BRANDEIS UNIVERSITY BIOCHEMISTRY/BIOPHYSICS ANNUAL RETREAT 2010
MARINE BIOLOGICAL LABORATORY, WOODS HOLE
October 21 & 22, 2010

Thursday, October 21, 2010

8:30-9:30am	**Coffee, pastries, etc -** Lillie Lobby	
9:30-11:00am	**Session I -** Lillie Auditorium	Chair: Kristine Mackin
	Jordan Kerns (Kern)	"Precious Metal: The Unexpected Role of Mg in Adenylate Kinase Catalyzed Phosphoryl Transfer"
	Oren Elrad (Hagan)	"Encapsulation of a Polymer by an Icosahedral Virus"
	Greg Patton (Hedstrom)	"Mechanistic Studies of Guanosine Monophosphate Reductase"
11:00-11:15am	**Coffee Break –** Lillie Lobby	
11:15-12:45pm	**Session II** – Lillie Auditorium	Chair: Ashley Lajoie
	Xin Sun (Hedstrom)	"Kinetically Controlled Drug Resistance: How Penicillium brevicompactum Survives"
	Janice Robertson (Miller)	"Design, Function, and Structure of a Monomeric CLC Transporter"
	Sharotka Simon (Petsko/Ringe)	"Dimerization of uch-21 Proteins: Implications of Parkinson's Disease & Cancer"
12:45-1:30pm	**Lunch –** Swope Dining Hall	
1:30-3:00pm	**Session III** – Lillie Auditorium	Chair: Yupeng Tu
	Jeffrey Boucher (Theobald)	"Studying the Evolution of Specificity in Malate and Lactate Dehydrogenase through Necromancy, Voodoo & Enzyme Kinetics"
	Baris Avsaroglu (Kondev)	"Polymer Models for the Spatial Organization of Chromosomes in Yeast"
	Kene Piasta (Miller)	"Using Ba^{2+} to Probe Ion Binding in KcsA"
3:00-3:15pm	**Coffee Break -** Lillie Lobby	
3:15-4:15pm	**Session IV –** Lillie Auditorium	Chair: Jeff Bombardier
	Iva Perovic (Pochapsky)	"Solution NMR Studies of the Parkinson Disease-Associated Protein alpha-Synuclein or *'Why it is not good to be single?*'"
	Francesco Pontiggia (Kern)	"Following Convenient Trails in a Highly Corrugated Landscape: Activation Pathways a Signalling Protein
4:15-5:00pm	**David Clapham (KEYNOTE)**	**"Ion Channels in Sperm: The Struggle for Existence"**
5:00 – 7:00pm	**Poster Sessions - Swope**	
5:00 – 7:00pm	**Mixer – Meigs Room - Swope**	
7:00 – 8:30pm	**Dinner - Swope Dining Hall**	
8:30 – 10:30pm	**Mixer/DJ – Meigs Room - Swope**	

Friday, October 22, 2010

8:00- 9:00am	**Breakfast –** Swope Dining Hall	
9:00-10:30am	**Session V** – Lillie Auditorium	Chair: Josue Alfaro
	Charles Sindelar (Grigorieff)	"Optimizing High-Resolution Cryo-EM Structures: Connecting to X-Ray Crystallography"
	Drew Tietz (Pochapsky)	"Modulating Substrate Selectivity in Cytochrome P450cam Using NMR as a Guide"
	Ed Barry (Dogic)	"The Role of Chirality in the Self Assembly of Attractive Rods"
10:30-10:45am	**Coffee Break** – Lilly Lobby	
10:45-12:15pm	**Session VI** – Lillie Auditorium	Chair: Clarisse van der Feltz
	Ce-Feng Liu (Petsko/Ringe)	"Characterization of a DNA-Tethering Eukaryotic Transcription Factor"
	Kristine Mackin (Theobald)	"Changing the Fold, Preserving the Function: An Investigation of Bacteriorhodopsin"
	Young-Jin Cho (Kern)	"Visualizing Adenylate Kinase Catalysis through the X-Ray Lens"
12:15-1:15pm	**Lunch** – Swope Dining Hall	
1:15-2:15pm	**Session VII** – Lillie Auditorium	Chair: Jeff Bombardier
	Alvaro Sanchez (Gelles)	"Repression of Transmission by Free Sigma-70"
	Michael Heymann (Fraden)	"Do Kinetics Matter in Protein Crystallization"
2:15pm	**Departure**	**Drive Safely**

1. **Dimitar Pachov** (Kern Lab) "Toward Atomic-Resolution Conformational Transition Pathways and States of a Signaling Protein (ntcr)"

2. **Steffen Kutter** (Kern Lab) "Tau vs Glycerol – A Kinetic Study of the Tubulin Polymerization"

3. **Sparky Clarkson** (Kern Lab) "Cocktail Hour: An Inosital Hexaphosphate Apertif for Hungry Proteins"

4. **Roman Agafonov** (Kern Lab) "Connecting the Dots: Chemical and Structural Transitions in Adenlyate Kinase"

5. **Adelajda Zorba** (Kern Lab) "Following the Northern Lights: Insights into the Activation of Aurora A Kinase"

6. **Clarisse van der Feltz** (Krummel & Grigorieff Labs) "Pursuing the structure of an 840 kDa splicing complex: The U1snRNP from *S. cerevisiae*"

7. **Kelsey Anthony** (Krummel Lab) "A New Gold Labeling Reagent to Localize and Trace Protein(s) in an EM Map"

8. **Axel Brilot** (Grigorieff Lab) "Affinity Layers for Visualization of Large Complexes using Cryo-EM"

9. **Alexis Rohou** (Grigorieff Lab) "Imaging the Amyloid Cross-Beta Fold with Cryo-EM"

10. **Mackenzie Gallegos** (Theobald Lab) "Ancestral Resurrection of L-2-hydroxyisocaproate Dehydrogenase"

11. **Marcus Kelly** (Theobald Lab) "Substitution Matrices for Transmembrane Proteins"

12. **Phillip Steindel** (Theobald Lab) ""Investigations of a novel inhibitor of gene regulation in *Clostridium difficile*""

13. **Ashley Lajoie** (Miller Lab) "Trials and Tribulations: Expressing a K_{ATP} Channel's Cytoplasmic Domain"

14. **Jackie Naffin** (Petsko/Ringe Lab) "Structural Studies of Decarboxylases from Pseudomonas Putida"

15. **Vincent Mecozzi** (Petsko/Ringe Lab) "Improving Function of the Retromer"

16. **Melisa Osborne** (Gelles Lab) "Regulation of Bacterial Transcription One Molecule at a Time"

17. **Jeffrey Bombardier** (Gelles Lab) "Single Molecule Visualization of Formins at the Tips of Growing Actin Filaments"

18. **Larry Friedman** (Gelles Lab) "The Role of One Dimensional Diffusion in the Protomer Search by sigma54RNA Polymerase"

19. **Nathaniel Freedman** (Hedstrom Lab) "Identification of Candidate Thiamine Triphosphate-Interacting Proteins Using an Active Site Directed Probe"

20. **Marcus Long** (Hedstrom Lab) "Tales of Two Enzymes and their Respective Inhibitors"

Cont.

Thursday, October 21, 2010 POSTER SESSIONS CONT.

21. **Kalyan Chakrabarti** (Oprian Lab) "Interaction of Recoverin with Rhodopsin Kinase: Induced Fit or Conformational Selection?"

22. **Ben Nickle** (Oprian Lab) "Isolation of Transducin / Rhodopsin Complexes"

23. **Rafael Cabanas** (Fraden Lab) "Self Assembly of Mixtures of Virus and Colloids"

24. **Sathish Akella** (Fraden Lab) "Protein Crystal Nucleation"

25. **Nate Tompkins** (Fraden Lab) "Using a Projector to Control BZ Drops: Attractor Selection by Pattern Entertainment"

26. **Emily Peck** (Fraden Lab) "Imaging Chlamydomonas Reinhardtii and Analyzing the Flagella Beating Patterns to Better Understand the Structural Basis of Axoneme Beating"

27. **Aleksandr Kivenson** (Hagan Lab) "Mechanism for Pressure-Dependent Rates of Conformational Change in Adenosine Kinase"

28. **Matthew Perkett** (Hagan Lab) "Atomistic Studies of a Conformational Transition in a Viral Capsid Protein"

29. **Joseph Salisbury** (Agar Lab) "In Silico Screening for Molecules to Stabilize ALS Associated with Cu/Zn Superoxide Dismutase"