

Program

01/18

Morning:

7:30-8:30 – breakfast

8:30-8:40 – EPSCoR (Ladd Gray)

8:40-8:50 – SC INBRE Bioinformatics Core Director, John Rose – welcoming remarks

Morning session. Chair – Emil Alexov

8:50-9:50 – **Key note talk. Diana Murray** “Genomic and Proteomic analysis of peripheral membrane proteins”

9:50-10:10 - **Paul Richardson** “Theoretical characterization of Apolipoprotein E in the lipid bound state and the implications on lipoprotein clearance”

10:10-10:30 – **Petras Kundrotas** “Development Of A New Algorithm For Predicting Protein-Protein Interactions”

10:30-10:50 coffee break

10:50-11:10 – **Salvatore Profeta** “Quantum Mechanical Studies of DNA-Protein Interactions: The Quality of Results at the Semi-empirical MNDO and AM1 Levels Relative to Those from *Ab Initio* 3-21G* and 6-31G** Calculations”

11:10-11:30 **Balakrishnan Sivaraman** “Protein Adsorption And Its Effect On Platelet Adhesion To Biomaterial Surfaces”

11:30-11:50 **Homayoun Valafar** “Assessment of the Structural Novelty of an Unknown Protein Using Unassigned Residual Dipolar Coupling Data”

11:50-12:10 **Liangjiang Wang** “Random Forests For Semi-Supervised Classification Of Dna-Binding Residues In Protein Sequences”

12:10 – 1:45 lunch + posters

Afternoon session. Chair – Austin Hughes

1:45 – 2:45 Invited talk - Reinhard Laubenbacher "Biochemical network inference"

2:45-3:05 **Robert Chapman** “Ecogenomics: Analytical Challenges And Potential Solutions”

3:05- 3:25 **Chun-Huai Cheng** “Protein evolution analysis of human inflammatory network”

3:25- 3:45 **Steve Stevenson** “Systems Thinking in Biology”

3:45-4:05 coffee break

4:05- 4:25 **Bob Friedman** “Likelihood-ratio tests for positive selection of human and mouse duplicate genes reveal non-conservative and anomalous properties of widely used methods”

4:25-4:45 **Xinghua Lu** “Identify Gene Expression Module via Information Integration”

4:45-5:05 Pierre Rivaller “Analysis of two multi-gene families encoded within the genome of *Eimeria tenella*, a chicken parasite related to *Plasmodium spp.* and *Toxoplasma gondii*”

5:05-5:25 John Rose “Viral Genomic Signatures: Amino Acid Usage Profiles”

5:25-5:45 Jijun Tang “Genome Rearrangement Analysis using Conserved Blocks”

5:45 – 8:00 posters + wet bar

01/19

7:30-8:30 breakfast

Morning session, Chair John Rose

8:30-9:30 Keynote talk. Anna Panchenko “Deciphering the evolution of protein structures and protein interactions”

9:30-9:50 – Delphine Dean “Effects of substrate composition and structure on the mechanical properties of cardiomyocytes in 2D culture”

9:50-10:10 Alvin Fox “Biomarkers For Proteomics And Metaproteomics”

10:10-10:30 Kelly Brook “Electrostatics optimization of protein-protein complexes”

10:30-10:50 coffee break

10:50-11:10 Austin Hughes “Variable Intensity of Purifying Selection on Cytotoxic T-Lymphocyte Epitopes in Hepatitis C Virus”

11:10-11:30 Wan Jin Jahng “Systems Biology Of Age-Related Macular Degeneration”

11:30-11:50 Feng Luo ”Functional modules from protein interaction network via local optimization”

11:50-12:10 Jeff Tomkins ”Fagaceae Genomic Database (FGD): An Integrated Web-Based Resource for Tree Genomics”

12:10 – 1:45 lunch + posters

Afternoon session (Chair Chin-Fu Chen)

1:45-2:30 – Travis Glenn, Julie Weston, Olga Tsyusko “Genomics Trifecta: New Models, Approaches And Opportunities”

2:30-2:50 – James Wang “Searching Top N Similar Genes In Gene Ontology Database”

2:50-3:10 – Galen Collier “Simulated Interactions between Structured Peptides and Biomaterials - Computational Procedure Development”

3:10-3:30 – Will Norman “BioAnalyze: A Tool for the Simulation and Analysis of Biological Systems”

3:30-3:50 – Sorinel Oprisan “An improved geometrical separator for HP Protein Folding model”

End