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34<sup>th</sup> Fall Workshop on Mass Spectrometry  
**Lipidomics**  
**The Essentials to the Cutting Edge**  
November 6 - 7, 2023  
Omni Royal Orleans, New Orleans, LA



**Organizers**

Timothy J. Garrett, *University of Florida*  
Jace W. Jones, *University of Maryland*

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**ASMS Education Committee**

**Livia Eberlin**

*ASMS Board Member-at-Large for Education  
Baylor College of Medicine*

**Bingming Chen**  
*Merck*

**Stacy Malaker**  
*Yale University*

**Stephanie Samra**  
*Thermo Fisher Scientific*

**Ian Kilby Webb**  
*IUPUI*



## MONDAY, NOVEMBER 6

7:30 – 9:00 **Continental Breakfast & Badge pick-up**, *Grand Salon Ballroom*

9:00 - 9:10 **Welcome**  
Timothy J. Garrett, *University of Florida*  
Jace Jones, *University of Maryland*

### SESSION 1: INTRODUCTION TO LIPIDOMICS - WHY, WHEN, AND HOW

9:10 – 9:30 **01 Introduction to Lipidomics**  
Xianlin Han, *UT Health, Barshop Institute*

9:30 – 10:35 **02 Experimental Design**  
Timothy J. Garrett, *University of Florida*  
Jeffrey M. Spraggins, *Vanderbilt University*

10:35 – 10:55 **Coffee Break**

10:55 - 12:00 **03 Sample Preparation**  
Jace W. Jones, *University of Maryland*  
Claire L. Carter, *Hackensack Meridian Health*

12:00 - 1:00 **Group Photo & Lunch hosted by ASMS**, *Esplanade Room*

### SESSION 2: SEPARATIONS OR NOT

1:00 – 1:40 **04 Direct Infusion/Shotgun Analyses**  
Xianlin Han, *UT Health, Barshop Institute*

1:40 – 2:40 **05 Chromatographic Separations 1 (Reversed- and Normal-Phase, HILIC)**  
Kelly M. Hines, *University of Georgia*

2:40 – 3:15 **06 Ion Mobility**  
Erin Baker, *University of North Carolina, Chapel Hill*

3:15 – 3:35 **Coffee Break**

3:35 – 4:30 **07 Lipidomics Reporting Overview**  
**followed by problem set on experimental design**  
Kim Ekroos, *International Lipidomics Society*

4:30 – 5:00 **Round Table Discussion on Problem Set and Day 1 Recap**

5:00 – 6:00 **Happy Hour**

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## TUESDAY, NOVEMBER 7

7:30 – 9:00 **Continental Breakfast**, Grand Salon Ballroom

9:00 – 9:10 **Day 2 Welcome**  
Timothy J. Garrett, *University of Florida*  
Jace Jones, *University of Maryland*

### SESSION 3: IONIZATION, ION ACTIVATION AND DATA ACQUISITION

9:10 – 10:00 **08 Ionization Techniques**  
Livia S. Eberlin, *Baylor College of Medicine*

10:00 - 10:50 **09 Ion Activation Techniques**  
Boone M. Prentice, *University of Florida*

10:50 - 11:10 **Coffee Break**

11:10 - 12:00 **10 Data Acquisition: Targeted, Untargeted, Data-Dependent and Data-Independent Workflows**  
Jace W. Jones, *University of Maryland*

12:00 - 1:00 **Lunch hosted by ASMS**, *Esplanade Room*

### SESSION 4: LIPID IDENTIFICATION AND DATA ANALYSIS

1:00 – 1:50 **11 Lipid Identification: *de novo* Database Searching in Silico Programs**  
Evelyn Rampler, *University of Vienna*

1:50 - 2:30 **12 Data Processing: Normalization, Statistical Analyses, Relative/Absolute Abundance**  
Timothy J. Garrett, *University of Florida*  
Jeffrey M. Spraggins, *Vanderbilt University*

2:30 - 2:50 **Refreshment Break**

2:50 - 3:30 **13 Integration of Lipidomics with Pathway Analysis**  
Kelly Hines, *University of Georgia*  
Claire L. Carter, *Hackensack Meridian Health*

3:30 - 4:00 **14 Lipidomics Standards and Reporting Recommendations**  
Kim Ekroos, *International Lipidomics Society*

4:00 - 4:45 **Problem Set (focusing on lipid ID) and Round Table Discussion**

4:45 - 5:00 **Closing Remarks**



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## Notes

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## UPCOMING EVENTS

### Online Two-Day Short Courses

Registration Deadline is November 10

Thurs & Fri, November 30 & December 1

Untargeted Metabolomics: From Basic Methods to Adv. Workflows and Isotope Labeling

Thurs & Fri, December 7 & 8

High Resolution Mass Spectrometry for Qualitative and Quantitative Analysis: An Introduction

Thurs & Fri, December 14 & 15

LC-MS/MS: Understanding, Optimizing and Applying Techniques using Electrospray, APCI and APPI to Develop Successful Methods for Qualitative and Quantitative Analysis

More Information at <https://www.asms.org/conferences/online-short-courses>

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### Mock Zoom Interview Program

November 30, December 7 and 14

We need both interviewees and interviewers

Practice interviewing and network

*Sign up by November 10*

More Information at <https://www.asms.org/member-center/mock-interviews-for-students-postdocs>

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### 34<sup>th</sup> Sanibel Conference on Mass Spectrometry

January 21 - 24, 2024

Mass Spectrometry for Complex Mixtures in Energy  
and the Environment

Hilton St. Petersburg Bayfront | St. Petersburg, Florida

#### *Organizers*

Janne Janis (University of Eastern Finland)

Amy McKenna (Nat'l High Magnetic Field Laboratory)

More information at <https://www.asms.org/conferences/sanibel-conference>

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### 72<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics

June 2 – 6, 2024

Anaheim Convention Center | Anaheim, CA

Abstract Deadline is February 2, 2024

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