

Lipidomics Impact on Cell Biology, Structural Biochemistry and Immunopathology

Wednesday, May 6

Faculty Club – Atkinson Pavilion - UCSD

8:00-8:30 AM – Breakfast Buffet

8:30-8:45 AM – WELCOME [Edward A. Dennis]

8:45-10:15 AM – I. Lipid Recognition in the Immune System [Peter Henson, Chair]

- 8:45 Alan Aderem (Institute for Systems Biology), A systems approach to dissecting immunity
- 9:15 D. Branch Moody (Brigham and Women's Hospital and Harvard Medical School), An immunological surprise: diverse lipid antigens for human T cells
- 9:45 Charles Brown (University of Missouri), Eicosanoids in the innate immune response to infection: lessons from the Lyme arthritis model

10:15-10:45 AM – Coffee Break

10:45 AM-12:15 PM – II. Membrane Proteins and Specific Lipid Interactions [Graham Shipley, Chair]

- 10:45 H. Ronald Kaback (University of California, Los Angeles), A fat protein that is full of water
- 11:15 Shelagh Ferguson-Miller (Michigan State University), Conserved lipid and steroid binding sites in cytochrome c oxidase
- 11:45 H. Alex Brown (Vanderbilt University), Mass spectrometric analysis of phospholipid signaling pathways

12:15-12:30 PM – Meeting Photo

12:30-2:30 PM – Lunch & Poster Session (Presenters will be at their posters 1:30 – 2:30 PM)

2:30-3:30 PM – III. Fatty Acid and Metabolite Signaling [Susan Henry, Chair]

- 2:30 Rosalind A. Coleman (University of North Carolina), Partitioning of acyl-CoAs by acyl-CoA synthetase-1: Different views from different cells
- 3:00 Edward A. Dennis (University of California, San Diego), Phospholipase A₂ and eicosanomics

3:30-4:00 PM – Break

4:00-4:30 PM – IV. Nature's role in the Lipidomics Gateway [Nicholas Winograd, Chair]

- 4:00 Matthew Day (Nature Publishing Group), Nature's role in the Lipidomics Gateway

4:30-5:50 PM – V. Advances in Lipidomics [Catherine Costello, Chair]

- 4:30 Christian R. H. Raetz (Duke University), Identification of novel lipids and lipid-protein interactions by mass spectrometry
- 5:00 Robert C. Murphy (University of Colorado Denver), Imaging of lipid distribution in tissues by mass spectrometry
- 5:30 Brigitte Simons (MDS Analytical Technologies), Comparing global and targeted lipid and fatty acid shotgun profiling of brain tissue extracts by NanoESI-infusion*

5:50-6:30 PM – Reception (Faculty Club, University of California, San Diego)

6:30-8:00 PM – Dinner (Faculty Club, University of California, San Diego)

Thursday, May 7

Faculty Club – Atkinson Pavilion - UCSD

8:00-8:30 AM – Breakfast Buffet

8:30-10:30 AM – VI. Macrophage Lipidomics [John R. Falck, Chair]

- 8:30 David W. Russell (UT Southwestern), Sterol metabolism in macrophages
- 9:00 Christopher K. Glass (University of California, San Diego), The genomics of macrophage lipidomics
- 9:30 Steven Briggs (University of California, San Diego), Quantitative subcellular proteomics of RAW macrophages
- 10:00 Shankar Subramaniam (University of California, San Diego), Comparison of macrophage lipidomics

10:30-11:00 AM – Coffee Break

11:00 AM-12:20 PM – VII. Sphingolipid Signaling [Walter A. Shaw, Chair]

- 11:00 Sarah Spiegel (Virginia Commonwealth University), The ins and outs of sphingosine-1-phosphate
- 11:30 Alfred H. Merrill, Jr. (Georgia Institute of Technology), Sphingolipidomics: New methods, new molecules and new paradigms
- 12:00 Robert Yu (Medical College of Georgia), Autoimmune mechanisms of peripheral neuropathies: Role of antiglycolipid antibodies*

12:20-2:20 PM – Lunch and Poster Session (Presenters will be at their posters 1:20 – 2:20 PM)

2:20-3:40 PM – VIII. Macrophages and Disease, Systems Biology Implications [Michael VanNieuwenhze, Chair]

- 2:20 Aldons Jake Lusis (University of California, Los Angeles), Genomics and Lipidomics
- 2:50 Joseph L. Witztum (University of California, San Diego), Novel roles for oxidized cholesteryl esters in macrophage biology
- 3:20 Jay Heinecke (University of Washington), Proteomics reveals a sterol-regulated network in macrophages*

3:40 PM – Final Comments and Adjournment [Edward A. Dennis, Chair]

4:00 PM – Coffee and snacks

4:15-6:15 PM – Advisory Committee Meeting

Committee members only

Friday, May 8

La Jolla Sheraton – California Room

7:30-8:00 AM – Breakfast Buffet

8:00-10:30 AM – Operating Committee Meeting

Committee members only

10:30 AM-11:30 PM – Steering Committee Meeting

Committee members only

