

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**

Andrey 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)

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| Daniel Bachovchin | TSRI | Identification and characterization of inhibitors of protein phosphatase methylesterase 1 (PPME1) |
| Gira Bhava | 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 sialic-acid-inhibitors |
| Arne Moeller | TSRI | Carriers for membrane proteins in Cryo-EM |

Break

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|----------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Sabin | 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

| | | | |
|-------|-------------------------|------|-----------------------------------------------------------------------------------|
| 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

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

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|-------|------------------------|------|-------------------------------------------------------------|
| 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

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| 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 | | | |
| 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 | | |
| Nucleic Acids, Binding Proteins & Enzymes (Chair: Robert Stroud) | | | |
| 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 | | | |
| 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 |