

# Biochemistry and Molecular Biology

2015 Retreat  
March 26, 2015

## Poster Presentations

- 1. Pseudouridylation-Induced Nonsense Suppression is Sequence Context-Independent**  
Hironori Adachi and Yi-Tao Yu
- 2. Modified Amber Force Field Correctly Models the Conformational Preference of Tandem GA Pairs in RNA**  
Asaminew H. Aytenfisu, Aleksandar Spasic, Matthew G. Seetin, John Serafini and David H. Mathews
- 3. Inhibitory Codon Pairs Affect Translation by Distinct Mechanisms**  
Christina Brule, Caitlin Gamble, Kimberly Dean, Stanley Fields and Elizabeth Grayhack
- 4. Expression of HIV Envelope Glycoprotein at the Yeast Cell Surface for Vaccine Development**  
Sara Connelly, Elizabeth Mathew, Hong Zhu and Mark Dumont
- 5. Using Yeast to Determine Binding Sites of G $\beta$ y Inhibitors**  
Isaac Fisher and Alan V. Smrcka
- 6. Common Secondary Structure Prediction for RNA Homologs with Domain Insertions: Dynalign II**  
Yinghan Fu, Gaurav Sharma and David H. Mathews
- 7. Biliverdin Reductase: A Target for Cancer Therapy?**  
Peter E.M. Gibbs, Nicole Lerner-Marmarosh, Tihomir Miralem and Mahin D. Maines
- 8. The Human Cytomegalovirus UL26 Protein Modulates the NF $\kappa$ B Host Defense Pathway**  
Christopher Goodwin, Chun Mathers and Joshua Munger
- 9. The Biology of Pus3 and of Pseudouridine 38 and Pseudouridine 39 Modifications in Yeast tRNAs**  
Lu Han, Yoshiko Kon and Eric M. Phizicky
- 10. Investigating the U2 snRNA - Interactions by Tat-SF1, a Host Co-Factor for HIV-1 Splicing**  
Nazish N. Jeffery and Clara L. Kielkopf
- 11. Initiation Factor 2 Stabilizes the Ribosome in a Semi-Rotated Conformation**  
Clarence Ling and Dmitri Ermolenko
- 12. Enhanced Factor VIIIa Stability of A2 Domain Interface Variants Results from an Increased Affinity for the A2 Subunit**  
Morgan Monaghan, Hironao Wakabayashi, Amy Griffiths, Jennifer Wintermute, and Philip J. Fay

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- 13. Interaction of Insulin Receptor Kinase with Human Biliverdin Reductase-Based Peptides Alters the Secondary Structure of the Kinase**  
Amelia Poulin, Peter E.M. Gibbs, Nicole Lerner-Marmarosh and Mahin D. Maines
- 14. Dissecting the Function of Domain-Forming Transcriptional Enhancers**  
David Rabayev, Sierra Fox, George Fromm, Christina Davidson and Michael Bulger
- 15. Dynamic Ligand-Protein Interactions Alter Rhodopsin's Conformational Ensemble: Simulations of Rhodopsin and Opsin**  
Letty Salas-Estrada, Nicholas Leioatts, Tod D. Romo, Shairy Azmy Danial and Alan Grossfield
- 16. Following Structural Dynamics of Elongation Factor G During Ribosomal Translocation**  
Enea Salsi, Elie Farah, Jillian Dann, Zoe Netter and Dmitri N. Ermolenko
- 17. Secondary Structure Prediction: A New Focus on Predicting the Loops**  
Michael F. Sloma and David H. Mathews
- 18. *Slo2.1* Potassium Channels are Involved in the Regulation of Heart Mitochondrial Function**  
C. Owen Smith, Andrew P. Wojtovich, Sergiy M. Nadtochiy, William R. Urciuoli, Xiao-Ming Xia, Keith Nehrke and Paul S. Brookes
- 19. Improving RNA Nearest Neighbor Parameters for Predicting Helical Stability by Going Beyond the Two-State Model**  
Aleksandar Spasic, Jonathan L. Chen, Matthew G. Seetin, Douglas H. Turner and David H. Mathews
- 20. Oncogenic Mutation-Induced Restriction to HCMV Infection**  
Shihao Xu and Joshua Munger
- 21. Influence of Sequence and Covalent Modifications on Yeast tRNA Dynamics**  
XiaoJu Zhang, Ross C. Walker, Eric M. Phizicky and David H. Mathews
- 22. CCN1 Regulates Chondrocyte Differentiation and Cartilage Development**  
Yongchun Zhang, Jennifer H. Jonason, Tzong-jen Sheu, Donna Hoak, Jie Shen, Sarah E. Catheline, Matthew J. Hilton, Michael J. Zuscik and Regis J. O'Keefe