

# 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](http://www.asms.org/conferences).

### 66th Annual ASMS Conference on Mass Spectrometry and Allied Topics

June 3 - 7, 2018

San Diego, CA

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



## Awards

**Brandon Ruotolo**, Associate Professor of Chemistry, University of Michigan, has been selected to receive the **2018 Protein Science Young Investigator Award**. The award, given annually by The Protein Society, recognizes a scientist in the first 8 years of their independent career, and who has made an important contribution to the study of proteins. Dr. Ruotolo has made continual and substantive contributions to our understanding of protein structure in the absence of bulk solvent, performing pioneering ion mobility-mass spectrometry measurements on model peptide, protein and multi-protein complex systems that have illustrated the level of conformational memory retained by biopolymers in the gas phase. Ruotolo is also responsible for the creation of new measurement technologies that have furthered our understanding of protein biophysics and structure. Most recently, Ruotolo has spearheaded the development of collision induced unfolding for the rapid analysis of protein complex structure and stability and demonstrated the utility of such experiments for applications ranging from conformationally-selective inhibitor screening to the characterization of biotherapeutics. The award will be presented during the 32<sup>nd</sup> Annual Symposium of The Protein Society to be held July 9-12, 2018 in Boston, MA. Ruotolo received a B.Sc. degree in Chemistry in 1999 from Saint Louis University, then completed a Ph.D. in Analytical Chemistry in 2004 in the laboratory of Prof. David Russell at Texas A&M University. After postdoctoral research with Dame Prof. Carol



*Brandon Ruotolo*

Robinson at the University of Cambridge from 2004-2009, where he was also a Waters Research Fellow from 2008-2009, Dr. Ruotolo joined the faculty at the University of Michigan as an Assistant Professor, and was promoted to Associate Professor with tenure in 2015. His research group is focused on developing new tools and methods centered on ion mobility-mass spectrometry (IM-MS), aimed at determining the three dimensional structure and stability of proteins and multi-protein assemblies important in biology and medicine. In his career to date, Dr. Ruotolo has published 126 peer reviewed papers, and has trained 7 graduate students (and has 7 graduate students currently), 11 undergraduates, and mentored 4 postdoctoral fellows. He previously received an Eli Lilly Young Investigator Award (2013), a National Science Foundation CAREER Award (2013), and an American Society for Mass Spectrometry Research Award (2011).

**Michael L. Gross**, Professor of Chemistry, Washington University in St. Louis and Professor of Immunology and Internal Medicine at Washington University School of Medicine, has been awarded the **2018 American Chemical Society (ACS) Award in Analytical Chemistry**, for his pioneering efforts in the 'development of mass spectrometry methods that provide insight in physical-organic chemistry, enable environmental protection, offer new approaches in biochemistry and biophysics, and give understanding of human disease'. The award, sponsored by Battelle Memorial Institute, was presented at the 255<sup>th</sup> ACS National meeting held March 18-22, 2018 in New Orleans, LA.



*Michael Gross*



*Carol Robinson*

**Dame Carol V. Robinson**, Doctor Lee's Professor of Chemistry, University of Oxford, has been awarded the **American Chemical Society 2018 Frank H. Field and Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry**. The award, sponsored by Waters Corporation, was presented at the 255<sup>th</sup> ACS National meeting

held March 18-22, 2018 in New Orleans, LA., in recognition of her outstanding accomplishments in ‘developing fundamental processes that allow membrane and soluble protein complexes to retain biologically significant states during mass spectrometry, prompting new fields of research’.

## ASMS Postdoctoral Career Development Awards

Up to five ASMS Postdoctoral Career Development Awards in the amount of \$10,000 each will be presented annually. The purpose of these awards is to promote the professional career development of postdoctoral fellows in the field of mass spectrometry. The awards are open to postdoctoral fellows within three years of completing a Ph.D. or equivalent degree. Applicants must be a member of ASMS, be currently appointed as a postdoctoral fellow in North America (e.g., in academia, industry, a government or national laboratory or at a research institute), be appointed as a postdoctoral fellow during the entire period of the award (June 1 – May 31), and may not have previously received an award under this program. Funds from this award are to be expended on activities that enhance the awardee’s professional development. Activities include, but are not limited to, conference and workshop attendance, travel to other mass spectrometry laboratories, purchase of books and/or software.

The deadline for submission of completed applications is **November 30, 2018**.

Additional information regarding the program, including eligibility, fiscal details and the application process, may be found at: <http://www.asms.org/about/asms-awards/postdoctoral-awards>

## ASMS Postdoctoral Career Development Awards: ‘Where are they now’?

Since 2014, the ASMS has annually presented up to five Postdoctoral Career Development Awards. In this “Where are they now” Q&A feature, we are pleased to highlight the variety of activities that these awards have enabled for the recipients, and their current (and future) career trajectories. Look for additional Q&A’s from other award recipients in the coming months.

### Boone Prentice (2014 awardee)

#### What professional career development activities did you pursue using the funds from your award?

My main goals for the award funding were to advance my professional career development in two fashions: (1) by continuing my training in advanced MS technologies and

(2) by broadening my scientific background to fields of biochemistry and clinically relevant cell biology. I mainly used the award to fund my travel to a variety of different conferences covering a range of mass spectrometry, biology, and professional development topics. Attending a diverse array of mass spectrometry conferences allowed me to further my expertise in several different MS subfields, while



Boone Prentice

conferences focused on biochemistry and molecular biology really broadened my scientific background, especially in fields related to diabetes and the study of the pancreas. Many of these conferences were smaller in scale, which provided excellent opportunities for networking with experts in my field, and to converse with experts outside of mass spectrometry. Presenting my imaging mass spectrometry research at these meetings also enabled me to introduce this analytical technology to new audiences. For my professional development, I attended a 2-day Federal STEM Policy & Advocacy Event in Washington, DC that provided insight on how the STEM policy and advocacy processes function in the Executive and Legislative branches of the U.S. federal government - it was really interesting to see how scientific funding decisions are made on the legislative level. I also attended the 14<sup>th</sup> Annual National Postdoctoral Association Meeting, a 3-day event for postdoctoral fellows that focuses on postdoc career trajectory, STEM advocacy in areas such as diversity, and “soft skill” development. Meeting with faculty and other postdocs from around the country at this meeting gave me a great perspective on the postdoc experience and the occupational landscape. In many cases, I was able to obtain partial travel award funding to present at these conferences, which enabled me to use the ASMS award as supplemental funding and stretch the award budget. I was also able to use some of the ASMS award funds to purchase great reference books on mass spectrometry, lipid biochemistry, and diabetes pathophysiology.

#### Where are you now? i.e., have you moved to another institution or position since receiving the award? If so, what is your new role?

I have just accepted an Assistant Professor position in the Department of Chemistry at the University of Florida (UF) and I am excited to move to Gainesville this summer to set up my lab!

#### What are your current research interests?

At UF, my lab will continue to utilize imaging mass spectrometry to study important problems in human health in collaboration with biologists and clinicians, skills that I learned during my postdoctoral fellowship at Vanderbilt University with Professor Richard Caprioli. In particular, we will leverage the novel analytical instrumentation and gas phase chemical transformations I learned during my graduate work at Purdue

University with Professor Scott McLuckey to expand the capabilities of bioanalytical mass spectrometry technologies in health research.

#### **Where do you see yourself (career wise) in 3-5 years?**

Since I've just accepted a faculty position, in 5 years I'll likely be preparing my (hopefully successful!) tenure application. During that time, I hope to be able to help continue the excellent tradition of analytical chemistry at UF and contribute to the superb group of faculty performing mass spectrometry research. I hope to build strong ties to biologists and clinicians across campus in order to enable novel insights into disease pathophysiology and provide new opportunities for curative therapies. Through fundamental MS development, I hope our lab is able to contribute to the scientific field at large by advancing the capabilities and applications of mass spectrometry.

### **Valentino Pirro (2015 awardee)**

#### **What professional career development activities did you pursue using the funds received from your award?**

I mostly used the money from the award to attend workshops (including the 2015 ASMS Fall Workshop on lipidomics in San Diego), and conferences. The networking opportunity proved to be the most useful, because I got to make connections and develop new collaborations that are working out well so far.



*Valentina Pirro*

#### **Where are you now? i.e., have you moved to another institution or position since receiving the award? If so, what is your new role?**

I am still at Purdue working with Prof. Cooks, but I am now appointed as a full time senior research scientist.

#### **What are your current research interests?**

My interests are still in clinical diagnostics and toxicology. I mostly like working with small molecules and lipids. I like focusing on the development of ambient ionization and imaging MS for detection and quantification of these compounds in biological matrices. I would love to follow the entire bench-to-bedside development, but that has not been always possible.

#### **Where do you see yourself (career wise) in 3-5 years?**

Two options, either proceed with the academic career and work my way to a tenured professor position, or switch to an application scientist type of job. The non-academic world intrigues me after staying almost 6 years at Purdue. I love to see the bedside implementation of analytical technology and I like to be in a complex and interdisciplinary troubleshooting mode. I guess I'll see.

### **Gloria Sheynkman (2015 awardee)**

#### **What professional career development activities did you pursue using the funds received from your award?**

The award financed my attendance at a genomics conference, "Cell Symposia: Technology, Biology, Data Science". It was a small meeting so I got to interact with many leaders in the fields of functional genomics and proteomics. The award was also used to support my attendance at a two-week, intensive course at Cold Spring Harbor Laboratories called "Statistical Methods for Functional Genomics". There, I gained competence in analysis of high-throughput genomics and molecular biology-based datasets, which I think should be more closely integrated with MS-based proteomics data in the years to come.



*Gloria Sheynkman*

#### **Where are you now? i.e., have you moved to another institution or position since receiving the award? If so, what is your new role?**

I am a postdoctoral researcher at the Center for Cancer Systems Biology, or CCSB for short, which is directed by Dr. Marc Vidal. The center is part of the Dana Farber Cancer Institute and Department of Genetics at Harvard Medical School. The philosophy of CCSB is that we can only go so far in understanding life by a 'one-gene-at-a-time' approach, so we study molecules in the context of the network of interactions occurring in a cellular system. We are particularly focused on protein-protein interactions and how they are organized and abnormally perturbed in disease states.

#### **What are your current research interests?**

Overall, I am interested in how human proteomic variation underlies differences in phenotype (traits or disease). There has been a lot of research activity around the question of how genomic variation is associated with phenotype, but I believe that in the long run, studying the proteome will have higher relevance to understanding phenotype and has more power to explain basic physiological mechanisms and disease etiology. Towards this goal, I am interested in developing analytical methodologies to detect proteoforms as well as developing high-throughput functional assays to study these forms within the context of protein-protein interaction networks. In graduate school at the University of Wisconsin-Madison in Lloyd Smith's laboratory, I worked on integrated RNA-Seq data and MS-based proteomics data to discover peptides from novel protein isoforms. In my current postdoc, I am using tools from high-throughput molecular biology and network science to "functionalize" novel isoforms. Specifically, I've developed pipelines to sequence, clone, and express thousands of protein isoforms so as to map the specific protein-protein interactions

they participate in. We published work on this last year that has shown that within a network context, functional differences between protein isoforms are as great as those between proteins from different genes (Yang *et al. Cell.* 2016, 164, 805-817).

#### Where do you see yourself (career wise) in 3-5 years?

I see myself as an Assistant Professor at an R1 University, leading a research program that aims to integrate analytical and computational tools from the fields of functional genomics and proteomics so as to better understand normal and disease biology.

## ASMS Speaker Program

ASMS has allocated funds to support an ASMS-sponsored speaker program, with the objectives to (i) support vibrant seminar programs at local MS discussion groups, (ii) increase exposure of students at non-Ph.D. granting institutions to research in mass spectrometry, and (iii) promote exposure and professional development of young MS professionals at the onset of an independent research career.

Any ASMS member at the rank of Assistant Professor (at the time of invitation) is eligible to receive support, with no more than two sponsored trips per calendar year per speaker. Eligible hosts may be (i) any North American MS discussion group or (ii) any North American non-Ph.D. granting college or university, with no single host to propose more than two ASMS-sponsored events in a calendar year.

Additional information regarding the program, including the application process and eligible expenses (travel, meals, lodging and expenses up to \$1500 per event, until the annual budget for the program is exhausted) may be found at: <http://www.asms.org/member-center/discussion-groups>.

## Related Events

ASMS is pleased to offer announcements for other non-profit organizations. Please email details including website to [info@asms.org](mailto:info@asms.org).

#### June 24 – 28, 2018

**14<sup>th</sup> Annual Conference of the Metabolomics Society**  
Seattle, WA  
<http://metabolomics2018.org/>

#### July 8 – 14, 2018

**12<sup>th</sup> Mass Spectrometry School in Biotechnology and Medicine (MSBM)**  
Dubrovnik, Croatia  
<http://www.msbm.org/>

#### August 26 - 31, 2018

**22<sup>nd</sup> International Mass Spectrometry Conference**  
Florence, Italy  
[www.imsc2018.it](http://www.imsc2018.it)

#### September 9 – 13, 2018

**MSACL 2018 EU**  
Salzburg, Austria  
<https://msacl.org/>

#### October 21 – 26, 2018

**SciX presented by FACSS**  
Atlanta, GA  
<https://www.scixconference.org/>

#### November 11 – 14, 2018

**IMSS II & OurCon VI Conference**  
Charleston, SC  
<https://www.imagingmssociety.org>  
and <http://www.ourcon.org>

#### January 30 – February 3, 2019

**27<sup>th</sup> Australian and New Zealand Society for Mass Spectrometry Conference**  
Auckland, New Zealand  
<http://www.anzsms.org>