

THURSDAY, JANUARY 29

5:00 - 7:00 pm **Setup all posters, Lumpkins Ballroom**

5:00 - 7:00 pm **Registration**

7:00 - 7:10 pm **Opening Remarks**, Laura-Isobel McCall, Vanessa Phelan, and Alison Scott

7:10 - 8:00 pm, Lumpkins Ballroom

Keynote Lecture

Molecular Heterogeneity at the Host-Pathogen Interface

Eric Skaar, Vanderbilt University

8:00 - 9:00 pm, Lumpkins Ballroom

Reception

Drinks & Dessert

**The following students received an ASMS Student Travel Award.
Congratulations!**

Ahmed Al-Tohamy
Louisiana State University

Daniel Breiner
CU Anschutz Skaggs

David Brewer
University of Georgia

Tina Dang
U of Wisconsin - Madison

Eva Keohane
Colorado State University

Jan-Philipp Knepper
University of Münster

Ali Lotfi
University of Connecticut

Allyson McAtamney
UC, Santa Cruz

Gabrielle Mingoelli
U of Illinois at Chicago

Jennifer Nguyen
University of Michigan

Muhammad Shehroz
Dublin City University

Marquis Yazzie
University of Denver

JASMS Special Issue | Call for Papers

Attendees, presenters and non-attendees are invited to submit manuscripts.

Submission deadline is June 30.



The banner is divided into two main sections. The left section has a blue and purple background with a microscopic image of cells. It features the ASMS logo, the text 'Journal of the American Society for Mass Spectrometry', and the title 'MASS SPECTROMETRY IN MICROBIAL SCIENCES' in large white letters. Below this, it says 'Submit your manuscript' in yellow. The right section has a solid purple background and contains the text 'JASMS Special Issue Submissions open to ALL' above a QR code. The QR code is a standard black and white matrix code.

CALL FOR PAPERS

Journal of the American Society for
Mass Spectrometry

MASS SPECTROMETRY IN MICROBIAL SCIENCES

Submit your manuscript

ACS Publications

JASMS Special Issue
Submissions open to ALL

FRIDAY, JANUARY 30

7:30 - 8:30 am **Continental Breakfast**, *Lumpkins Ballroom*

Clinically Important Microbes - Detection & Characterization

Session Co-Chairs: Nathalia Rodrigues De Almeida, *Texas Biomed Research Institute*
& Laura-Isobel McCall, *San Diego State University*
5 minutes of Q&A following each talk

- 8:30 – 9:00 am Harnessing Mass Spectrometry as a Platform for Rapid Identification and Antimicrobial Susceptibility Testing
Ian Lewis, *University of Calgary*
- 9:05 – 9:35 am MS Imaging in Drug Development: The Clinical-Stage Antibiotic BTZ 043 Accumulates and Efficiently Acts Against Mycobacterium tuberculosis in Tuberculosis Lesions
Andreas Roempp, *University of Bayreuth*
- 9:40 – 10:10 am FLAT - A Technology Platform for Enhanced Diagnostics and Structural Insights of Specialized Bacterial Lipids
Robert Ernst, *University of Maryland*
- 10:15 - 10:35 am **Coffee Break**, *Lumpkins Ballroom*
- 10:35 – 11:05 am Metabolomics to Decode Drug-Microbe, Microbe-Microbe and Microbe-Host Interactions in the Genus Burkholderia
Neha Garg, *Georgia Institute of Technology*
- 11:10 – 11:25 am Native Mass Spectrometry-Based Proteomics Reveals the Mechanism of Hemophore Release by Pathogenic Model Gram+ Bacteria
Joseph Loo, *UCLA*
- 11:30 – 11:45 am Spatially resolved proteomics for detecting pathogen-specific molecular signatures in infected host tissues
Helena Petrosova, *University of Victoria*
- 11:50 – 12:05 pm Direct Bacterial Capture and Lipid Analysis using In-Line Filters and Matrix-Assisted Laser Desorption Ionization Mass Spectrometry (MALDI-MS)
Ethan McBride, *Los Alamos National Laboratory*
- 12:10 – 1:15 pm **Group Photo & Lunch**, provided by ASMS
La Terraza

FRIDAY, JANUARY 30

Microbial Systems: Interactions (Food, Microbiome, & More)

Session Co-Chairs: Azadeh Nasuhidehnavi, *Binghamton University*

& Vanessa Phelan, *University of Colorado Anschutz*

5 minutes of Q&A following each talk

- 1:15 – 1:45 pm This Might Sound Cheesy, But We Need to Know More About Fungal Metabolites
Laura Sanchez, *UC, Santa Cruz*
- 1:50 – 2:20 pm Sourdough-Omics: Using Modern Analytical Approaches to Understand an Ancient Fermented Food
Jessica Prenni, *Colorado State University*
- 2:25 – 2:55 pm Chemical Metabolomics - Novel Chemical Biology Tools to Explore Gut Microbiota and Nutrition Metabolism
Daniel Globish, *Science for Life Laboratory*
- 3:00 - 3:20 pm Coffee Break
- 3:20 – 3:50 pm Diet-Microbiome Interactions during Cancer Chemotherapy
Peter Turnbaugh, *UC, San Francisco*
- 3:55 – 4:10 pm Cyclic di-AMP–Calcium Signaling Integrates Bacterial Metabolism and Biofilm Physiology
Hui Wu, *Oregon Health & Science University*
- 4:15 – 4:30 pm The Human Gut Microbiome Metabolizes Diverse Bioactive Coumarins via α,β Unsaturated Lactone Reduction and Ketoreduction
Gabrielle Mingoelli, *University of Illinois*
- 4:35 – 4:50 pm *Poster 13: Discovery of Antibiotic Proteins from A Gut Microbe Implicated In Crohn's Disease*
Matt Henke, *University of Illinois*
- 5:00 – 7:00 pm Dinner on your own

7:00 - 9:00 pm, Lumpkins Ballroom

Poster Session I

plus Reception (Drinks & Dessert)

Odd-Numbered Posters Present

Starts with 2-minute Flash Talks from the Odd-Numbered Poster Presenters

7:40 – 7:45, Welcome to the Reception

Presented by Erica Forsberg, Bruker Daltonics

SATURDAY, JANUARY 31

7:30 - 8:30 am **Continental Breakfast, Lumpkins Ballroom**

Microbial Systems: Fungal, Plant & Environmental

Session Co-Chairs: Stephanie Momeni, *Oregon Health & Science University*
& Laura Sanchez, *UC Santa Cruz*
5 minutes of Q&A following each talk

- 8:30 – 9:00 am Metabolomics at Repository Scales – New Languages and Computational tools for Scalable Compound Annotation
Mingxun Wang, *UC-Riverside*
- 9:05 – 9:35 am Defining Spatial and Temporal Proteome Signatures of Fungal Infection Dynamics to Reveal Putative Druggable Targets
Jennifer Geddes-McAlister, *University of Guelph*
- 9:40 – 10:10 am Metabolomics Outcomes as a Function of Biological Complexity from Microbiome Samples
Marcy Balunas, *University of Michigan*
- 10:15 – 10:35 am **Coffee Break, Lumpkins Ballroom**
- 10:35 – 11:05 am Advancement of Molecular Cartography Tools for Mapping Environmental Microbiomes...and the Future of Microbial Molecular Phenotyping
Christopher Anderton, *PNNL*
- 11:10 – 11:25 am Overview of the Impact Common Soil Contaminants, PFAS and Microplastics, have on Microbial Metabolism in Lab Cultures and Soil Microcosms
Amanda May, *University of Tennessee*
- 11:30 – 11:45 am Combining MALDI-FISH for co-localization of brominated metabolites and *Pseudovibrio brasiliensis* in marine sponge tissue
Allyson McAtamney, *University of California, Santa Cruz*
- 11:50 – 12:05 pm Poster 18: Unveiling Rhizosphere Dynamics: Enhancing Nutrient Cycling with Basalt Amendments and Microbial Synergies for Sustainable Bioenergy Systems
Sandra LaBonte, *Pacific Northwest National Laboratory*
- 12:10 – 7:00 pm **Free Time (Dinner on your own)**

7:00 - 9:00 pm, Lumpkins Ballroom

Poster Session II

plus Reception (Drinks & Dessert)
Even-Numbered Posters Present

Starts with 2-minute Flash Talks from the Even-Numbered Poster Presenters

SUNDAY, FEBRUARY 1

7:30 - 8:30 am **Continental Breakfast, Lumpkins Ballroom**

Meeting Challenges & Emerging Trends in Microbial MS

Session Co-Chairs: Christopher Anderton, *PNNL*

& Edwin Gonzalez, *Teledyne FLIR Detection*

5 minutes of Q&A following each talk

- 8:30 – 9:00 am Ion Mobility-Mass Spectrometry for Rapid Multi-Omics in Microbial Diagnostics
Kelly Hines, *University of Georgia*
- 9:05 – 9:35 am Using Lipidomics to Study Leishmania-Host Interaction
Kai Zhang, *Texas Tech University*
- 9:40 – 10:10 am Novel Mass Spectrometry Methods Identify Metal-Binding Molecules Produced by Environmental Microbes
Allegra Aron, *University of Denver*
- 10:15 - 10:35 am Coffee Break
- 10:35 – 11:05 am Spatial-omics for Microbe-Host Interactions: Do we need Everything Everywhere at Once?
Sizun Jiang, *Harvard University*
- 11:10 – 11:25 am Attributing MS1 Features Detected in Coculture to Individual Strains
Nishant Panicker, *University of Pittsburgh*
- 11:30 – 11:45 am An Important Role for Organic Sulfur in marine microbes unveiled by sulfur stable isotope probing metabolomics
Erin L McParland, *Oregon State University*
- 11:50 – 12:05 pm Gut Microbiota–Driven Inter-Individual Variability in the Metabotype and Bioactivity of Ginger Compounds
Shengmin Sang, *North Carolina A&T State University*
- 12:10 - 1:10 pm Lunch, *on your own*

1:10 – 2:00 pm, Lumpkins Ballroom

Keynote Lecture

Chemical Signatures of Tuberculosis: Mass Spectrometry for Outcome Prediction and Pathogen Biology

John Belisle, *Colorado State University*

2:00 - 2:20pm Closing Remarks and Bon Voyage