

LIPIDOMICS IMPACT ON CELL BIOLOGY, INFLAMMATION AND METABOLIC DISEASES: LIPID MAPS Annual Meeting ♦ MAY 13-14, 2014

Tuesday, May 13

Scripps Seaside Forum – UCSD

7:15 – 8:30 AM – Registration and Breakfast Buffet / Poster Setup

8:30 – 8:45 AM – Welcome [Edward A. Dennis, Chair]

8:45 – 10:15 AM – Lipid Role in Cancer Progression [Alfred H. Merrill, Jr., Chair]

- 8:45 Michael J.O. Wakelam (Babraham Institute, UK) – Use of lipidomics in characterizing colorectal cancer
- 9:15 Sarah Spiegel (Virginia Commonwealth University) – Sphingosine-1-phosphate: key role in inflammation and cancer
- 9:45 Michael Karin (University of California, San Diego) – A new mouse model for NASH and its progression to hepatocellular carcinoma: Explosive effect of ER stress and hypernutrition

10:15 – 10:45 AM – Coffee Break

10:45 – 12:15 PM – Lipidomics and Metabolic Disease [Friedrich Spener, Chair]

- 10:45 Rosalind A. Coleman (University of North Carolina) – Acyl-CoA partitioning
- 11:15 Suzanne E. Barbour (Virginia Commonwealth University) – Modulation of hepatic lipid metabolism by iPLA₂β
- 11:45 Dawn L. Brasaemle (Rutgers University) – Control of lipolysis by perilipin and its binding partners

12:15 – 12:30 PM – Group Photo

12:30 – 1:30 PM – Lunch

1:30– 3:00 PM – Membrane Lipid Interactions with Proteins [Yasuhito Shirai, Chair]

- 1:30 Takao Shimizu (University of Tokyo, Japan) – Sec14L3, a novel protein recognizing liposome curvature and packing defects
- 2:00 Shelagh Ferguson-Miller (Michigan State University) – Crystallographic and computational analysis of lipidic regulatory sites in cytochrome c oxidase and translocator protein (TSPO)
- 2:30 Charles Sanders (Vanderbilt University) – How binding of cholesterol to the APP promotes amyloidogenesis and Alzheimer's disease

3:00 – 3:20 PM – Coffee Break

3:20 – 4:20 PM – Eicosanoids and the Inflammatory Response [Alan Brash, Chair]

- 3:20 Daniele Piomelli (University of California Irvine) – A key role for fatty acid amide signalling in inflammation
- 3:50 Alan Saghatelian (Harvard University) – A new regulator of prostaglandin biosynthesis

4:20 – 4:50 PM - Lightning Talks from Poster Abstracts (6 talks) [Sarah Dunsmore, Chair]
(see next page for talk titles)

4:50 – 6:50 PM – Poster session & Reception

6:50 – 8:20 PM – Dinner

Lightning Talks

(Tuesday, May 13, 4:00 - 4:30 PM)

- 4:00 Clara Meana (CIBERDEM, Spain) – Impaired inflammatory response in fatty liver dystrophy mice – *Poster #3*
- 4:05 Aditi Das (University of Illinois Urbana-Champaign, IN) - Elucidating the mechanism of endocannabinoid metabolism by CYP2J2 epoxygenase in nanodiscs – *Poster #10*
- 4:10 Vishal M. Gohil (Texas A&M University, TX) – Meclizine inhibits mitochondrial respiration through direct targeting of cytosolic phosphoethanolamine metabolism – *Poster #15*
- 4:15 Clara John (University Medical Center Hamburg-Eppendorf, Germany) – Impact of adaptive thermogenesis on systemic lipid and cholesterol handling – *Poster #22*
- 4:20 Krishna Rao Maddipati (Wayne State University, MI) – Eicosanomic profiling reveals dominance of the epoxygenase pathway in human amniotic fluid at term in spontaneous labor – *Poster #33*
- 4:25 Emma Börjeson (University of California San Diego, CA) – LipoxinA4 and Benzo-LipoxinA4 attenuate adipose inflammation and rescue obesity-induced kidney disease – *Poster #56*

(Wednesday, May 14, 12:00 - 12:30 PM)

- 12:00 Matthew A. Mitsche (UT Southwestern Medical Center, TX) – Post-squalene cholesterol biosynthetic pathways – *Poster #8*
- 12:05 Yajing Chu (University of Cambridge, UK) – Using metabolomics to investigate the induction of non-alcoholic fatty liver disease in a rat model of hepatocellular carcinogenesis – *Poster #19*
- 12:10 Chao Liu (University of California San Diego, CA) – Apoc2 knockout zebrafish model of hypertriglyceridemia – *Poster #39*
- 12:15 Chia-Hung Wu (California Institute of Technology, CA) – Characterization and quantification of hopanoids in Burkholderia multivorans and Rhodopseudomonas palustris TIE-1 – *Poster #45*
- 12:20 Pei-an (Betty) Shih (University of California San Diego, CA) – Application of sequencing, fatty acid profiling, and metabolomics investigation to explore pathogenesis and treatment strategy for anorexia nervosa – *Poster #57*
- 12:25 Tudorita (Doina) Tumber (Cornell University, NY) – Runx1-mediated hair follicle stem cell activation and skin tumorigenesis by regulation of lipid metabolism – *Poster #64*



2013 LIPID MAPS Meeting

Photo by Alvin Angeles

Wednesday, May 14

Scripps Seaside Forum – UCSD

7:45-8:30 AM – Breakfast Buffet

8:30 – 10:05 AM – Non-Alcoholic Fatty Liver Disease [Shankar Subramaniam, Chair]

- 8:30 Rohit Loomba (University of California, San Diego) – Key clinical issues in the assessment of NAFLD
- 9:00 Robert C. Murphy (University of Colorado Denver) – Neutral lipids in NASH samples
- 9:30 Introduction by Joseph L. Witztum – Awarding Alfred H. Merrill the Journal of Lipid Research Lectureship
- 9:35 Alfred H. Merrill, Jr. (Georgia Institute of Technology) – Sphingolipid "omics": Use of transcriptomic and lipidomic data to uncover links between sphingolipids and disease

10:05 – 10:30 AM – Coffee Break

10:30 – 12:00 PM – Lipidomics of Microorganisms and the Biodome [Charles Brown, Chair]

- 10:30 Pieter C. Dorrestein (University of California, San Diego) – “GoogleMAP”- type molecular view of microbes - from culture to people
- 11:00 Susan A. Henry (Cornell University) – Stress response signaling in yeast; genomic and lipidomic insights from the cellular response to inositol
- 11:30 Markus R. Wenk (National University of Singapore) – Natural variation of a signalling lipid

**12:00 – 12:30 PM - Lightning Talks from Poster Abstracts (6 talks) [Sarah Dunsmore, Chair]
(see previous page for talk titles)**

12:30 – 2:30 PM – Lunch and Poster session

2:30 – 3:30 PM – Macrophage Biology and Cardiovascular Disease [Walter A. Shaw, Chair]

- 2:30 Christopher K. Glass (University of California, San Diego) – Genomics and lipidomics of macrophage activation
- 3:00 Joseph L. Witztum (University of California, San Diego) – Oxidized lipids are a target of innate immunity

3:30 – 4:30 PM – Panel Discussion: International view of the Decade of LIPID MAPS and Lipidomics [Edward A. Dennis, Chair]

Panel: Takao Shimizu (University of Tokyo)
Friedrich Spener (University of Graz)
Michael J.O. Wakelam (Babraham Institute)
Markus R. Wenk (National University of Singapore)

4:30 PM – Closing Remarks and Adjournment

4:45 – 5:15 PM – Coffee