

CABO XX Program
World Molecular Engineering Network Twentieth Annual Meeting on Structural Biology

May 2-5, 2010, San Jose del Cabo, Baja, Mexico

Sunday Evening, 2 May

17:30 – 17:45 **Introduction and Welcome**
Andrej Sali and Ian Wilson

17:45- 20:00 **Self-Introduction**
Dan Santi

Short Presentations (5+1 min.) by TSRI ,UCSF, UCB Graduate Students, Postdoctoral Fellows *et al.* (Chair: Ian Wilson)

Daniel Bachovchin	TSRI	Identification and characterization of inhibitors of protein phosphatase methylesterase 1 (PPME1)
Gira Bhaba	TSRI	Divergent evolution of enzyme dynamics in dihydrofolate reductase
Damian Ekiert	TSRI	Broadly neutralizing antibodies against influenza virus hemagglutinin
Robert Kirchdoerfer	TSRI	A crystal structure of VLR4 in complex with the C-terminal domain of BclA
Dmitry Lyumkis	TSRI	New methods for <i>ab initio</i> 3-D reconstructions in single-particle electron microscopy applied to the structural characterization of macromolecular complexes
Anke Mulder	TSRI	Visualizing ribosome assembly via time resolved EM
Ashley Pratt	TSRI	Understanding the mechanism of dsRNA transport by Sid-1
Timothy Reichart	TSRI	Analysis of gp41 epitopes in model viral membranes
Cory Rillahan	TSRI	High-throughput synthesis and glycan array screening of high-affinity siglec-inhibitors
Arne Moeller	TSRI	Carriers for membrane proteins in Cryo-EM

Break

Angela Brooks	UCB	Using RNAi and RNA-Seq to identify alternative exons regulated by individual RNA binding proteins and their associated regulatory motifs
Debajyoti Datta	UCSF	Allostery and cooperativity in caspases
Ruchira Datta	UCB	Matchmaker: Improving alignment accuracy through phylogenomics
Janet Finer-Moore	UCSF	Substrate Recognition by RNA-modifying enzymes
Christophe Guilbert	UCSF	Flexible Docking with MORDOR
Jeremy Phillips	UCSF	Integrative structure determination of a heptameric component of the nuclear pore complex
Elena Sablin	UCSF	Nuclear receptor LRH-1 as a target in pancreatic cancer

20:00– 21:00 **Reception**

Poolside

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Monday Morning, May 3

Advances in Proteomics (Chair: Ron Milligan)

09:00	Ian Wilson	TSRI	The Expanding Protein Universe
09:20	Stephen Brenner	UCB	RNA regulation and personal genomics
09:40	Andrej Sali	UCSF	Determination of macromolecular structures based on 2D electron microscopy images
10:00	Break		
10:30	Kimmen Sjolander	UCB	New methods in protein functional site identification
10:50	Bo Huang	UCSF	STORM: super-resolution microscopy with twinkling molecules
11:10	Graham Johnson	TSRI	Automated visualization at subcellular environments

Monday Afternoon

Immunology and Biomedicine (Chair: Jim Wells)

16:30	Jacob Glanville/ Arvind Rajpal	Rinat/Pfizer	Precise determination of the diversity of an antibody library and insights into the human immunoglobulin repertoire
16:50	Jim Paulson	TSRI	Targeting B cells with glycan ligands of CD22
17:10	Shuvo Roy	UCSF	Engineered microdevices for advancing biomedicine
17:30	Break		

Chemical Biology (Chair: David Webb)

18:00	Floyd Romesberg	TSRI	The rise and fall of a class of natural product antibiotics
18:20	Dennis Wolan	UCSF	Small-molecule activators of a proenzyme
18:40	James Wells	UCSF	Engineering cells to death

Tuesday Morning, May 4

SPONSORS I (Chair: Dan Santi)

09:00	Matt Benning	Bruker	The pursuit of the trouble-free photon: a low maintenance, high brilliance x-ray source for the home lab
09:20	Angela Criswell	Rigaku	Recent advances in the home lab
09:40	Karyn O'Neill	Johnson & Johnson	Engineering alternative scaffold proteins
10:00	Break		
10:30	David R. Webb	Celgene	Understanding IMiD® Mechanism of action at the molecular level: a progress report
10:50	Marcos Milla	Johnson & Johnson	Small molecule antagonists targeting TNF receptor 1: where do we start?

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11:10	Hans Parge	PRD West Coast Proteros	Notes from a scientific journey in Academia and Industry
11:30	Panel Discussion	Moderator: Dan Santi	Current state and future prospects of Biotech: Funding, recent changes in industry, how is translational research at universities coupled with biotech, role of NIH.
Tuesday Afternoon			Nucleic Acids, Binding Proteins & Enzymes (Chair: Robert Stroud)
16:30	David Millar	TSRI	DNA polymerase activity at the single-molecule level
16:50	Robert Fletterick	UCSF	Interaction of LRH-1 with beta catenin
17:10	Ron Milligan	TSRI	Microtubule binding proteins involved in cell division
17:30	Break		
			Membrane Proteins etc. (Chair: Andrej Sali)
18:00	Chris Koth	Genentech	Evolving strategies for studying the structures of membrane proteins
18:20	Robert Stroud	UCSF	Insertion, folding and assembly of membrane proteins
18:40	Larissa Podust	UCSF	Targeting CYP51 for new drugs to treat Chagas Disease
Wednesday Morning, May 5			Assemblies, Computation, and Drug Design (Chair: Kimmen Sjolander)
09:00	Mark Yeager	TSRI	Structure of the HIV-1 Capsid: A molecule jigsaw puzzle
09:20	Thomas James	UCSF	What can we do about HIV-1 genome dimerization/packaging?
09:40	Todd Yeates	UCLA	New structures of protein-based bacterial organelles: The ethanolamine utilization microcompartment in <i>E. coli</i>
10:00	Break		
10:30	Jeff Blaney	Genentech	Unexpected structure-based design failures and successes from fragment hits
10:50	James McKerrow	UCSF	Targeting parasite proteases for new drugs to treat neglected tropical diseases
11:10	Art Olson	TSRI	Recent progress in computational drug design
11:30	Ian Wilson and Andrej Sali		Closing Remarks