

# WMEN CABO XXV, May 3-6, 2015

## Sunday Evening, May 3

**17:15-17:30 Introduction and Welcome**  
Ian Wilson and Andrej Sali

**17:30-18:15 Keynote Lecture**  
**Sasha Kamb** Amgen Alzheimer's disease: The confluence of genetics, molecular structure and new medicines

**18:15-18:25 Self-Introductions**  
**Daniel J. Cipriano** Merck Research Labs  
**Jakob Loven** Third Rock Ventures  
**Jaume Pons** UCSF/Rinat-Pfizer

## 18:30-20:45 Short Presentations (5+1 min.) by TSRI and UCSF Graduate Students, Postdocs and Researchers (Chair: Dennis Wolan)

<b>Jessica Bruhn</b>	TSRI	Insights into the molecular and structural properties governing RNA virus transcription and replication
<b>Sandip Chatterjee</b>	TSRI	A comprehensive database and search method for microbiome metaproteomics
<b>Jonathan Hulce</b>	TSRI	Extended N-hydroxyhydantoin carbamate inhibitors of mammalian lipases
<b>Jennifer Kefauver</b>	TSRI	Compositional heterogeneity of Swell1, the volume-regulated anion channel
<b>Bryan Martin</b>	TSRI	The Octamer Repeat motif, a novel molecular architecture involved in splicing regulation
<b>Charles Murin</b>	TSRI	Structures of protective antibodies reveal sites of vulnerability on Ebola virus
<b>Erika Olson</b>	TSRI	Structure-guided optimization of a peptide antagonist of EphA4 activation
<b>Nicole Schirle Oakdale</b>	TSRI	The crystal structure of human argonaute2
<b>Jessica Sheu-Gruttadauria</b>	TSRI	Structural studies of higher-order miRNA-induced silencing complexes
<b>Peter Thuy-Boun</b>	TSRI	The development of tools for profiling gut microbial sulfatases
<b>Yuh Ana Wang</b>	TSRI	Chemical metaproteomics of the human distal gut microbiota

## Break

<b>Elena Sablin</b>	UCSF	Regulation of NR5A receptors by PIP3 hormone.
<b>Courtney French</b>	UC Berkeley	Transcriptome analysis reveals thousands of targets of nonsense-mediated mRNA decay that offer clues to the mechanism in different species
<b>Geoffrey Smith</b>	UCSF	Exploring the kinetics of cell signaling with small molecules: a unique temporal requirement for JAK3 activity in IL-2 signaling
<b>Alex Vecchio</b>	UCSF	Piece by piece: putting together the tight junction three-dimensional puzzle
<b>Benjamin Barad</b>	UCSF	Side-chain directed model and map analysis for 3D electron cryomicroscopy
<b>Peter Cimermancic</b>	UCSF	Finding small-molecule modulators of large macromolecular assemblies
<b>Marco Lolicato</b>	UCSF	Activation of a human ion channel by physical forces
<b>Nicolas Strauli</b>	UCSF	Deconvolution of selection pressures in overlapped genes: The story of Tat and Rev

**21:00– 22:00 Reception with Buffet**

**Poolside**

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### Monday Morning, May 4 Structural Biology (Chair: Kathleen Aertgeerts)

09:00	<b>Andrej Sali</b>	UCSF	Integrative structure determination based on EMAP data
09:20	<b>John Tainer</b>	TSRI	Better design of proteins and protein cages by X-ray scattering
09:40	<b>James Fraser</b>	UCSF	BBC PUBS: Results from our first year graduate students!
10:00	<b>Jeff Lengyel</b>	FEI	Beyond the frontiers of the Cell - unveiling the wonders of Nature at the molecular level
<b>10:20</b>	<b>Break</b>		
10:40	<b>Elizabeth Getzoff</b>	TSRI	Switching protein conformations and assemblies: light and ligands, redox and radicals
11:00	<b>Otomo Takanori</b>	TSRI	Structural insights into the functions of the autophagic ubiquitin-like proteins
11:20	<b>Peter Wright</b>	TSRI	Intrinsically disordered proteins in cellular regulation
11:40	<b>Ashok Deniz</b>	TSRI	Biophysics of a disordered protein, from single molecules to droplets

### Monday Afternoon Virology and Immunology (Chair: Jim Paulson)

16:30	<b>Andrew Ward</b>	TSRI	High resolution cryoEM of viral glycoproteins
16:50	<b>Ian Wilson</b>	TRSI	Recognition of influenza virus by broadly neutralizing antibodies
17:10	<b>Jim Paulson</b>	TSRI	Targeting immune cells
17:30	<b>Pedro Paz</b>	Bayer Healthcare	Modeling MHCII-peptide-TCR interactions for prediction of immunogenicity
<b>17:50</b>	<b>Break</b>		

### Membrane Proteins (Chair: Andrew Ward)

18:10	<b>Robert Stroud</b>	UCSF	Membrane transporters in action: how do they work?
18:30	<b>Dan Minor</b>	UCSF	How ion channels respond to temperature and pressure
18:50	<b>Mark Yeager</b>	UVA	Allosteric enhancers of adenosine receptors for treatment of a disease that has increased 300% in last 20 years
19:10	<b>Kathleen Aertgeerts</b>	Dart NeuroScience	Integrative methods to facilitate structure-based GPCR drug discovery

**20:00-22:30** Sponsor Dinner, by invitation only - Oceana Garden

### Tuesday Morning, May 5 SPONSORS (Chair: Daniel Santi)

9:00	<b>Daniel Santi</b>	UCSF/ProLynx	A chemical approach to half-life extension of therapeutics
9:20	<b>Mathias Rickert</b>	Rinat Laboratories- Pfizer, Inc.	Production of soluble and active microbial transglutaminase for site-specific antibody drug conjugation in <i>Escherichia coli</i>
9:40	<b>Craig Muir</b>	Third Rock Ventures	Cytomx, Global Blood, Myokardia, allosterity and FibroCO; innovation, patient focus and assiduousity since 2010
10:00	<b>Christian Cunningham</b>	Genentech, Inc.	USP30 and Parkin homeostatically regulate atypical ubiquitin chains on mitochondria

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<b>10:20</b>	<b>Break</b>		
10:40	<b>Wayne Fairbrother</b>	Genentech, Inc.	Targeting Bcl-2-family proteins
11:00	<b>Ute Hoch</b>	Nektar Therapeutics	Etirinotecan pegol: Teaching an old dog new tricks
11:20	<b>Joshua Salafsky</b>	Biodesy, Inc.	Detecting and distinguishing conformations sensitively by second-harmonic generation (SHG) for drug discovery and basic research
11:40	<b>Glen Spraggon</b>	GNF	The structure and design of LDK378 (Ceritinib): A potent anaplastic lymphoma kinase inhibitor

<b>Tuesday Afternoon</b>	<b>Nucleic Acids, Nucleic Acid Binding Proteins &amp; Evolution (Chair: Peter Wright)</b>
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16:30	<b>David Millar</b>	TSRI	Functional coordination during DNA polymerase activity
16:50	<b>Ian MacRae</b>	TSRI	Structural mechanisms in RNA silencing
17:10	<b>Jamie Williamson</b>	TSRI	Combined EM and MS studies of ribosome assembly
17:30	<b>Floyd Romesberg</b>	TSRI	A semi-synthetic organism with an expanded genetic alphabet
17:50	<b>Break</b>		

<b>Chemical Biology (Chair: Jack Taunton)</b>
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18:10	<b>Phil Dawson</b>	TSRI	Chemical ligation and bioconjugation, addressing large protein targets.
18:30	<b>Dennis Wolan</b>	TSRI	Chemical-based interrogation of the human gut microbiome
18:50	<b>Jack Kirsch</b>	UCB	Can the effect of an arbitrary mutation on the catalytic activity of an enzyme be predicted?
19:10	<b>Jack Taunton</b>	UCSF	Substrate-selective modulators of protein secretion

<b>Wednesday Morning, May 6</b>	<b>Computation, Health and Disease (Chair: Andrej Sali)</b>
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8:50	<b>Ryan Hernandez</b>	UCSF	Population genomics of health and disease
9:10	<b>Steven Brenner</b>	UC Berkeley	Diagnostic role of exome sequencing in immune deficiency disorders
9:30	<b>Robert Fletterick</b>	UCSF	Inhibiting androgen receptor
9:50	<b>Break</b>		
10:10	<b>Gabriel Lander</b>	TSRI	Investigating the machinery of cellular homeostasis by multiscale imaging
10:30	<b>Graham Johnson</b>	UCSF	Towards whole cells modeled in 3D molecular detail and community curated with cellPACK
10:50	<b>Arthur Olson</b>	TSRI	What's up with docking?

<b>11:15</b>	<b>Ian Wilson and Andrej Sali</b>	<b>Closing Remarks</b>
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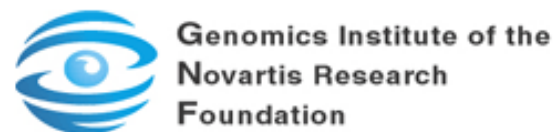
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