

CABO XXII Program
World Molecular Engineering Network Twenty-Second Annual Meeting on Structural Biology
May 6-10, 2012, San Jose del Cabo, Baja, Mexico

Sunday Evening, May 6

17:00 – 17:15	Introduction and Welcome	Ian Wilson and Dan Santi	
17:15-17:45	Keynote Lecture	William Rutter Synergenics What am I doing?	
17:45- 18:00	Self-Introductions	Wenwu Zhai Rinat/Pfizer Jack Kirsch UCB Seth Harris Genentech Eric Schneider UCSF Neil Kumar Third Rock Ventures	
18:00 -20:00	Short Presentations (5+1 min.) by TSRI, UCSF Stanford Graduate Students, Postdocs <i>et al.</i> (Chair: Dennis Wolan)	Dmitry Lyumkis TSRI Single-particle electron microscopy reveals extensive conformational variability of the Ltn1 E3 ligase Peter Lee TSRI Head-hunting: targeting the hemagglutinin receptor-binding site Ashley Pratt TSRI Mechanistic insights into framework destabilization of Cu, Zn-superoxide dismutase ASL mutants John Chen TSRI Heterodimer formation of two forms of Charco-Marie Tooth associated mutant forms of glycyl-tRNA synthetases that restores aminoacylation Eugene Chun TSRI New fusion partners for G protein-coupled receptor crystallization Robert Kirchdoerfer TSRI Organization of influenza replication machinery Denis Malyshev TSRI Replication without H-bonds: the structure of a DNA polymerase replicating an expanded genetic alphabet Katherine Petrie TSRI Modeling fitness landscapes <i>in vitro</i> : mutagenesis and genetic drift Kimberly Hartfield TSRI New strategies toward crystallization of complex forms of cytochrome P450 240A1 Josephine Leung TSRI Towards crystallization of <i>Thermus thermophilus</i> transhydrogenase Break Structure, function, and evolution of solute carrier (SLC) transporters Avner Schlessinger UCSF Voltage-gated sodium channel protein dissection creates a set of functional ‘pore-only’ proteins David Shaya UCSF Structures of a hinging membrane enzyme access membrane resident lipid to produce lipid X in the synthetic path to lipid A Louis Metzger UCSF Protein crosstalk in transcriptional control - strategies to identify novel regulatory complexes Sabine Mocklinghoff UCSF Two halves are better than the whole: development of an inducible PTEN phosphatase Jason Porter UCSF Imaging single Notch receptors at the cell surface with self-assembling monovalent quantum dots Justin Farlow UCSF Determining binding modes of cruzain inhibitors via NMR spectroscopy Greg Lee UCSF Non-peptidic cathepsin S activity-based probe for noninvasive optical imaging of tumor associated macrophages Martin Verdoes Stanford Reception Poolside	
20:15– 21:30	Reception	Poolside	

CABO XXII Program
World Molecular Engineering Network Twenty-Second Annual Meeting on Structural Biology
May 6-10, 2012, San Jose del Cabo, Baja, Mexico

Monday Morning, May 7			Advances in Structural Biology (Chair: James Fraser)
09:00	Bridget Carragher	TSRI	EM automation: the next decade
09:20	Roger Durst	Bruker	Developments in source and detector technology
09:40	John Tainer	TSRI	Advanced SAXS and a dawn for a mechanistic structural systems biology
10:00	Jane Dyson	TSRI	NMR studies of large and difficult proteins
10:20	Peter Wright	TSRI	Exploring protein energy landscapes by NMR relaxation
10:40	Break		
11:00	Graham Johnson	UCSF	autoFill: applications of mesoscale modeling and visualization software
11:20	Tom Ferrin	UCSF	Advances in chimera for modeling and animation
11:40	Robert Fletterick	UCSF	Structures in stem cell biology
12:00	Ray Stevens	TSRI	Structural genomics of the human GPCR superfamily
Monday Afternoon			Immunology and Biomedicine (Chair: Ian Wilson)
16:30	James Paulson	TSRI	Siglecs as sensors of self
16:50	Charles Craik	UCSF	Antibody-assisted structure determination
17:10	Andrew Ward	TSRI	Broad neutralization of influenza virus
17:30	Sherry LaPorte	CytomX	Probodies: Protease-activated antibodies for disease-specific targeting
17:50	Break		
18:10	Dennis Wolan	TSRI	Chemical Biology (Chair: Zev Gartner)
18:30	Matthew Bogyo	Stanford	Proteomic interrogation of the human distal gut microbiome
18:50	Dan Santi	UCSF/ProLynx	Imaging proteolysis during inflammation using small molecule probes
19:10	Jim Wells	UCSF	A chemical approach to half-life extensions of therapeutics
			The NEDDylator: a catalytic tagger for cell biology
Tuesday Morning, May 8			SPONSORS I (Chair: Dan Santi)
09:00	Peter Hirth	Plexxicon	Developing a new therapy for metastatic melanoma harboring the v600 B-Raf mutation
09:20	Jennifer Riggers	Nektar	The design of novel and improved therapeutics utilizing Nektar's advanced polymer conjugation technology
09:40	Javier Chaparro-Riggers	Rinat/Pfizer	A pH-sensitive anti-PCSK9-antibody: improving PK and cholesterol lowering by increasing antibody-antigen binding cycles and reducing target-mediated clearance
10:00	Manoj Desai	Gilead	Cobicistat: a potent and selective pharmacoenhancer
10:20	Break		
10:40	Dana Ault-Riche	Reflexion	Mirror image proteins as novel anti-angiogenic agents
11:00	Albert Stewart	Pfizer La Jolla	Examples of strategies for targeting protein-protein interfaces: Hif-1A/ARNT PasB heterodimer
11:20	Steven Bartz	Merck	Accessing external innovation
11:40	Craig Muir	Third Rock Ventures	Third Rock Ventures: Investment models on the west coast

CABO XXII Program
World Molecular Engineering Network Twenty-Second Annual Meeting on Structural Biology
May 6-10, 2012, San Jose del Cabo, Baja, Mexico

Tuesday Afternoon		Nucleic Acids and Lipid Binding Proteins (Chair: Robert Fletterick)	
16:30	David Millar	TSRI	A new fidelity checkpoint in DNA polymerase I
16:50	Floyd Romesberg	TSRI	Successful expansion of the genetic alphabet
17:10	Jamie Williamson	TSRI	Structural genomics of RNA binding proteins in T-cell activation
17:30	Dirk Bussiere	Novartis	Designing compounds against lipid kinases: NVP-BKM120 - a pan-class I PI3K inhibitor
17:50	Break		
Membrane Proteins (Chair: Andrew Ward)			
18:10	David Stout	TSRI	Transhydrogenase
18:20	Dan Minor	UCSF	Structure and mechanism of a voltage-dependent enzyme
18:50	Robert Stroud	UCSF	Surviving the heavy metal onslaught
19:10	Zev Gartner	UCSF	Building relationships between structure and function in epithelial tissues
Wednesday Morning, May 9			
Assemblies, Computation, Design and Drug Discovery (Chair: Sherry LaPorte)			
08:30	Philip Dawson	TSRI	Assembly of peptide functionalized nanoparticles for biological imaging
08:50	Bill Degrado	UCSF	Analysis and design of proteins
09:10	James Fraser	UCSF	The evolution and function of protein conformational dynamics
09:30	Jacob Corn	Genentech	Rationally engineering conformational dynamics to modulate ubiquitin-deubiquitinase interactions
09:50	Break		
10:10	Dinesh Patel	Protagonist	Peptide therapeutics: from 'identity crisis' to 'exceptional opportunities'
10:30	Peter Kuhn	TRSI	Fluid biopsy in solid tumors, how HD-CTCs can provide real-time drug response and stratification
10:50	Joshua Salafsky	Biodesy	Second-harmonic generation (SHG) for allosteric drug discovery: conformational change in real time
11:10	Alan Cheng	Amgen	Leveraging thermodynamics for data mining and drug discovery
11:30	Ian Wilson and Dan Santi		Closing Remarks

In order to protect individual rights and promote discussion, it is a requirement of the Scripps-UCSF Cabo WMEN Annual Meeting on Structural Biology Conference that no information presented is to be used or disclosed without the specific approval of the disclosing party. Each attendee of the Conference agrees that any information presented, whether in a formal talk or discussion, is a private communication from the individual making the contribution and is presented with the restriction that such information is not for public use. Each member of a Conference acknowledges and agrees to these restrictions as a condition of attending the Conference.