

## School of Plant Sciences

### *2013 Plant and Microbial Sciences Research Retreat Program*

January 26<sup>th</sup>, 2013

- 7:00 AM – 8:00 AM Poster set up and registration
- 7:30 AM – 8:00 AM Continental breakfast
- 8:00 AM – 8:05 AM Welcome by Karen Schumaker, School Director and Professor**
- 8:05 AM – 9:25 AM Session 1: Genomics Data and Tools [Chair: Rod Wing]**
- 8:05-8:25 am 'CoGe 5: Putting Users in Control of Their Data' by Eric Lyons
- 8:25-8:45 am 'Mapping the Imprintome of Developing Maize Endosperm' by Mingming Xin (Wang Lab)
- 8:45-9:05 am 'Viral Population Genomics: New Tools, New Revelations' by Zhongguo Xiong
- 9:05-9:25 am Discussion/break
- 9:25 AM – 10:45 AM Session 2: Translational Sciences and Plant Product I [Chair: Chieri Kubota]**
- 9:25-9:45 am 'Cotton Research and Extension in Arizona' by Guangao (Sam) Wang
- 9:45-10:05 am 'Saltgrass, a High Salt and Drought Tolerant Species, a Potential Turfgrass and a Plant for Sustainable Agriculture in Desert Regions' by Mohammad Pessarakli
- 10:05-10:25 am 'Producing Nutraceutical Carotenoids in Soybean Seeds' by Monica Schmidt
- 10:25-10:45 am Discussion/break
- 10:45 AM – 12:00 PM Session 3: Plant Development and Stress [Chair: David Galbraith]**
- 10:45-11:05 am 'Gene Networks in Early Endosperm Development in Maize & Arabidopsis' by Ramin Yadegari
- 11:05-11:25 am 'Toward Understanding Plant Adaptation to Soil Salinity: Comparative Analysis of a Calcium Sensor in a Halophyte and a Glycophyte' by Shea Monihan (Schumaker Lab)
- 11:25-11:45 am 'Effect of Heat and Drought on Cotton Development' by Tim Dabbert (Gore Lab, ALARC)
- 11:45-12:00 pm Discussion
- 12:00 PM – 1:00 PM Lunch**
- 1:00 PM – 2:20 PM Session 4: Translational Sciences and Plant Product II [Chair: Matt Jenks]**
- 1:00-1:20 pm 'Expediting the Use of Green Algae *Chlorella protothecoides* for Next Generation Biodiesel Production' by Sang-Hyuck Park (Brown Lab)

- 1:20-1:40 pm 'Gene Expression in Inbred and Hybrid Mice, Young and Old' by Steve Goff
- 1:40-2:00 pm 'Utilizing LIDAR Technology in Field-Scale Phenomic Measurements of Cotton' by Robert J. Strand (Gore Lab, ALARC)

2:00-2:20 pm Discussion/break

**2:20 PM – 3:35 PM Session 5: Microbial Adaptations to Hosts [Chair: Hans VanEtten]**

- 2:20-2:40 pm 'Adaptive Differences Among *Aspergillus flavus* Genotypes: Implications for Management of Aflatoxin Contamination' by Hillary Mehl (Cotty Lab)
- 2:40-3:00 pm 'Virulence Factors in the Valley Fever Pathogen, *Coccidioides*' by Marc Orbach
- 3:00-3:20 pm 'The Atomic Structure of a Viral DNA Piloting Protein and its Functional, Evolutionary and Biophysical Implications' by Bentley Fane
- 3:20-3:35 pm Discussion

*Walk to Planning Center Building*

**3:45 PM – 6:00 PM Poster Session and Social Hours (with finger food and drinks)**

**4:00-4:50 pm Posters Session I (odd numbers)**

**5:00-5:50 pm Poster Session II (even numbers)**

**6:00PM – 7:00 PM Special Nighttime Biosphere2 Tour (optional, \$10 per person; Sign-up needed)**

**Poster Presentations**

- P1 'Herbicide Susceptibility of Buffelgrass' by TBA (McCloskey Lab)
- P2 'Introducing Greenhouse Plant Physiology & Technology Research Education and Outreach' by Chieri Kubota
- P3 'Host Affiliations and Geographic Distributions of Fungal Symbionts of Aquatic Plants' by Dustin C. Sandberg (Arnold Lab)
- P4 'Expanding the Harvest Window for Sweet Sorghum' by Dennis T. Ray
- P5 'Identification of the RNA-Directed DNA Methylation Pathway in Gymnosperms' by Yi Huang (Mosher Lab)
- P6 'Temporally Temperamental Protein-Protein Interactions as a Barrier to Productive Horizontal Gene Exchange' by Sarah Doore (Fane Lab)
- P7 'Regulatory and Functional Changes in SOS1 Contribute to the Extreme Salt Tolerance of *Eutrema salsugineum*' by David E. Jarvis (Schumaker Lab)
- P8 'The Arabidopsis CALCINEURIN B-LIKE10 Protein Mediates Flower Development During Plant Growth in Saline Conditions' by Shea M. Monihan (Schumaker Lab)
- P9 'Analysis of CBL10 Gene Duplication in the Halophyte *Eutrema salsugineum*' by Courtney A. Magness (Schumaker Lab)

- P10 'Comparing Transplant Establishment with Surface and Subsurface Irrigation' by Ursula Schuch
- P11 'Phylogenetic Relationships and Diversity of Endohyphal Bacteria in Tropical Seed-Associated Fungi' by Justin Shaffer (Arnold Lab)
- P12 'Suppression of Storage Proteins in Soybean Results in Seed Proteome Changes that may be Caused by Genome Methylation' by Monica Schmidt
- P13 'Genomic Resources for *Leersia perrieri*: An Outgroup Species for the Genus *Oryza*' by Dario Copetti (AGI/Wing)
- P14 'Assessing The Phenotypic Effects of Endohyphal Bacteria Associated with Fungal Endophytes' by Kayla Arendt (Arnold Lab)
- P15 'Reconstructing the Ancestral Genome of the *Oryza* Genus' by Julie Jacquemin (AGI/Wing Lab)
- P16 'Polycomb Repressive Complex 2 Regulates Type I MADS-Box Gene Expression during Endosperm Development in *Arabidopsis*' by Shanshan Zhang (Yadegari Lab)
- P17 'Analysis of Transcription Factor Genes in Maize Early Endosperm Development' by Guosheng Li (Yadegari Lab)
- P18 'Transcriptome Analysis of Early Endosperm Development in Maize using LCM and RNA-Seq' by Dhiraj Thakare, Shanshan Zhang (Yadegari Lab)
- P19 'Collaborative Research Projects at the Arizona Genomics Institute' by Dave Kudrna (AGI/Wing Lab)
- P20 'Prophage in *Pseudomonas syringae*' by Kevin Hockett (Baltrus Lab)
- P21 'A Systematic and Genomic Description of *Undulatus ophiodiicola*, an Emerging Fungal Pathogen of Snakes' by Mana Ohkura (Orbach Lab)
- P22 'Staying Busy without a Research Appointment' by Patricia A. Rorabaugh
- P23 'Automated Food, Water and Oxygen Producing Machine' by Gene Giacomelli
- P24 'Root Growth and Biomass of Field Grown Pavon 76 Bread Wheat - Rye Translocation Lines' by Ruth Kaggwa (S. Wang Lab)
- P25 'A Possible Biotechnology Degree Program at UA' by Ken Feldmann
- P26 'Applications of LED Lighting in Greenhouse Specialty Crop Production' by Ricardo Hernandez (Kubota Lab)
- P27 'The Impact of Water Deficiency on Leaf Cuticular Lipids of Two Diverse Ecotypes of *Thellungiella*' by Xiaojing Xu (Jenks Lab)
- P28 'New Genetic Determinants of Cuticle Permeability in *Arabidopsis*' by Hongliang Wang (Jenks Lab)
- P29 'Genome Wide Association Studies of Cuticle Lipids in *Brassica napus*' by Greg Lohrey (Jenks Lab)
- P30 'Molecular Genetic Analysis of LORELEI Function in Inducing Pollen Tube Growth Arrest in the Female Gametophyte in *Arabidopsis*' by Xunliang Liu (Pelanivelu Lab)
- P31 'SearchTreeDB: Accessible Phylogenetic Trees Across Eukaryotes' by Shelley McMahon
- P32 'Sequencing the Collective *Oryza* Genome to Help Solve the 9 Billion-People Question' by Rod Wing

P33 Title TBA by Dave Kopec

P34 Low Temperature Tolerance of Curcubitaceae and Solanaceae Scion and Rootstock Seedlings Toward Development of Storage Techniques in Vegetable Grafting by Hans Spalholz (Kubota Lab)