Schedule of the Symposium

August 19, 2010

08:30 – 09:00 Welcome from Douglas J. Tobias, Michael Cahalan

Session 1. Biophysics of lipid:lipid and lipid:protein interactions I. Chairperson: Francesco Tombola, UC Irvine

09:00 - 09:10 Introduction by the chairperson

09:10 – 09:50 Kalina Hristova, Johns Hopkins University: Model systems for studies of molecular interactions in membranes

09:50 – 10:30 Melanie Cocco, UC Irvine: Proteins on the edge (of the lipid bilayer)

10:30 - 10:50 Coffee break and posters (Conference room Tamkin F108)

Session 2. Biophysics of lipid:lipid and lipid:protein interactions II. Chairperson: Martin Ulmschneider, UC Irvine

10:50 - 11:00 Introduction by the chairperson

11:00 - 11:40 Alexey Ladokhin, University of Kansas Medical Center: So, what is the free energy of the transmembrane insertion of a single helix after all?

11:40 - 12:20 Klaus Schulten, University of Illinois: Molecular dynamics and electron microscopy studies of nascent membrane proteins in the ribosome – SecY complex

12:20 - 12:40 Xi Wang, UC Irvine: Tethered lipid bilayer membranes assembly on Au electrode

12:50 – 14:20 Lunch

Session 3. Theoretical Membrane and Membrane Protein Biophysics. Chairperson: Alfredo Freites, UC Irvine

14:20 - 14:30 Introduction by the chairperson

14:30 - 15:10 Ioan Andricioaei, UC Irvine: DNA passing the membrane (with a little help from friends)

15:50 - 16:10 Coffee breaks and posters (Conference room Tamkin F108)

Session 4. Membrane proteins: from structure to function. Chairperson: Ray Stevens, The Scripps Research Institute

16:10 - 16:20 Introduction by the chairperson

16:20 – 17:00 Janos K. Lanyi, UC Irvine: Structure and function in xanthorhodopsin and gloeobacter rhodopsin, light-driven proton pumps with dual chromophores.

17:00 – 17:40 Michael C. Wiener, University of Virginia: Ton-B dependent outer membrane active transport

17:40 - 18:20 Hartmut Luecke, UC Irvine: Different strokes for different photoreceptors: ASR/ASRT vs. LOV in the dark

18:20 - 18:40 Karen M. Fleming, Johns Hopkins University: Experimental measurement of side-chain hydrophobicity using a whole transmembrane protein

18:40 - 19:00 Aubin Penna, UC Irvine: Stoichiometry of Orai channels

19:00 – 20:00 Coffee, sandwiches, and poster viewing (Conference room Tamkin F108)

August 20

Session 5. Ion channels and nanopores. Chairperson: David Worcester, University of Missouri-Columbia

09:00 - 09:10 Introduction by the chairperson

09:10 – 09:50 Zuzanna Siwy, UC Irvine: Biological channels inspired ionic devices based on single polymer nanopores

09:50 – 10:30 Kenton Swartz, NINDS: Structural basis of voltage sensor function and pharmacology

10:30 - 10:50 Coffee and poster viewing (Conference room Tamkin F108)

Session 6. How membrane proteins get inserted into the lipid membrane. Chairperson: Jim Bowie, UCLA

10:50 - 11:00 Introduction by the chairperson
11:00 – 11:40 Gunnar von Heijne, Stockholm University: How transmembrane helices make it into the ER
11:40 – 12:20 William C. Wimley, Tulane University: Making the membrane disappear: Engineering peptides that spontaneously translocate across living cell membranes
12:20 – 12:40 Venkatramanan Krishmani, UC Irvine: Structure of partially denatured bacteriorhodopsin in a detergent environment

12:40 – 14:20 Lunch

Session 7. Understanding how membrane proteins work. Chairperson: Jim Hall, UC Irvine
14:20 - 14:30 Introduction by the chairperson
14:30 – 15:10 Ronald Kaback, UCLA: The Old Man and the Membrane
15:10 – 15:50 Daniel Mueller, ETH Zurich: Probing Single Membrane Proteins Regulating the Mechanics of Cell Division
15:50 - 16:20 Coffee and poster viewing (Conference room Tamkin F108)

16:20 - 18:20 Panel discussions
18:30 Dinner (conference room Tamkin F108)

Each invited talk has 30 minutes each for the invited talks, plus 10 minutes discussion. The contributed talks have 15 minutes plus 5 minutes discussion. To promote open discussions of all contributions, the Symposium will include a round-table discussion of the posters.

Posters
Xi Wang, University of California, Irvine
"Tethered Lipid Bilayer Membranes Assembly on Au Electrode"

Eric Schow, University of California, Irvine
"Down-state Model of the Full KvAP Channel"

Harindar Keer, University of California, Irvine
“Structure of a DOTAP Lipid Bilayer: A Concerted Neutron Scattering and Molecular Dynamics Study"
Eduardo Valadez, University of California, Irvine
"NEUTRON SCATTERING AND MD SIMULATION STUDY OF DOPC AND DOPC/CHOLESTEROL BILAYERS"

Magnus Andersson, University of California, Irvine
"Accommodating charge in a lipid bilayer"

Eric Lindner, University of California, Irvine
“The “transmembrane” CadC transcriptional activator of the acid-response cadBA operon is a peripheral membrane protein”

Joanna Slusky, Stockholm University
"When and How is Membrane Protein Topology Determined"

Gael Nguyen, University of California, Irvine
“Comparison of Bipolar and Unipolar Diodes”

Karen Fleming, Johns Hopkins University
“Experimental measurement of side-chain hydrophobicity using a whole transmembrane protein”

and

“Measuring the Thermodynamic Stability of Outer Membrane Proteins”

Eric Kalman, University of California, Irvine
“Control of Salt Rejection by Surface Charge Patterning in Conical Polymer Nanopores”