**MACROMOLECULAR CROWDING**

Preliminary Schedule

Tuesday June 25 to Saturday June 29

**Location:** Telluride Intermediate School, 725 W. Colorado Avenue, 2nd Fl.

**Organizers:** Jeetain Mittal and David Goldberg

**TSRC Hosts:** Nana Naisbitt 970-708-0004 and Rory Sullivan 970-708-4542

**06/24/2013 (Monday)**

6:00 - 9:00 pm WELCOME RECEPTION FOR ALL SCIENTISTS, CASH BAR, NEW SHERIDAN BAR @231 W. COLORADO

**06/25/2013 (Tuesday)**

8:00 - 8:30 am BREAKFAST @ TSRC

8:30 – 9:00 Introductory Remarks (Jeetain Mittal / David Goldenberg)

9:00 – 9:45 Quantifying Preferential (Chemical) Interactions and Excluded Volume Effects of Large Solutes on Biopolymer Processes (M. Thomas Record)

9:45 – 10:30 Perturbation of protein structures in cellular environments from simulations (Michael Feig)

TEA/COFFEE BREAK

10:50 – 11:35 Characterizing protein conformational dynamics in the cellular environment with NMR spectroscopy (Michael Latham)

11:35 – 12:20 Folding of multi-domain and conjugated proteins: intramolecular crowding effects (Koby Levy)

ON YOUR OWN: LUNCH/ FREE TIME

6:00 – 7:15 pm, TSRC TOWN TALK, HISTORIC SHERIDAN OPERA HOUSE @ 110 N. OAK

**06/26/2013 (Wednesday)**

8:00 - 8:30 am BREAKFAST @ TSRC

8:30 – 9:15 Formation of protein-complexes in crowded environments and their enzymatic activity: From in vitro to in vivo (Gideon Schreiber)

9:15 – 10:00 Balance of enthalpy and entropy in molecular crowding (Daniel Harries)

TEA/COFFEE BREAK

10:20 – 11:05 Competitive Interactions of Maltose and Macromolecular Crowders with Maltose Binding Protein (Andrew Miklos)

11:05 – 11:50 Computer models of crowding effects on pathway selection in complex self-assembly (Russell Schwartz)

ON YOUR OWN: LUNCH / FREE TIME

6:00 – 9:00 pm, TSRC PICNIC DINNER, AH HAA SCHOOL FOR THE ARTS @ 300 S. TOWNSEND, FAMILIES AND GUEST WELCOME FREE OF CHARGE

**06/27/2013 (Thursday)**

8:00 - 8:30 am BREAKFAST @ TSRC

8:30 – 9:15 Building Upon Our Foundation: Folding the Proteome (Patricia Clark)

9:15 – 10:00 Modeling the effects of attractive interactions in chaperonins on protein folding and misfolding (Robert Best)

TEA/COFFEE BREAK

10:20 – 11:05 (David Vaux)

11:05 – 11:50 Springing the Kinetic Trap: A Theorist's Take on the Nonequilibrium Statistical Physics of Driven Macromolecular Solutions (Jeremy England)

ON YOUR OWN: LUNCH / FREE TIME

5:30 – 7:00 GROUP DINNER: Rustico at 114 E Colorado Ave. (Price $50 per person for the fixed price meal; tip is included; tax-exempt; drinks paid individually)

7:15 – 8:00 The effect of crowding and confinement: A comparison of Yfh1 stability in different environments (Domenico Sanfelice)

8:00 – 8:45 Stress-induced macromolecular collectives in the cytoplasm: from molecular mechanism to function (Simon Alberti)

**06/28/2013 (Friday)**

8:00 - 8:30 am BREAKFAST @ TSRC

8:30 – 9:15 Crowding of globular and unfolded proteins studied by small-angle scattering (David Goldenberg)

9:15 – 10:00 Single-molecule spectroscopy of intrinsically disordered proteins in the presence of molecular crowding (Ben Schuler)

TEA/COFEE BREAK

10:20 – 11:05 Protein assembly at surfaces (Joan-Emma Shea)

11:05 – 11:50 Biomolecular folding and assembly at interfaces (Jeetain Mittal)

ON YOUR OWN: LUNCH / FREE TIME / DINNER

7:00 – 7:45 Effects of the Intracellular Environment on Adenine Riboswitch RNA Structure (Gary Pielak)

7:45 – 8:30 Single-molecule studies of ribosomes and RNA polymerase in live E. coli (James Weisshaar)

**06/29/2013 (Saturday)**

8:00 - 8:30 am BREAKFAST @ TSRC

8:30 – 10:00 Wrap-up session