CABO XXI Program
World Molecular Engineering Network Twenty-First Annual Meeting on Structural Biology

May 1-4, 2011, San Jose del Cabo, Baja, Mexico

Sunday Evening, May 1

Time			
17:00 – 17:15	**Introduction and Welcome**		
	Andrej Sali and Ian Wilson		
17:15-17:45	**Keynote Lecture**		
	Irwin D. (Tack) Kuntz	UCSF	Design: The Long View
17:45- 20:00	**Self-Introductions**		
	Scott Forrest	**TSRI**	
	Eric Schneider	**UCSF**	
	Liang Tang	**Bayer**	
	Jaume Pons	**Rinat**	
	Pavel Strop	**Rinat**	

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

Daniel Bachovchin	TSRI	Discovery and characterization of a remarkable class of protein phosphatase methylesterase-1 (PME-1) inhibitors
Gira Bhabha	TSRI	Dynamics in enzyme catalysis
Corey Dambacher	TSRI	A robust temporal control switch for synthetic biology
Damian Ekiert	TSRI	From broadly neutralizing antibodies to a universal influenza vaccine
Robert Kirchdoerfer	TSRI	VLR species specificity for bacillus spores
Jingyun (Jeff) Liu	TSRI	Investigating ligand mediating dynamic changes of GPCR using 19F NMR
Dmitry Lyumkis	TSRI	Structural characterization of ribosomal signaling in non-stop protein decay
Crystal Moran Gutierrez	TSRI	Probing structural transitions and dynamics in intrinsically disordered α-synuclein to determine function
Crystal Moyer	TSRI	Functional genetic and biophysical analyses of membrane penetration by human adenovirus
Cory Rillahan	TSRI	High-throughput synthesis and glycan microarray screening identifies high affinity sialoside analogs for siglec targeting
	Break	
Gloria Olivier	LBL	Peptoid nanosheets as protein mimetic materials for molecular recognition
Edgar Deu Sandoval	Stanford	Development of a novel 'fragmenting hybrid' approach for the delivery of protease inhibitors to the malaria parasite
Homin Kim	UCSF	Function of C-termini in AAA+ ATPase of 26S proteasome
David Barkan	UCSF	A divide and conquer approach for protein-peptide docking
John Pak	UCSF	The overexpression of human integral membrane proteins in mammalian cells
Elena Dolgikh	UCSF	Predicting binding to P-glycoprotein and related transporters by flexible receptor docking
Jennifer Liu	UCSF	Understanding microtissue maintenance in synthetic MCF-10A acini

20:15– 21:30	**Reception**	**Poolside**

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Monday Morning, May 2			**Advances in Structural Biology (Chair: James Fraser)**
09:00	**Andrej Sali**	UCSF	Small molecule docking against protein structure models
09:20	**James Fraser**	UCSF	Protein cryo-crystallography quenches functional hidden alternative conformations
09:40	**J Michael Sauder**	Lilly	Engineering proteins for structural biology
10:00	**Rick Harkins**	Bayer	Identification of novel protein scaffolds from public databases
10:20	**Break**		
			Cellular Biology and Visualization (Chair: Larry Gerace)
10:40	**Graham Johnson**	TSRI	Applications of subcellular modeling and visualization software
11:00	**Zev Gartner**	UCSF	Total synthesis of 3D living tissues
11:20	**Larry Gerace**	TSRI	Endoplasmic reticulum nanodomains in regulation of cholesterol biosynthesis
11:40	**Jeff Kelly**	TSRI	Enhancing proteostasis for disease intervention

Monday Afternoon			**Immunology and Biomedicine (Chair: Jim Paulson)**
16:30	**James Paulson**	TSRI	Controlling the immune response with nanoparticles decorated with siglec ligands
16:50	**Dan Santi**	UCSF/ProLynx	Predictably extending drug duration
17:10	**Carlos Barbas**	TSRI	Chemically programmed immunity
17:30	**Ian Wilson**	TSRI	Broad neutralization of HIV-1
17:50	**Break**		
			Chemical Biology (Chair: Matthew Bogyo)
18:10	**Dennis Wolan**	TSRI	Structure-based mechanism of streptopain and insights into inhibitor design
18:30	**Matthew Bogyo**	Stanford	Applications of small molecule probes to study protease function
18:50	**Ronald Zuckermann**	LBL	Protein mimicry with peptoid polymers

Tuesday Morning, May 3			
			SPONSORS I (Chair: Dan Santi)
09:00	**Roger Durst**	Bruker	Advances in x-ray source and detection technologies
09:20	**Glen Spraggon**	GNF	Crystal structure of PCSK9 in complex with the Low Density Lipoprotein receptor
09:40	**Rob Kania**	Pfizer La Jolla	Structure-based design of axitinib and crizotinib
10:00	**Break**		
10:30	**Arvind Rajpal**	Rinat	From donor-derived antibody phage libraries to antibody repertoire analysis to synthetic library design - coming full circle in our efforts to understand and recapitulate functional diversity of antibodies
10:50	**Stephen Doberstein**	Nektar	Optimizing pharmacodistribution of small molecule drugs through polymer conjugation
11:10	**Alicia Berger**	Versant Ventures	Trends in venture capital

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Tuesday Afternoon			**Nucleic Acids and Nucleic Acid Binding Proteins (Chair: Jamie Williamson)**
16:30	**David Millar**	TSRI	Nucleic acid - protein interactions at the single molecule level
16:50	**Jamie Williamson**	TSRI	Dynamics of ribosome assembly in cells
17:10	**Pilgrim Jackson**	Celgene	Histone tales and the modifications that tell them (a story of JMJD2C)
17:30	**Break**		
			Membrane Proteins (Chair: Robert Stroud)
18:00	**Andrew Ward**	TSRI	Structure of P glycoprotein bound to a nanobody inhibitor
18:20	**Matt Jacobson**	UCSF	The specificity of P-glycoprotein and related transporters
18:40	**Robert Stroud**	UCSF	To and through the biological membrane
19:00	**Natalia Jura**	UCSF	Membrane organization and control of signaling in the HER family of receptor tyrosine kinases

Wednesday Morning, May 4			
			Viruses, Assemblies, Computation, and Drug Design (Chair: Andrej Sali)
08:30	**David Stout**	TSRI	Progress toward an allosteric inhibitor targeting HIV protease
08:50	**Mark Yeager**	TSRI/UVA	Atomic level modeling of the HIV-1 capsid
09:10	**Jack Johnson**	TSRI	Dynamics and stability in virus maturation: The mechanism of a molecular machine
09:30	**Yifan Cheng**	UCSF	Single particle cryoEM study of macromolecular complexes
09:50	**Break**		
10:10	**Arthur Olson**	TSRI	Wet docking
10:30	**Wayne Fairbrother**	Genentech	Mechanism of IAP antagonist-induced activation of cIAP ubiquitin ligase activity
10:50	**Sarah Hymowitz**	Genentech	Ubiquitin binding to A20 ZnF4 is required for modulation of NF-κB signaling
11:10	**Brent Appleton**	Novartis	Resistance screen with a novel c-Met inhibitor reveals mutations found in cancer patients
11:30	**Ian Wilson and Andrej Sali**		**Closing Remarks**