

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

Sunday Evening, May 5

17:00 - 17:15	Introduction and Welcome		
	Ian Wilson and Andrej Sali		
17:15 - 18:00	Keynote Lecture		
	Richard Lerner	TSRI	Autocrine Signaling Based Selection of Combinatorial Antibodies that Regulate Cell Fates
18:00 - 18:10	Self-Introductions		
	Jack Kirsch	UCB	
	James Kiefer	Genentech	
	Joseph Guglielmo	UCSF	
	Al Stewart	Pfizer	
18:10 - 20:00	Short Presentations (5+1 min.) by TSRI and UCSF Graduate Students, Postdocs and Researchers (Chair: Dennis Wolan)		
	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
		Break	
	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	Reception		Poolside

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Monday Morning, May 6

Structural and Computational Biology (Chair: Robert Stroud)

09:00	Andrej Sali	UCSF	Macromolecular structures by chemical cross-linking
09:20	John Tainer	TSRI	Hybrid methods with X-ray scattering for accurate structures
09:40	Ashok Deniz	TSRI	Single molecule biophysics of protein disorder
10:00	Robert Fletterick	UCSF	SfTuRnUcCtTiUoRnE of nuclear receptor LRH-1 for developmental and cancer biology
10:20	Break		

HIV-1 (Chair: Ian Wilson)

10:40	Graham Johnson	UCSF	Contest-catalyzed community science HIV visualization challenge
11:00	Andrew Ward	TSRI	Structural and biophysical studies of HIV-1 envelope glycoproteins
11:20	Bill Schief	TSRI	Epitope-focused vaccine design
11:40	Art Olson	TSRI	HIV interactions and the evolution of drug resistance

Monday Afternoon

Immunology and Vaccinology (Chair: Bill Schief)

16:30	Jim Wells	UCSF	Challenging targets for antibody engineering
16:50	Jim Paulson	TSRI	Induction of B cell tolerances to antigens
17:10	Ian Wilson	TSRI	Broadly neutralizing antibodies to Influenza Virus: Implications for vaccines and therapy
17:30	Phil Dawson	TSRI	Structure-based design of HCV mimics
17:50	Break		

Chemical Biology (Chair: Jack Kirsch)

18:10	Dan Santi	UCSF/ProLynx	A chemical approach to half-life extension of therapeutics
18:30	Phil Baran	TSRI	Studies in natural product synthesis
18:50	Dennis Wolan	TSRI	Direct and specific regulation and detection of human caspases
19:10	Floyd Romesberg	TSRI	Efforts toward the <i>in vivo</i> expansion of the genetic code

Tuesday Morning, May 7

SPONSORS (Chairs: Dan Santi)

09:00	Ye Jin	Bayer	Global substrate profiling of proteases in Neutrophil Extracellular Traps reveals consensus motif predominantly contributed by Elastase
09:20	Neel Anand	Nektar	The design of novel and improved oncolytics utilizing Nektar's advanced polymer conjugation technology
09:40	Magdalena Dorywalska	Rinat	Location matters: Site of conjugation modulates stability and pharmacokinetics of antibody drug conjugates
10:00	Nicholas Skelton	Genentech	Adventures with AKT: small molecule inhibition and mechanism of activation
10:20	Break		
10:40	Craig Muir	Third Rock Ventures	An update on TRV interests in antibody and protein engineering
11:00	Johanna (Hanneke) Jansen	TDTi	Computational chemistry workflows to support education and drug discovery for neglected diseases
11:20	Glen Spraggon	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	Carlos Barbas	TSRI	Gene-free gene therapy and other advances with novel enzymes that act on DNA
16:50	Jamie Williamson	TSRI	Dynamics of ribosome assembly in cells
17:10	Joel Gottesfeld	TSRI	Epigenic therapy for neurological diseases
17:30	Break		
			Membrane Proteins (Chair: Andrew Ward)
17:50	Robert Stroud	UCSF	Wiggle Wiggle not a Trickle
18:10	Dan Minor	UCSF	Structural and functional studies of cation channels
18:30	Mark Yeager	TSRI/UVA	X-ray structures of the human Cx26 gap junction channel suggest a novel electrostatic mechanism for calcium-mediated gating
18:50	David Millar	TSRI	Single molecule studies of GPCR's
Wednesday Morning, May 8			Assemblies, Design and Drug Discovery (Chair: Jim Wells)
08:30	Vijay Pande	Stanford	Simulating the functional dynamics of proteins: intermediates and transition states of conformational change in GPCRs and kinases
08:50	Frank Szoka	UCSF	Hyaluronan- a ligand and a target in cancer biology
09:10	Jim McKerrow	UCSF	Discovery and validation of a repurposed drug for amebiasis
09:30	Larissa Podust	UCSF	Structural analysis of thioredoxin reductase, the target of auranofin
09:50	Break		
10:20	Ron Zuckermann	UCB/LBL	Adapting protein design rules to the assembly of peptoid polymers
10:40	Natalia Jura	UCSF	Insights into activation of HER receptors by hetero-oligomerization
11:00	Matt Jacobson	UCSF	Membrane permeable and orally bioavailable macrocycles
11:40	Ian Wilson and Andrej Sali		Closing Remarks

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