



Fall Workshop on Lipids and Lipidomics

Organized by Xianlin Han and Gavin Reid

November 5 – 6, 2015

Catamaran Resort & Spa, San Diego, CA

Workshop is located in the Aviary Ballroom, Floor 2 of the meeting center area of the Catamaran Resort & Hotel. Registration opens at 07:30 on Thursday, November 5. Please arrive no later than 08:00 to insure that you pick-up your materials (badge, notepad and bag) and get settled into your seat for the 08:20-sharp start-time.

Please note that instructor presentations are available for download only. Attendees will receive a special download link. It is strongly recommended that you download the files in advance of your arrival at the Catamaran Resort.

THURSDAY, NOVEMBER 5

- 07:30 - 08:20 Workshop Registration (badge pick-up) and Early Morning Coffee with fresh fruit, yogurt and granola bars, *Aviary Foyer*
- 08:20 - 08:30 Welcome / Opening Remarks
- 08:30 - 09:15 **Introduction to Lipid Structure, Biochemistry and Biology**
Dennis Vance (University of Alberta)
- 09:15 - 10:00 **Overview of Lipidomics Workflows**
Xianlin Han (Sanford Burnham Medical Research Institute)
- 10:15 - 10:45 Coffee Break, *Aviary Foyer*
- 10:45 - 11:30 **Nomenclature and Systems of Annotation for MS and MS/MS Lipid Mass Spectrometry**
Gerhard Liebisch (University of Regensburg)
- 11:30 - 12:15 **Sample Preparation for Lipidomics: Extraction Techniques & Internal Standards for both LC-MS and Shotgun Lipidomics**
M. Cameron Sullards (Georgia Tech.)
- 12:30 - 13:30 Group Lunch BBQ (burgers, hot dogs, chicken), *Beach North*
- 13:30 - 14:15 **Chromatographic Separation Strategies for Lipid Analysis**
William Griffiths (Swansea University)
- 14:15 - 15:00 **Structural Elucidation of Lipids by Tandem Mass Spectrometry**
Stephen Blanksby (Queensland University of Technology)
- 15:15 - 15:45 Refreshment Break with Ice Cream Bars, *Beach South*
- 15:45 - 16:30 **Targeted Lipid Analysis Using Triple Quadrupole Instruments**
Xianlin Han (Sanford Burnham Medical Research Institute)
- 16:30 - 17:15 **Lipidome Analysis by High Resolution/Accurate Mass Spectrometry**
Gavin Reid (University of Melbourne)
- 17:15 – 18:00 **Emerging Strategies for Comprehensive Lipid Structural Characterization**
Stephen Blanksby (Queensland University of Technology)
- 18:00 - 19:00 Happy Hour / Networking with Beer, Wine, and Cheese, *Beach North*
- 19:00 Onward Dinner on-your-own

FRIDAY, NOVEMBER 6

- 8:30 - 9:15 am **Relative and Absolute Lipid Quantification**
Gerhard Liebisch (University of Regensburg)
- 9:15 - 10:00 **Mass Spectrometry Based Lipid Imaging**
Robert Murphy (University of Colorado Denver)
- 10:15 - 10:45 am Coffee Break
10:45 - 11:30 am **Database Searching, Multivariate Methods and Bioinformatic Resources for Data Processing, Management and Visualization of Lipidomics Data**
Oliver Fiehn (UC Davis)
- 11:30 - 12:15 Future Directions and Challenges' Group Discussion
- 12:30 - 1:15 pm Group Lunch – Mexican Fiesta Buffet, *Beach North*
- 1:15 - 2:30 pm **Applications of Lipidomics in Disease Biomarker Discovery**
Gavin Reid (University of Melbourne)
- 2:30 - 3:15 pm **Bioactive Lipid Mediators of Inflammation and Anti-Inflammatory Signaling**
Robert Murphy (University of Colorado Denver)
- 2:45 - 3:00 pm Refreshment Break with Assorted Desserts, *Beach South*
- 3:00 - 3:45 pm **Sterols and Oxysterols**
William Griffiths (Swansea University)
- 3:45 - 4:30 pm **Sphingolipids in Health and Disease**
M. Cameron Sullards (Georgia Tech.)
- 4:45 - 5:00 pm Closing remarks
- 5:00 pm Onward Departures at leisure.