

# FINAL SCHEDULE

## World Molecular Engineering Network Sixteenth Annual Meeting on Structural Biology

1-5 May 2005, San Jose del Cabo, Baja, Mexico

### Sunday Evening, 1 May

17:30 – 17:45 R. Fletterick and I. Wilson

#### Introduction

17:45 – 20:00 **Self-Introductions by Non-Presenting Sponsors**

Cornelia Bellamacina	Chiron
David Mack	Alta
Thomas Woiwode	Versant Ventures

#### Short Presentations (5 min.) by TSRI and UCSF Graduate Students and Postdoctoral Fellows

Russell Burge	TSRI	dsRNA/dsRBP complex formation and structural studies
Kyle Chiang	TSRI	Global metabolite profiling of human cancer cell lines
Erik Debler	TSRI	Efficient proton abstraction from carbon by a catalytic antibody: small structural changes with large catalytic consequences
Michael Evans	TSRI	Preparation and reactivity of a natural product-like library of activity-based probes
Olgun Guvench	TSRI	Trypsin-ligand binding free-energy landscapes
Leslie Nangle	TSRI	Investigations of translational proofreading in mammalian cells
Anu Sawkar	TSRI	Chemical chaperones increase the activity of $\beta$ -glucocerebrosidase – a therapeutic strategy for Gaucher disease
Erin Scherer	TSRI	Towards improving the neutralizing potency of the broadly neutralizing anti-HIV antibody 4E10
Desiree Thayer	TSRI	Effect of glycosylation on activity of nonribosomal peptide and glycopeptide antibiotics
Andrew Ward	TSRI	Reconstruction of a bacterial ABC transporter by cryo-electron microscopy
Craig Yoshioka	TSRI	Insights into the structural mechanism of Ncd
William Waas	TSRI	Substrate translocation for translational editing
Eva Estebanez-Perpina	UCSF	3D screening for blockers of androgen receptor-coregulators assembly
Soon-Ho Hong	UCSF	Dynamic behavior of Salmonella pathogenicity gene expression
Morten Kloster	UCSF	Modeling the fission yeast cell cycle
Filip Van Petegem	UCSF	Regulation of voltage-gated calcium channels by the beta subunit
Yifeng Yin	UCSF	From malate dehydrogenase to lactate dehydrogenase: a study on substrate specificity

20:15 – 21:00 **Reception**

**In the Main Garden**

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### Monday Morning, 2 May

### Advances in Structural Biology & Proteomics (Chair: Ian Wilson)

09:00	Ashok Deniz	TSRI	Single-molecule fluorescence studies of biological folding
09:20	Ben Cravatt	TSRI	Activity-based proteomics
09:40	Marc Elsliger	TSRI	High throughput structural genomics at the JCSG
10:00	<b>Break</b>		
10:30	Maureen Darcy	Fluidigm	Dynamic arrays for genomic and proteomic applications
10:50	Sue Byram	Bruker AXS	Latest crystallographic instrumentation and techniques for structural biology
11:10	Eric Hnath	Rigaku	Advances in the homelab

### Monday Afternoon

### Cell & Molecular Biology & Immune System (Chair: Ben Cravatt)

16:30	Bill Balch	TSRI	Structural organization of components directing protein packaging and targeting
16:50	Chao Tang	UCSF	Modeling yeast cell cycle
17:10	Chris Voigt	UCSF	Synthetic design of therapeutic bacteria

### 17:30 Break

### Immune System

17:45	Ian Wilson	TSRI	Antigen recognition by CD1
18:05	James Paulson	TSRI	In situ photo-affinity protein-glycan crosslinking reveals homo-multimerization of CD22
18:25	Carlos Barbas	TSRI	Chemically-programmed immunity
18:45	Dawson, Phil	TSRI	Peptide mimics of gp41: towards an HIV vaccine

### Tuesday Morning, 3 May

### SPONSORS (Chair: Dan Santi)

09:00	Dan Santi	Kosan	Modular building blocks of polyketide synthase genes: Combinatorial biosynthesis made easy
09:20	Mike Randall	Sunesis	Drug discovery at adaptive surfaces
09:40	Yi Liu	GNF	Structural aspects beyond gleevec binding
10:00	Duncan McRee	ActiveSight	Active site's for sale at ActiveSight

### 10:20 Break

### 10:50 Panel Discussion

*Can Industry and Academia Work Together Towards Drug Discovery?*  
(Panel Leader: David Mack)  
Panel: Dan Santi, Cornelia Bellamacina, Thomas Woiwode, Carlos Barbas

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**Tuesday Afternoon**

**Nucleic Acids etc. etc. (Chair: Chris Voigt)**

16:30	David Millar	TSRI	Conformational dynamics of nucleic acid enzymes
16:50	Joel Gottesfeld	TSRI	Transcription therapies for human disease
17:10	Mirko Hennig	TSRI	Structure and function of RNA pseudoknots involved in ribosomal frameshifting
17:30	<b>Break</b>		
17:45	Fletterick, Robert	UCSF	Nuclear receptors in development bind PIP3
18:05	Jack Kirsch	UC Berkeley	Directed evolution of paralogs
18:25	Ivanetich, Kathy	UCSF	Biotechnology-based microbial source tracking assays

**Wednesday Morning, 4 May**

**Assemblies, Membrane Proteins, and Computation (Chair: Robert Fletterick)**

08:30	Dave Stout	TSRI	Nanodisc technology applied to membrane proteins
08:50	Dan Minor	UCSF	Structural insights into ion channel function
09:10	Mark Yeager	TSRI	A C $\alpha$ model for the transmembrane $\alpha$ -helices of gap junction membrane channels
09:30	<b>Break</b>		
10:00	Todd Yeates	UCLA	Logic analysis of phylogenetic profiles: using ideas in formal logic to decipher protein interactions and functions
10:20	Michael Sanner	TSRI	Software tools for visualizing large macromolecular assemblies
10:40	Art Olson	TSRI	Designing physical models for structural molecular biology