

**CABO XXIII Program**  
**World Molecular Engineering Network Twenty-Third Annual Meeting on Structural Biology**  
May 5-9, 2013, San Jose del Cabo, Baja, Mexico

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**Sunday Evening, May 5**

17:00 - 17:15	<b>Introduction and Welcome</b>		Ian Wilson and Andrej Sali
17:15 - 18:00	<b>Keynote Lecture</b>	Richard Lerner	TSRI
			Autocrine Signaling Based Selection of Combinatorial Antibodies that Regulate Cell Fates
18:00 - 18:10	<b>Self-Introductions</b>	Jack Kirsch	UCB
		James Kiefer	Genentech
		Joseph Guglielmo	UCSF
		Al Stewart	Pfizer
18:10 - 20:00	<b>Short Presentations (5+1 min.) by TSRI and UCSF Graduate Students, Postdocs and Researchers (Chair: Dennis Wolan)</b>		
	Devin Sok	TSRI	Role of somatic hypermutation in HIV-1 bNabs
	Joseph Jardine	TSRI	Rational HIV design to target specific germline B cell receptors
	Peter Lee	TSRI	Head-hunting: Episode II – attack of the antibody clone
	Melody Campbell	TSRI	Structural studies of soluble guanylate cyclase
	Dmitry Lyumkis	TSRI	An unusual mechanism of enzyme activation provides structural and evolutionary insight into phage-host competition
	David Marciano	TSRI	Modulating the PPARG paradigm
	Joseph Nagano	TSRI	Selective inhibitors and tailored activity probes for Lp-PLA2
		<b>Break</b>	
	Peter Cimermancic	UCSF	Analysis and prediction of cryptic binding sites
	Jonathan Sockolosky	UCSF	Engineering FcRn-mediated recycling and transcytosis in recombinant proteins by short terminal peptide extensions
	Felix Findeisen	UCSF	Lessons from a bacterial sodium channel structure for the function of mammalian calcium channels
	Elena Sablin	UCSF	Nuclear receptor LRH-1 in cancer: Search for receptor specific modulators
	Thomas Tomasiak	UCSF	Pushing the size limits of membrane protein structural biology: A crystal structure of a single TM cytochrome p450 and a subnanometer EM structure of an ABC transporter
	Daniel Suveges	UCSF	Isolation and characterization of full length HER receptors
	Min Zhuang	UCSF	Substrates of IAP ubiquitin ligases identified with a designed orthogonal E3 ligase, the NEDDylator
20:15 - 21:45	<b>Reception</b>		<b>Poolside</b>

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<b>Monday Morning, May 6</b>			<b>Structural and Computational Biology (Chair: Robert Stroud)</b>
09:00	<b>Andrej Sali</b>	UCSF	Macromolecular structures by chemical cross-linking
09:20	<b>John Tainer</b>	TSRI	Hybrid methods with X-ray scattering for accurate structures
09:40	<b>Ashok Deniz</b>	TSRI	Single molecule biophysics of protein disorder
10:00	<b>Robert Fletterick</b>	UCSF	SfTuRnUcCtTiUoRnE of nuclear receptor LRH-1 for developmental and cancer biology
10:20	<b>Break</b>		
			<b>HIV-1 (Chair: Ian Wilson)</b>
10:40	<b>Graham Johnson</b>	UCSF	Contest-catalyzed community science HIV visualization challenge
11:00	<b>Andrew Ward</b>	TSRI	Structural and biophysical studies of HIV-1 envelope glycoproteins
11:20	<b>Bill Schief</b>	TSRI	Epitope-focused vaccine design
11:40	<b>Art Olson</b>	TSRI	HIV interactions and the evolution of drug resistance
<b>Monday Afternoon</b>			<b>Immunology and Vaccinology (Chair: Bill Schief)</b>
16:30	<b>Jim Wells</b>	UCSF	Challenging targets for antibody engineering
16:50	<b>Jim Paulson</b>	TSRI	Induction of B cell tolerances to antigens
17:10	<b>Ian Wilson</b>	TSRI	Broadly neutralizing antibodies to Influenza Virus: Implications for vaccines and therapy
17:30	<b>Phil Dawson</b>	TSRI	Structure-based design of HCV mimics
17:50	<b>Break</b>		
			<b>Chemical Biology (Chair: Jack Kirsch)</b>
18:10	<b>Dan Santi</b>	UCSF/ProLynx	A chemical approach to half-life extension of therapeutics
18:30	<b>Phil Baran</b>	TSRI	Studies in natural product synthesis
18:50	<b>Dennis Wolan</b>	TSRI	Direct and specific regulation and detection of human caspases
19:10	<b>Floyd Romesberg</b>	TSRI	Efforts toward the <i>in vivo</i> expansion of the genetic code
<b>Tuesday Morning, May 7</b>			<b>SPONSORS (Chairs: Dan Santi)</b>
09:00	<b>Ye Jin</b>	Bayer	Global substrate profiling of proteases in Neutrophil Extracellular Traps reveals consensus motif predominantly contributed by Elastase
09:20	<b>Neel Anand</b>	Nektar	The design of novel and improved oncolytics utilizing Nektar's advanced polymer conjugation technology
09:40	<b>Magdalena Dorywalska</b>	Rinat	Location matters: Site of conjugation modulates stability and pharmacokinetics of antibody drug conjugates
10:00	<b>Nicholas Skelton</b>	Genentech	Adventures with AKT: small molecule inhibition and mechanism of activation
10:20	<b>Break</b>		
10:40	<b>Craig Muir</b>	Third Rock Ventures	An update on TRV interests in antibody and protein engineering
11:00	<b>Johanna (Hanneke) Jansen</b>	TDTi	Computational chemistry workflows to support education and drug discovery for neglected diseases
11:20	<b>Glen Spraggon</b>	GNF	One residue makes all the difference: The structural basis for lack of toxicity of CRM197

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Tuesday Afternoon			Nucleic Acids and Nucleic Acid Binding Proteins (Chair: David Millar)
16:30	<b>Carlos Barbas</b>	TSRI	Gene-free gene therapy and other advances with novel enzymes that act on DNA
16:50	<b>Jamie Williamson</b>	TSRI	Dynamics of ribosome assembly in cells
17:10	<b>Joel Gottesfeld</b>	TSRI	Epigenic therapy for neurological diseases
17:30	<b>Break</b>		
			Membrane Proteins (Chair: Andrew Ward)
17:50	<b>Robert Stroud</b>	UCSF	Wiggle Wiggle not a Trickle
18:10	<b>Dan Minor</b>	UCSF	Structural and functional studies of cation channels
18:30	<b>Mark Yeager</b>	TSRI/UVA	X-ray structures of the human Cx26 gap junction channel suggest a novel electrostatic mechanism for calcium-mediated gating
18:50	<b>David Millar</b>	TSRI	Single molecule studies of GPCR's
Wednesday Morning, May 8			Assemblies, Design and Drug Discovery (Chair: Jim Wells )
08:30	<b>Vijay Pande</b>	Stanford	Simulating the functional dynamics of proteins: intermediates and transition states of conformational change in GPCRs and kinases
08:50	<b>Frank Szoka</b>	UCSF	Hyaluronan- a ligand and a target in cancer biology
09:10	<b>Jim McKerrow</b>	UCSF	Discovery and validation of a repurposed drug for amebiasis
09:30	<b>Larissa Podust</b>	UCSF	Structural analysis of thioredoxin reductase, the target of auranofin
09:50	<b>Break</b>		
10:20	<b>Ron Zuckermann</b>	UCB/LBL	Adapting protein design rules to the assembly of peptoid polymers
10:40	<b>Natalia Jura</b>	UCSF	Insights into activation of HER receptors by hetero-oligomerization
11:00	<b>Matt Jacobson</b>	UCSF	Membrane permeable and orally bioavailable macrocycles
11:40	<b>Ian Wilson and Andrej Sali</b>		<b>Closing Remarks</b>

*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.*

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