CBI RETREAT

July 23, 2010

9:00 a.m. to 4:00 p.m. followed by happy hour

Come see what’s new in the world of the chemistry-biology interface. It’s a great time to eat free food, drink free drinks and discuss science!

To register email Erin Podlesny at podlesny@sas.upenn.edu

The retreat will be held at Swarthmore College. This is easily accessible by car, bike, or the R3 regional rail. Breakfast starts at 9:00 a.m. followed by student talks starting at 10:00 a.m.
CBI Retreat
July 23, 2010 Swarthmore College

9:00-10:00 AM  Breakfast (Science Center 101 lobby)

10:00-10:30 AM  Daniela Fera - Marmorstein
Towards the structure-based design of HPV E7 inhibitors

10:30-11:00 AM  Lisa Lippert - Yale Goldman
Observing conformational changes of yeast cytoplasmic dynein in real time using polarized total internal reflection fluorescence microscopy

11:00-11:30 AM  Jun Wang - Degrado
Discovery of potent inhibitors targeting influenza A virus M2 proton channel

11:00-11:30 AM  Noon Graham Clinthorne - DeGrado
Transmembrane histidine kinases: the role of polar residues offers clues to signaling mechanisms

12:00-1:00 PM  Lunch

1:00-2:00 PM  Poster Session

2:00-2:30 PM  Jennifer Greene - Harry Ischiropoulos
Unraveling the structural specificity of S-nitrosylation using global proteomic approaches

2:30-3:00 PM  Najat Khan - Dmchowski
Folate-Conjugated 129-Xe Biosensor for Targeting Cancer Cells

3:00-3:30 PM  Mike Harbut - Greenbaum
A chemical-genetic approach defines a key role for the P. falciparum metallo-aminopeptidase, PfA-M1, in hemoglobin catabolism

3:30-4:00 PM  Kushol Gupta - Van Duyne
The tyranny of the lattice: small-angle scattering studies of retroviral integrases and their complexes with DNA

4:00-6:00 PM  Happy Hour and Dinner
Posters

1. **Julie Aaron**, Xin LIn, David Cane, and David Christianson
   X-ray Crystal Structure of epi-Isozizaene Synthase from *Streptomyces coelicolor*

   Interfacing Ferritin with Gold Nanoparticles

3. **Christopher MacDermai** C. Lanci, S. Kang, G. Bender, A. Lehmann, C. Fry, V. Krishnan J.K. Blasie, M. Therien, W. DeGrado, and J. Saven
   Computational Design of Nonbiological Protein-cofactor Assemblies and Protein Crystals

   Structural characterization of the voltage sensor domain of the KvAP channel vectorially-oriented and reconstituted within a single bilayer phospholipid membrane tethered onto inorganic substrates via x-ray and neutron interferometry

5. **Tomoyasu Mani**, Tatiana V. Esipova, and Sergei A. Vinogradov
   Sensitization of Ln(III) emission by energy transfer from the triplet state of pi-extended porphyrin

6. **Kyle Harpole** Tatyana I. Igumenova, Michael S. Marlow, Jakob Dogan, Kathleen G. Valentine, and A. Joshua Wand
   Conformational Entropy of Peptide Binding in Calmodulin Mutants

7. **Jacob M. Goldberg**, Solongo Batjargal, Alyssa M. Klein and E. James Peterssson
   Thioamides as Fluorescence Quenchers: Minimalist Chromophores to Monitor Protein Dynamics

8. **Anne M. Wagner**. Christina L. J. Grindley, Nicholas Marotta, and E. James Peterssson
   A Simple Chemoenzymatic Method for N-Terminal Protein Functionalization

9. **Morgan E. DeSantis** and James Shorter
   Inter-subunit collaboration in a AAA+ Hexamer

10. **Mimi Cushman**, Huan Wang, Jacob E Lazarus, and James Shorter
    Small molecule antagonists of toxic beta-amyloid assemblies

11. **Nataline Meinhardt** and Doron Greenbaum
    Development of New Calpain Specific Inhibitors

12. **Ian Farrell** and Barry Cooperman
    Factors Determining the Rate of L1-tRNA Separation in the E-site in the Bacterial Ribosome

13. **Gabriel Gonzales** and William Degrado
    Protein Design by Sequence Analysis

14. **Erin Podlesny** and Marisa Kozlowski
    Synthesis of bisnaphthoquinones and bisanthraquinones

    Motor number controls cargo switching at actin-microtubule intersections in vitro

16. Christopher Butts, Jin Xi, Zhengzheng Liao, **Ashley Fiamengo**, XinJing Tang, Roderic G. Eckenhoff, and Ivan J. Dmochowski
    Towards the Identification of In Vivo Molecular Targets of General Anesthetics Using the Fluorescent Anesthetic 1-Aminoantrhacen and Photoactive Variant

17. **Olena Taratula**. Najat S. Khan, Garry Seward, Yubin Bai, Brittany A. Riggle and Ivan J. Dmochowski
    Targeted Xe-Cryptophane MRI Contrast Agents

    Photoregulating Gene Expression with Light-Activated Oligonucleotides