

2nd Annual Symposium on Big Data in Biology

Friday, May 16, 2014

NHB 1.720

- 08:45 *Continental Breakfast*
- 09:15 Welcome and Opening Remarks
Dr. Hans Hofmann, Director, Center for Computational Biology & Bioinformatics
Dr. Daniel Stanzione, Acting Director, Texas Advanced Computing Center
- 09:25 Epidemics of the "Common Cold" and the Dynamics of Severe Asthma Exacerbations
Dr. Rosalind Eggo, Statistics and Data Sciences, Laboratory of Dr. Lauren Meyers
- 09:50 Interlocus Gene Conversion and Gene Evolution in Eukaryotes
Dr. Claudio Casola, Texas A&M University, Ecosystems Science and Management
- 10:15 Biophysical Perspectives on Molecular Evolution
Dr. Claus Wilke, Integrative Biology
- 10:40 *Coffee break*
- 11:00 **KEYNOTE LECTURE**
Designing Biological Circuits
Dr. Pamela Silver, Harvard Medical School, Systems Biology
- 12:00 **LUNCH BREAKOUT SESSIONS***
- 01:30 Transcriptional Regulation of the Human Genome: Lessons from ENCODE and Beyond
Dr. Vishy Iyer, Molecular Biosciences
- 01:55 The Genetics of Divergence between Upland and Lowland Ecotypes of *Panicum virgatum*
Elizabeth Milano, Integrative Biology, Laboratory of Dr. Tom Juenger
- 02:20 An eQTL Analysis of the Human Glioblastoma Multiforme Genome.
Dr. Matthew Cowperthwaite, Texas Advanced Computing Center
- 02:45 **POSTER SESSION** (*with coffee and refreshments*)
- 05:00 Poster Awards and Closing Remarks
Dr. Scott Hunicke-Smith, Director, Genome Sequencing and Analysis Facility

* LUNCH BREAKOUT SESSIONS

Big Data in Undergraduate Teaching – PHR 2.110: **Dr. Claus Wilke** (Integrative Biology), **Dr. Andy Ellington** (Molecular Biosciences), **Dr. Erin Dolan** (Freshman Research Initiative)

Big Data in Medicine – WEL 2.122: **Dr. Robert Messing** (Vice Provost for Biomedical Sciences), **Dr. Matthew Cowperthwaite** (Texas Advanced Computing Center), **Dr. Peter Mueller** (Statistics and Data Sciences), **Dr. Bill Rice** (St. David's Health Care)

Industry Career Panel – MBB 1.210: **Scott Hunicke-Smith** (Director, Genome Sequencing and Analysis Facility), **William Honea** (T-Systems North America), **Dr. Krista Ternus** (Signature Science), **Dr. Dennis Wylie** (Asuragen)

Informal lunch with attendees – NHB patio

*** POSTER SESSION**

- 1 **The Bioinformatics Consulting Group** CCBB/CSSB Bioinformatics Consultants
- 2 **Limited utility of residue masking for positive-selection inference**
Stephanie Spielman – Graduate student, Claus Wilke Lab
- 3 **Amino-acid site variability among natural and designed proteins**
Eleisha Jackson – Graduate student, Claus Wilke Lab
- 4 **Protein Complex Structural Modelling with Proteomic Profiling Data**
Kevin Drew – Postdoctoral Fellow, Edward Marcotte Lab
- 5 **Protein Complexes Through Evolution Characterized by Shotgun Proteomics**
Ophelia Papoulas - Research Scientist, Edward Marcotte Lab
- 6 **Characterization of Human Bone Marrow Plasma Cell Antibody Repertoire Using High Throughput Sequencing** Gabriel Wu- Graduate student, Edward Marcotte Lab
- 7 **Plastid genome rearrangement and re-growth of the large inverted repeat in *Erodium*** Chris Blazier - Postdoctoral Fellow, Bob Jansen Lab
- 8 **"Pharmacopanomics" and the Promise of Precision Medicine**
Yury Nunez-Lopez, Research Scientist, John Kuhn Lab
- 9 **Investigating the Roles of Plant Protein Synthesis Initiation Factors eIF4F and eIFiso4F in *Arabidopsis Thaliana*** Nicola Cole - Graduate student, Karen Browning Lab
- 10 **Proteomics Facility: Quantitative Proteomics and PTM Analysis**
Maria Person - Director, Proteomics Facility
- 11 **Whole Genome Phylogeny of *Acinetobacter* sp. and Comparative Analysis Between Isolates**
Brown Seaton, – Graduate student, Mark Eppinger Lab, UT San Antonio
- 12 **Characterization of the pathogenome and phylogenomic framework of non-O1/O139 *Vibrio cholerae***
Brigida Rusconi - Postdoctoral Fellow, Mark Eppinger Lab, UT San Antonio
- 13 **Genomic epidemiology investigation of bacterial infectious diseases: Outbreak case studies of *E. coli* O157:H7 and *Vibrio cholerae* O1**
Mark Eppinger, Principle Investigator, Mark Eppinger Lab, UT San Antonio
- 14 **Investigating mechanisms of local adaptation in a symbiotic organism using functional genomics**
Carly Kenkel – Graduate Student, Mikhail Matz Lab
- 15 **Genome-wide epigenetic analysis of alcohol responses in flies**
Alfredo Ghezzi - Research Associate, Nigel Atkinson Lab
- 16 **Rapid repression of the mechanistic/mammalian target of rapamycin complex 1 (mTORC1) shifts the regional expression of disease-related protein ensembles**
Farr Niere - Postdoctoral Fellow and Sanjeev Namjoshi—Graduate student, Kim Raab-Graham Lab
- 17 **Unique Ca²⁺ Binding Sites are Conserved in Calmodulin throughout Eukaryote Evolution**
Brent Halling - Research Associate, Richard Aldrich Lab
- 18 **Effects of an Urban Landscape on Native Bee and Plant Communities in Central Texas**
Kim Bellare - Graduate Student, Shalene Ja Lab
- 19 **Epigenetic Profiling in Glioblastoma Multiforme**
Amelia Hall - Graduate Student, Vishy Iyer Lab
- 20 **miRNA Profiling of Diverse Cell Types and Sub-Cellular Compartments Using ENCODE Small RNA-Seq Data** Nathan Abell - Graduate Student, Vishy Iyer Lab
- 21 **Genetic requirements in spatially organized polymicrobial wound infection**
Keith Turner - Postdoctoral Fellow, Marvin Whiteley Lab