

2014 Meeting of the Southern Section of the
American Society of Plant Biologists

In association with the University of Kentucky



Meeting Program

March 29-31, 2014
Hyatt Regency Lexington
Lexington, KY

Meeting Schedule and Locations

Saturday, March 29th

2:00-5:30 pm	Registration, Main Lobby by Regency Ballroom
3:00-6:00 pm	Poster Set-up
6:00-8:00 pm	Annual Mixer, Kentucky Room (Lower Level A)
9:00-10:00 pm	Executive Committee Meeting (TBA)

Sunday, March 30th

7:30-8:00 am	Sunrise Continental Breakfast in Regency Lobby
8:00 am	Welcome from Jay Shockey, Chair, SS-ASPB, Regency Ballroom 1 & 2
8:05-9:50 am	General Session, Regency Ballroom 1 & 2
9:50-10:15 am	Refreshments, Regency Foyer
10:15-11:45 am	Graduate Student Oral Presentations, Regency Ballroom 1 & 2
11:45-1:00 pm	Lunch Break
1:00-2:15 pm	Graduate Student Oral Presentations, Regency Ballroom 1 & 2
2:15-2:45 pm	Refreshments, Regency Foyer
2:45-3:45 pm	Graduate Student Oral Presentations, Regency Ballroom 1 & 2
4:00-6:00 pm	Poster Session, Regency Room 3
7:00 pm	Banquet, Hyatt Suites (Second Level by elevators)
8:30 pm	Awards Presentations, Hyatt Suites (Second Level by elevators)

Monday, April 8

2013 Kriton-Hatzios Symposium, Ballroom

8:45-10:00 am	Speakers
10:00-10:30 am	Refreshments, Regency Foyer
10:30-12:10 pm	Speakers
12:10-1:00 pm	General Business Meeting, Regency Ballroom 1 & 2
1:00 pm	Adjourn

Sunday, March 30

8:00 am

Welcome from Jay Shockey, Chair, SS-ASPB, Regency Ballroom 1 & 2

8:05-9:50 am

General Session

Microbial natural product-based bioprospecting: identification of acetobixan as an inhibitor of plant cellulose biosynthesis. *Ye Xia*, University of Kentucky.

Identification and molecular characterization of a chlorophyll deficient non-photosynthetic *Chlamydomonas reinhardtii* mutant. *Mautusi Mitra*, University of West Georgia, Carrollton, Georgia.

Plant Gene Discovery by mPing-based Transposon Tagging. *C. Nathan Hancock*, Department of Biology and Geology, University of South Carolina Aiken, 471 University Parkway, Aiken, SC.

Rhodobacter capsulatus: An autotrophic platform for production of triterpene fuels. *S. Eric Nybo*, Department of Pharmaceutical Sciences, University of Kentucky, Lexington, KY.

A genome-scale resource for the functional characterization of Arabidopsis transcription factors. *Ghislain Breton*, Department of Integrative Biology and Pharmacology, University of Texas Health Sciences Center-Houston (UTHSC), Houston, TX.

A systems level approach to dissect the regulation of photosynthetic carbon metabolism in rice. *Supratim Basu*, Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR.

Glycoengineering of tobacco plants to produce asialoerythropoietin and erythropoietin. *Jiahua Xie*, Department of Pharmaceutical Sciences, North Carolina Central University, Durham, NC.

9:50 am

Refreshments

10:15-11:45 am

Graduate Oral Competition Session 1

Determining the impact of endophytic bacteria on growth of bell pepper (*Capsicum annuum* L.). *Zheng Wang*, Department of Horticulture, University of Kentucky, Lexington, KY.

Interacting Partners of the SUNN Symbiotic Regulatory Kinase. *Ashley Crook*, Clemson University, Department of Genetics & Biochemistry, Clemson, SC.

RDNs/HPATs and CLEs: A role in the autoregulation of nodulation. *Stephen Nowak*, Clemson University, Department of Genetics & Biochemistry, Clemson SC

Chemical inducers of systemic acquired resistance in plants. *Mohamed El-Shetehy*, Department of Plant Pathology, University of Kentucky, Lexington, KY.

Mammalian herbivory on fourteen experimentally planted native hardwood tree seedlings of the Kentucky Bluegrass savanna-woodland community. *James D. Shaffer*, University of Kentucky, Department of Biology, Lexington, KY.

Identification and quantitative analysis of the polyphenolic compounds in *Fragaria* spp. mutants. *Sutapa Roy*, Department of Horticulture, University of Kentucky, Lexington, KY.

11:45–1:00 pm

Lunch Break

1:00-2:15 pm

Graduate Oral Competition Session 2

Effects of fatty acid desaturase 7, lipoxygenase C and Hydroperoxide lyase on performance of potato aphids, *Macrosiphum euphorbiae* in tomato. *Jiamei Li*, Entomology Department, University of Arkansas, Fayetteville, AR.

Gene Expression and Physiological Analyses to Study Grain Filling in *Oryza sativa* Japonica varieties Cypress and LaGrue Subjected to High Nighttime Temperatures. *Nicholas Lawson*, Department of Plant Pathology, University of Arkansas, Fayetteville, AR.

Identification of proteins that regulate virus resistance in soybean. *Hexiang Luan*, University of Kentucky, Lexington, KY.

Enzymes from fungal and plant origin required for chemical diversification of loline alkaloids in grass-*Epichloë symbiota*. *Juan Pan*, Department of Plant Pathology, University of Kentucky, Lexington, KY.

Occurrence and Implications of Anandamide (a mammalian neurotransmitter) in the Moss *Physcomitrella patens*. *Richard R. Sante*¹, Department of Biological Sciences, East Tennessee State University, Johnson City, TN.

2:15 pm

Refreshments

2:45-3:45 pm

Graduate Oral Competition Session 3

Arabidopsis Seed-filling Regulatory Association Network Analysis. *Chirag Gupta*, Department of Crop, Soil and Environmental Sciences, University of Arkansas, Fayetteville, AR.

Towards development of an Ac-Ds activation tagging system in tomato. *Ipeleng Randome*, Department of Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR.

Abiotic stress tolerance in rice mediated by coordinate regulation of lignocellulose biosynthesis pathway. *Ritu Mihani*, Cell and Molecular Biology Program, Department of Crop, Soil and Environmental Sciences, University of Arkansas. Fayetteville, AR.

Genetic Dissection of N-Acylethanolamine (NAE) Signaling Pathway in *Arabidopsis thaliana* L. *Bikash Adhikari*, Center for Plant Lipid Research, Department of Biological Sciences, University of North Texas, Denton, TX.

3:45-4:15 pm

Break

4:00-6:15 pm

Poster Session

Undergraduate Poster Competition*

- P1*** Symbiotic endophytes could improve crop production.
Katelyn Knight, University of West Alabama.
- P2*** A Molecular Approach to the Autoregulation of Nodulation: Genes and Hormones.
Kaylee Kotwis, Clemson University.
- P3*** The role of Hydroxyproline Arabinosyl Transferases (HPATs) in *Arabidopsis*.
Benjamin Flanagan, Clemson University.
- P4*** Determining the role of target site duplication sequences on the transposition of miniature inverted repeat transposable elements.
David Gilbert, University of South Carolina Aiken.
- P5*** Targeted Insertion of the Transposable Element, mPing, by Manipulation of Transposase Proteins.
Ashley Strother, University of South Carolina Aiken.
- P6*** Identifying sequences responsible for the high transposition rate of a Tourist MITE.
Daymond Parrilla, University of South Carolina Aiken.
- P7*** Optimizing germinal transposition of mPing in *Arabidopsis thaliana*.
Curtney Burckhalter, University of South Carolina Aiken.
- P8*** Nitric Oxide-mediated Retrograde Signaling in Plants.
Jared Gabbert, University of Kentucky.
- P9*** High Throughput Phenotyping of High Vitamin C Tobacco Lines.
Earl Morris, Arkansas State University.
- P10*** Discovery of Symbiotic Fungal Endophytes and Their Effects on Agricultural Plants.
Brandon S. Nelson, University of West Alabama.
- P11*** Characterization of *Epipremnum aureum* EaF82 by expressing in *Arabidopsis* Plants.
Keely N Wharton, North Carolina Central University.
- P12*** Characterization of Two Genes in *Arabidopsis* That Control Lipid Droplet Formation.
Kevin T. Mutore, University of North Texas.
- P13*** Spadix Function in *Pinellia pedatisecta*.
T. Marshall, University of North Georgia.

General Poster Session

- P14** Grass-fungal endophyte symbioses effects on nitrogen fixation and dynamics in a Kentucky pasture.
Lindsey Slaughter, University of Kentucky.
- P15** A Forward Genetic Approach to Unraveling a Genetic Pathway: Mapping Suppressor Screen Mutants.
Sophie Altamirano, Clemson University.
- P16** Single seed selection for low phytate soybeans.
Maythem Al-Amery, University of Kentucky
- P17** Transcriptional Regulators of Triacylglycerol Biosynthesis in Nonseed Tissues.
Parker Dabbs, East Tennessee State University.
- P18** Characterization of anandamide metabolic pathway in moss.
Swati Swati, East Tennessee State University.
- P19** Identification of the WRKY Transcription Factor Family from the Medicinal Plant *Catharanthus roseus*.
Craig Schluttenhofer, University of Kentucky.
- P20** Identification and Characterization of DGAT1 and PDAT1 involved in TAG biosynthesis in Avocado.
Md Mahbubur Rahman, East Tennessee State University.
- P21** Towards development of an Ac-Ds activation tagging system in tomato.
Ipeleng Randome, University of Arkansas.
- P22** ER Localized Arabidopsis SEIPIN Proteins Regulate Lipid Droplet Number and Morphology.
Yingqi Cai, University of North Texas.
- P23** Using variegated 'Golden Pothos' Plants to Study Nuclear Genes Involved in Chloroplast Biogenesis.
Laquitta Thomas, North Carolina Central University.
- P24** Comparative study of varying *M. truncatula* genotypes and phenotypes as they relate to saponin defenses against insect pests.
Audra Harris, University of Arkansas.
- P25** Formation of hormone-induced nodule-like structures in cereals.
Ryan Hiltenbrand, University of Central Arkansas.
- P26** Engineering high value oil production into biofuel crops.
Zuodong Jiang, University of Kentucky.
- P27** Double-stranded RNA-binding protein 4 is required for resistance signaling against viral and bacterial pathogens.

Gah-Hyun Lim, University of Kentucky.

- P28** Presence of Atrazine in Surface Waters of North Louisiana.
Om Devkota, Louisiana State University, Shreveport, LA.
- P29** Screening and characterization of diverse rice genotypes for water use efficiency and drought tolerance.
Anuj Kumar, University of Arkansas.
- P30** Role of a nodule-specific membrane transporter during symbiotic nitrogen fixation in legumes.
Christina Wyman, West Virginia University.
- P31** Magnetic Growth Stimulation of Microalgae for Biofuel.
Jeff Zabolotney, University of South Alabama.
- P32** Efficiency and Structure of Repair Site after I-SceI Mediated DNA Excision in Rice.
Clinton Greub, University of Arkansas.
- P33** Characterization of Gossypol Metabolites in Situ in Pigmented Glands of Cotton Embryos using Laser Desorption Ionization (LDI)- and Nanospray Ionization (NSI)-Mass Spectrometry (MS).
Drew Sturtevant, University of North Texas.
- P34** Understanding Bacterial and Plant Interactions in *Nicotiana benthamiana* and The Effects That has in Their Normal Physiology and Development.
Andrea Sanchez, University of Kentucky.
- P35** Functional analysis of a nodule-specific GRF Zinc Finger transcription factor in the model legume, *Medicago truncatula*.
Lucas Gontijo Silva Maia, West Virginia University
- P36** Heterologous expression of *Arabidopsis* purple acid phosphatase (AtPAP15) in tobacco for remediation of excess phosphorus from soil.
Jane Bartonjo, Western Kentucky University.
- P37** A genome-scale resource for the functional characterization of Arabidopsis transcription factors.
Ghislain Breton, University of Texas Health Sciences Center-Houston.
- P38** Peroxidase activity in healthy or *Cercospora kikuchii*-infected soybean seeds.
Bruno Guilherme Torres Licursi Vieira, University of Kentucky.
- P39** *Rhodobacter capsulatus*: An autotrophic platform for production of triterpene fuels.
S. Eric Nybo, University of Kentucky.
- P40** Comprehensive expression profiling of rice grain quality-related genes in contrasting cultivars under high nighttime temperature.
Ramegowda Venkategowda, University of Arkansas.
- P41** Soybean NDR1-like proteins bind pathogen effectors and regulate resistance signaling.

MB Shine, University of Kentucky.

- P42** Identification of novel regulators of a calcium calmodulin dependent protein kinase (DMI3) controlling plant-microbe symbioses.
Arijit Mukherjee, University of Central Arkansas.
- P43** Elucidating differences in gene expression of *Epichloe coenophiala* endophytic fungus in reproductive vs. vegetative tissues of tall fescue (*Lolium arundinaceum*).
Padmaja Nagabhyru, University of Kentucky.
- P44** Physiological measures and plant grafting as means to characterize stress in salt-susceptible and salt-tolerant soybeans.
Lacy D. Nelson, University of Arkansas.
- P45** Efficient excision of FRT-flanked selectable marker gene from the *Oryza sativa* genome by FLPe activity.
Jaimie Underwood, University of Arkansas.
- P46** “Drying oil production in transgenic plants: optimization of codon usage, epitope tagging, and promoter choice.”
Jay Shockey, USDA-ARS, Southern Regional Research Center.
- P47** Metabolic engineering of photorespiratory bypass pathways to enhance novel biofuel production in transgenic plants.
Sheba Goklany, University of Kentucky.

Monday, March 31

Kriton-Hatzios Symposium

8:45-10:00 am

Regulation of Nutrient Uptake, Transport and Exchange Processes Inarbuscular Mycorrhizal Interactions.

Carl Fellbaum

Department of Botany and Microbiology
South Dakota State University

10:00-10:30 am

Break

10:30-12:10 pm

Up, Down and Back Again: Long Distant Signal Transduction in the Autoregulation of Nodulation.

Dr. Julia Frugoli

Department of Genetics and Biochemistry
Clemson, University

The Ecological Consequences of Hybridization in Asexual Grass Endophytes.

Dr. Stanley Faeth

Department of Biology
University of North Carolina-Greensboro

12:10-12:40 pm

General Business Meeting

12:40 pm

Adjourn

See you next year in Mobile, AL

Please Recycle your Badges
on your way out!