

**Texas Genetics Society 45th Annual Meeting**

March 22-24, 2018

Rudder Tower, Texas A&M University

College Station, TX

**Thursday, March 22**

2:00-4:15 p.m.

Registration/Board Meeting

4:15-4:30 p.m.

Welcome and announcements – Sarah Canterberry, President

4:30-5:30 p.m.

**KEYNOTE ADDRESS**

**Mechanisms of RNA polymerase II transcription**

**Craig Kaplan, Ph.D.**

Associate Professor, Department of Biochemistry and Biophysics  
Texas A&M University

*\*Reception to follow*

**Friday, March 23**

7:00-8:00 a.m.

Registration and continental breakfast

8:00-8:05 a.m.

Announcements – Sarah Canterberry, President

8:05-9:00 a.m.

**INVITED LECTURE 1**

**Chromatin-based mechanisms of genome maintenance in human cells**

**Kyle Miller, Ph.D.**

Associate Professor, Department of Molecular Biosciences  
University of Texas at Austin

9:00-10:00 a.m.

**SESSION I- Genomics and Bioinformatics, Part A**

9:00-9:20 a.m.

Identifying heme importers & exporters through RNA seq analysis in *Aedes aegypti*

*Heather Eggleston, Texas A&M University*

9:20-9:40 a.m.

Somatic hypermutation of TcR $\alpha$  contributes to thymic positive selection in sharks

*Jeannine A. Ott, Texas A&M University*

9:40-10:00 a.m.

Hi-C and RNAseq analysis in the venom gland of a rattlesnake illustrate the unique structure and function of microchromosomes and coordinated interaction of chromatin and specific transcription factors in regulation of venom expression.

*Nicole R. Hales, University of Texas at Arlington*

10:00-10:30 a.m.

Coffee break, poster and exhibit viewing

- 10:30 a.m.-11:30 p.m. **SESSION 2- Genomics and Bioinformatics, Part B**
- 10:30-10:50 a.m. Dr. Insight, A Novel Systematic Drug Repurposing Method  
*Jinyan Chan, Baylor University and Baylor Scott & White Research Institute*
- 10:50-11:10 a.m. Bayesian Data Integration and Variable Selection for Pan-Cancer Survival Prediction using Protein Expression Data  
*Arnab Kumar Maity, Texas A&M University*
- 11:10 – 11:30 a.m. Genetic Characterization of American Bison  
*David Forgacs, Texas A&M University*
- 11:30-12:30 p.m. Lunch
- 12:30-12:40pm **Poster Teaser Session 1**
- 12:40-2:20 p.m. **SESSION 3- Genetics of Metabolism and Energy Homeostasis**
- 12:40-1:00 p.m. Investigating the relationship between glycogen accumulation and calcium homeostasis in *Saccharomyces cerevisiae*  
*Sarah Smith, Austin College*
- 1:00-1:20 p.m. Identification of gene-diet interactions related to carbohydrate sensitivity and evaluation of predictive value of response to diet in Collaborative Cross Recombinant F1 Hybrids  
*Anna C. Salvador, Texas A&M University*
- 1:20-1:40 p.m. Singleminded-2s: at the nexus of mitophagy and mitochondrial dynamics during mammary epithelial cell differentiation  
*Jessica Elswood, Texas A&M University*
- 1:40-2:00 p.m. Transcriptional comparisons of intestinal regenerative growth in multiple snake species provide a new perspective on conserved vertebrate stress and growth pathways that may direct intestinal regeneration  
*Blair W. Perry, Texas A&M University*
- 2:00-2:20 p.m. Digestive efficiency and gut-microbiome dynamics throughout reproduction in the Mexican free-tailed bat, *Tadarida brasiliensis*  
*Oscar Sandate, Texas Tech University*
- 2:20-2:30 p.m. **Poster Teaser Session 2**
- 2:30-3:40 p.m. **POSTER SESSION**
- 2:30-3:00 p.m. Odd-numbered posters
- 3:00-3:30 p.m. Even-numbered posters

3:40-4:40 p.m.

**INVITED LECTURE 2**

**Breaking new ground: canonical and non-canonical functions for telomere-associated components in Arabidopsis**

**Dorothy Shippen, Ph.D.**

Professor, Department of Biochemistry and Biophysics

Texas A&M University

4:40-6:00 p.m.

**SESSION 4- Genome Integrity and Cancer**

4:40-5:00 p.m. Genetic analysis of Replication Protein A (RPA) paralogs reveals functional specificity in telomere length set point regulation in Arabidopsis thaliana  
*Behailu Aklilu, Texas A&M University*

5:00-5:20 p.m. Novel ATM Response Element Promotes Genomic Stability in Breast Cancer  
*Scott Pearson, Texas A&M University*

5:20-5:40 p.m. Progression of colorectal cancer through epidermal growth factor receptor (EGFR)-independent mechanisms  
*Carolina Mantilla-Rojas, Texas A&M University*

5:40-6:00 p.m. NOP2 and EMC8/9: New genes involved in telomere length set point in Arabidopsis thaliana  
*Callie Kobayashi, Texas A&M University*

6:30-8:30 p.m.

**RECEPTION & BANQUET**

The Stables at Calvary Court, 200 Century Court, College Station, TX

**Barbara Bowman Award Recipient**

David Threadgill, Ph.D.

Distinguished Professor, Department of Veterinary Medicine and Biomedical Sciences

Texas A&M University

**Saturday, April 29**

7:30-8:30 a.m.

Continental breakfast

8:30-8:35 a.m.

Announcements – Sarah Canterbury, President

8:35-9:30 a.m.

**INVITED ADDRESS 3**

**Somatic mutations in PIK3CA cause generalized lymphatic anomaly**

**Michael Dellinger, Ph.D.**

Assistant Professor, Department of Surgery, Hamon Center for Therapeutic Oncology  
UT Southwestern Medical Center

9:30-10:30 a.m.

**SESSION 5- Genetic Evolution and Adaptation**

9:30-9:50 a.m.

*In-Vivo* Action of Molecular Nanomachines Increases Mortality in Eukaryotic Species and Destroy Single Cellular Prokaryotes  
*Ciceron Ayala-Orozco, M.D. Anderson Cancer Center*

9:50-10:10 a.m.

Phenotypic Variation of Embryonic Spacing in the Mouse: Elucidating the Genetic Contribution  
*Samantha Peeler-Fletcher, Texas A&M University*

10:10-10:30 a.m.

Piecing together 300 million years of wet-skin and slime: Low-coverage sampling of amphibian genomes provides insight into ancestral tetrapod genome structure and evolution  
*Richard H. Adams, University of Texas at Arlington*

10:30-11:00 a.m.

Coffee break and judges meeting

11:00 a.m.- 12:00 p.m.

General Business Meeting & Awards Presentation

12:00 p.m.

Adjourn