

Plant Genomics @ MSU REU Research Symposium

Friday July 28th, 2023

A155 Plant & Soil Sciences Building



Photo Credit: Kara Headley, 2023

Sponsors



MSU College of Natural Science
MSU College of Agriculture & Natural Resources
Department of Plant Biology
Department of Biochemistry & Molecular Biology
Department of Horticulture
Department of Plant, Soil & Microbial Sciences
MSU-DOE: Plant Research Laboratory

- 8:30 am Coffee and Bagels
- 8:55 am Welcome, Cornelius Barry
- 9:00 am **Session One: Plant Stress Responses**
Session Chair: Hannah Cushman
- 9:00 am **Makayla Ritko**, Illinois Valley Community College (Sharkey)
“Isoprene Protection Against High Temperature and High Light Stress”
- 9:15 am **Margaret Mattson**, Scripps College (VanBuren)
“Genomic Characterization of Micro Animal Symbionts in Resurrection Plants: Insights from a Systems Perspective”
- 9:30 am **Krishen Patel**, Michigan State University (Hu)
“Effect of Photorespiration on Peroxisome Motility and Distribution in *Arabidopsis thaliana*”
- 9:45 am **Austin Jensen**, University of Wisconsin, Stevens Point (Niederhuth)
“Expression Landscape of Conserved Drought Responsive Gene and its Orthologs Across Species in Response to Abiotic Stresses”
- 10:00 am **Athena Dila**, West Shore Community College (Josephs)
“Genomic Signatures of Urban Adaptation in *Arabidopsis thaliana*”
- 10:15 am **Monica Carey**, University of Nevada, Reno (Lebeis)
“Drought Stress Impacts the Metabolic Profile and Microbiome Dynamics in Soybean Roots”
- 10:30 am Break

- 10:45 am **Session Two: Metabolism**
Session Chair: Lucas Reist
- 10:45 am **Charles Swiggett**, King University (Hamberger)
“Increasing Terpene Production Through the Artificial Targeting of Terpene Metabolic Pathways to Plastoglobules”
- 11:00 am **Abigail Proksch**, Ferris State University (Benning)
“Screening for *PLIP3* Suppressor Mutants in *Arabidopsis*”
- 11:15 am **Alora Sundbeck**, Michigan Technological University (Last)
“Using Yeast One-Hybrid to Identify Transcription Factors Regulating Acylsugar Biosynthesis in Cultivated Tomato”
- 11:30 am **Avery Hickcox**, Drake University (Grotewold)
“Role of ACT-like domain in the Function of Arabidopsis TT8 bHLH Transcription Factor”
- 11:45 am **Malinali Sanchez Carmona**, Iowa State University (Walker)
“Triose Phosphate Utilization Characterized Through Tobacco Development”
- 12:00 pm **Lunch**
- 1:30 pm **Session Three: Abiotic & Biotic interactions**
Session Chair: Brandon Beall
- 1:30 pm **Juan Naasko**, Finlandia University (Thompson)
“Evaluating transcription factor mybr87 as a biomarker for Nitrogen Response in Maize Seedlings”

- 1:45 pm **Sebastian Lee**, Pomona College (Patterson)
“What Makes a Weed a Weed”
- 2:00 pm **Serena Perry**, Elizabeth City State University (Jiang)
“The Deletion of a Putative Chitinase Enhancer in Arabidopsis using Cas9”
- 2:15 pm **Alondra Ayala**, University of Puerto Rico, Mayaguez (Haus)
“Determining the Effectiveness of *Phaseolus vulgaris* using Fusarium Root Rot Resistance Checks”
- 2:30 pm **Jessica Matheson**, University of Massachusetts, Amherst (Patterson)
“Validation of the International Weed Genomics Consortium Annotation Pipeline Using Two Model Species”
- 2:45 pm **Cornelius Barry**, Closing Remarks