarkers* in 2014. In 2017, he was Chair and Organizer of the 2nd Global CESI-MS Symposium held in Boston, MA. Prof. Ivanov has also been actively involved in national and international initiatives enabled under the umbrella of the Association of Biomolecular Resource Facilities (ABRF), including serving as chair from 2010-2012 of the Standards in

Proteomics Research Group, to develop standards for proteomics research and standardization of proteomic practices.

Prof. Ivanov earned his Ph.D. in Bioorganic Chemistry at the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Science, Moscow in 2000. He then conducted postdoctoral training at Northeastern University prior to joining the Harvard School of Public Health (HSPH) at Harvard University in 2003, where he served as Director of the HSPH Proteomics Resource. He re-joined Northeastern as a Research Associate Professor at the Barnett Institute of Chemical & Biological Analysis in 2011, prior to being appointed to his current position in 2017.

Inaugural Meeting on Advancing Mass Spectrometry (AMS) for Biophysics and Structural Biology

The first biennial Advancing Mass Spectrometry (AMS) for Biophysics and Structural Biology meeting was held in Ann Arbor, MI on July 28-August 1, 2017, at the University of Michigan. Chaired by Brandon T. Ruotolo, the purpose of this new meeting is to bring together scientists across multiple disciplines interested in advancing the mass spectrometry technology landscape to address problems associated with biomolecular structure characterization. The meeting was attended by 116 scientists from 8 countries, 45 different institutions, and 9 companies. The scientific program included 47 oral presentations, including 11 short ‘hot topic’ talks that were promoted from submitted abstracts, and 69 posters covering topics ranging from new computational methods to advances in pharmaceutical discovery workflows. Thanks to generous support from academic sponsors and a range of companies operating broadly in the technology and pharmaceutical industries, the meeting was able to offer 9 student/post-doc travel awards as well as catered events and activities throughout the University of Michigan campus. The next AMS meeting will be held in 2019 on the campus of the University of Massachusetts in Amherst, MA, and will be chaired by Richard W. Vachet. For more information about the conference, and pictures taken at the 2017 meeting, please visit: <http://depts.washington.edu/advms/>.



Contributed by Brandon T. Ruotolo (left), University of Michigan, Ann Arbor and Richard W. Vachet (right), University of Massachusetts, Amherst

Related Events

ASMS is pleased to offer announcements for other non-profit organizations. Please email details including website to info@asms.org.

December 11 – 13, 2017

7th Asia Oceania Mass Spectrometry Conference (AOMSC2017)
Singapore
www.aomsc2017.org

January 21 – 25, 2018

Mass Spectrometry: Applications to the Clinical Laboratory
Palm Spings, CA
www.msac1.org/

February 1 - 4, 2018

23rd Annual Lorne Proteomics Symposium
Lorne, Victoria, Australia
www.australasianproteomics.org/lorne-proteomics-symposium-2018

March 11 - 14, 2018

US HUPO 14th Annual Conference: Technology Accelerating Discovery
Minneapolis, MN
www.ushupo.org

August 26 - 31, 2018

22nd International Mass Spectrometry Conference
Florence, Italy
www.imsc2018.it