# 2012 Meeting of the Southern Section of the American Society of Plant Biologists

# **Main Program**



March 3 -5, 2012
Ocean Reef Resort
Myrtle Beach, South Carolina

### Saturday, March 3

4:30 P.M. - 6:30 P.M. Registration

5:00 P.M. - 8:00 P.M. Annual Mixer

5:00 P.M. - 8:00 P.M. Poster Set-Up

7:00 P.M. - 9:00 P.M. Executive Committee Meeting

## Sunday, March 4

7:00 A.M. - 8:15 A.M. Breakfast Buffet, Café du Port Restaurant, Ocean Reef Resort

8:15 A.M. Welcome - Rebecca Dickstein, Chair, SS - ASPB

#### **General Session 8:30 A.M. – 10:15 A.M.**

8:30 Soybean Somatic Embryos and Plastids as a Model System for Lipid Metabolism

Salvatore Sparace Clemson University

8:50 Transgenic Soybean Seeds as a Protein Expression System: Separating Production from

**Purification** 

Kenneth Bost University of North Carolina at Charlotte and SoyMeds, Inc.

9:10 Hotspots in Viral siRNA Accumulation in Maize

Vicki Vance University of South Carolina

9:30 Analysis of Aquaporin Gene Family in Cotton

Wonkeun Park Clemson University

9:50 N-Glycosylation Engineering of Tobacco Plants to Produce Asialoerythropoietin

Farooqahmed Kittur North Carolina Central University

#### **Refreshment Break - 10:15 A.M. - 10:45 A.M.**

10:45 TLA1, A Novel Gene for the Regulation of the Chlorophyll Antenna Size in the Green Microalga *Chlamydomonas reinhardtii* 

Mautusi Mitra University of West Georgia

11:05 Wound healing and peculiar underwater polymerization strategies in marine algae

Cliff Ross University of North Florida

11:25 Soybean Seed Protein, Oil, Sugars, and Boron Altered by Foliar Boron Application Under Water

**Stress** 

Nacer Bellaloui USDA-ARS, Jamie Lee Whitten Delta States Research Center

11:45 QTL that Underlie Resistance to Two Major Diseases in Soybean: Sudden Death Syndrome (SDS)

and Sovbean Cyst Nematode (SCN)

Abdelmajid Kassem Fayetteville State University

12:05 The ANR Pathway of Proanthocyanidin Biosynthesis is Evolutionally Conserved Across the

**Vascular Plants** 

De-Yu Xie North Carolina State University

#### <u>Lunch Break 12:30 P.M. – 2:00 P.M (on your own)</u>

#### <u>Graduate Student Oral Competition Session A. 2:00 P.M – 5:15 P.M.</u>

2:00 Physiological and Biochemical Responses of Bald Cypress (Taxodium distichum) to Elevated

**Salinity** 

Nathan Lauer University of North Florida

2:15 The Role of CALMODULIN-LIKE38 in Viral Suppression of RNA Silencing

Amy Wahba Foreman University of South Carolina

2:30 Coupling of Molecular Modeling with *In Vitro* Enzymatic Analysis to Elucidate how the Toc

GTPase Mechanism is Coupled to the Pre-Protein Import Cycle

Kristen Holbrook University of Tennessee

2:45 Ferric Reductases and Transporters that Contribute to Mitochondrial Iron Homeostasis

Anshika Jain University of South Carolina

3:00 Mini Spider Silk-Like Protein Production in Transgenic Tobacco Plants

Congyue Peng Clemson University

#### Refreshment Break 3:15 P.M. – 3:45 P.M. (posters are open)

3:45 Employing Functional Genomics to Study the Regulation of Tetrapyrrole Metabolism in the

Green Micro-Alga Chlamydomonas reinhardtii

Phillip Grovenstein University of West Georgia

4:00 Functional Characterization of AtFRO4 and AtFRO5: Two Members of the *Arabidopsis* Ferric

**Reductase Oxidase Gene Family** 

Grandon Wilson University of South Carolina

Physiological Responses of the Seagrass Thalassia testudinum Against the Causative Agent of 4:15 Wasting Disease, Labyrinthula sp. Stacey Trevathan-Tackett University of North Florida 4:30 Three Arabidopsis AIL/PLT Genes Act in Combination to Regulate Shoot Apical Meristem **Function** Janaki Mudunkothge University of South Carolina 4:45 The Utilization of a Genome-Scale Model to Explore Mutations that Increase Cellulose in Arabidopsis thaliana Jiun Yen Virginia Polytechnic Institute and State University 5:00 Velvetbean: de novo transcriptome assembly Elspeth Murday Clemson University Graduate Student Oral Competition Session B. 2:00 P.M. – 5:15 P.M. 2:00 Ethanol Prolongs Systemin, Flagellin, and Chitosan-Induced Activation of MAP Kinases in Solanum peruvianum cells. Claire Hann University of South Carolina Comparative Proteomics of Recalcitrant Seed Death in Spartina alterniflora 2:15 Louisiana State University Yi Wang 2:30 **Examining the Roles of PsToc75 POTRA Domains in Chloroplast Protein Import** Richard Simmerman University of Tennessee Analysis of Soybean Stem Characteristics to Maximize Biofuel Yield 2:45 Matthew Waalkes Virginia Military Institute **Interacting Partners of the SUNN Symbiotic Regulatory Kinase** 3:00 Ashley Crook Clemson University

#### Refreshment Break 3:15 P.M. – 3:45 P.M. (posters are open)

3:45 Ectopic Expression of AINTEGUMENTA-LIKE 6 Affects Floral Organ Initiation and Identity
Han Han University of South Carolina

4:00 Effects of Historical Land Use and Environmental Variation on Plant Community Structure and the Prevalence of Invasion in Weeks Bay, AL

Amanda Ecker University of South Alabama

4:15 Seagrass Defenses: Elicitation of an Oxidative Burst in the Tropical Marine Angiosperm *Thalassia* testudinum

Kyle Loucks University of North Florida

4:30 N-Terminal Hsp70 Binding Site is a Major Determinant for Precursor Protein Translocation Into Chloroplasts

Prakitchai Chotewutmontri University of Tennessee

4:45 Long Distance Signaling: a Mechanism for Nodule Regulation in Medicago truncatula

Tessema Kebede Kassaw Clemson University

5:00 Identification and Characterization of a MAP Kinase-Containing Complex

Carleton Bequette University of South Carolina

#### Poster Session 1. 5:15 P.M – 7:30 P.M.

# <u>Undergraduate students – posters</u>

(\* - undergraduate poster competition entry)

(Each student presenter should be at their poster from 5:15 - 6:30 P.M. for discussion and undergraduate competition judging)

P1\*. Employing Functional Genomics to Identify Novel Genes That Provide Photo-Protection to Plants

in High Light Stress

Darryel Wilson University of West Georgia

P2\*. Analyzing the Mechanism of Antibiotic Resistance with Atwbc19 through the Analysis of Protein-

**Protein Interaction** 

La'Mayah Hodges Spelman College

P3\*. The Effects of NIP on Cellular Growth in Arabidopsis thaliana Leaves

Bailey Wattron University of North Texas

P4\*. Selenate (SeO4) Induced the Up-Regulation of miRNA395 in Arabidopsis thaliana

Patrick Vallentine Coastal Carolina University

P5\*. The Effect of the Arabidopsis ABC Transporter Atwbc19 on Transcript Levels of Iron-Regulated

Genes

Morayo Gloria Adebiyi Spelman College

P6\*. Genetic Mapping of a Novel MicroRNA Translational Regulation Mutant in Plants

Kala Peek, Caleb Kirkpatrick, and Cody Mullins Charleston Southern University

P7\*. Confirmation of Mini-spidroin Expression in Transgenic Tobacco

Charlene Gravgaard Clemson University

P8\*. Evaluation of Natural Pathogens of Salvinia molesta as Potential Agents of Biological Control.

Danielle Handrop Louisiana State University-Shreveport

P9\*. Creation and Characterization of Transgenic Tobacco Plants Expressing Human Recombinant

**Erythropoietin** 

Mamudou Bah North Carolina Central University

#### Poster Session 2. 6:30 P.M. – 7:30 P.M.

P10. Positive Effects of the Gall Forming Midge, Asphondylia borrichiae (Diptera: Cecidomyiideae), on Its Host Plant Borrichia frutescens (Asteraceae)

Cliff Ross University of North Florida

P11. Cotton Line Development for Physiology, Genetics and Biochemistry Research

Rick Turley USDA-ARS, Jamie Whitten Delta States Research Center

P12. Identification and Characterization of a MAP Kinase-Containing Complex

Carleton Bequette University of South Carolina

P13. Immunohistochemical Investigation of Cotton Carpel Tissue Exposed to Xylanolytic Hydrolases of

Aspergillus flavus

Jay Mellon USDA-ARS, Southern Regional Research Center

P14. Does Inhibiting Phloem Loading in Verbascum phoenicium Induce Apoptosis in Intermediary

Cells?

Ashlee McCaskill North Georgia College & State University

P15. Exploring an Energy Sensor Protein Complex

Janet Donahue Virginia Polytechnic Institute and State University

P16. Control of Mycotoxigenic Fungi with Synthetic Antimicrobial Peptides

Jeff Cary USDA-ARS, Southern Regional Research Center

P17. Expression and Localization of Arabidopsis thaliana Proteins Involved in Metal Metabolism

Shannon R. Alford Presbyterian College

P18. Subcellular Localization of Regulatory Enzymes in Inositol Signaling

Phoebe Williams Virginia Polytechnic Institute and State University

P19. Alteration of Energy Sensing Pathways in Arabidopsis thaliana

Padma Rangarajan Virginia Polytechnic Institute and State University

P20. Manipulation of Mir156 Genes Leads to Modified Plant Morphology and Enhanced Abiotic Stress

Tolerance in Transgenic Creeping Bentgrass (Agrostis stolonifera L.)

Zhigang Li Clemson University

P21. Possible Role of Nonphotochemical Quenching in Chloroplast Movement

Judy Schmalstig Rollins College

P22. Investigating the Role of Reactive Oxygen Species (ROS) in Elongating Cotton Fiber

Michael Stiff North Carolina State University

P23. Hotspots in Viral siRNA Accumulation in Maize

Sizo Mlotshwa University of South Carolina

#### **Banquet** – 7:45 P.M.

Martin's Restaurant 7200 N. Ocean Blvd, Myrtle Beach, SC

Phone: 843.449.1368

# Monday, March 5

7:00 A.M. - 8:15 A.M. Breakfast Buffet, Café du Port Restaurant, Ocean Reef Resort

#### 2012 Kriton – Hatzios Symposium

8:30 How Plants Sense Their Environment: the Role of Chloroplasts in the Perception of And Response To Environmental Stress

Klaus Apel, Boyce Thompson Institute for Plant Research, Ithaca NY

9:30 A Feeling for the Organelle: Multiple Roles for Mechanosensitive Channels in the Chloroplast Envelope

Elizabeth Haswell, Washington University in St. Louis

#### Refreshment Break 10:30 A.M. – 11:00 A.M. (posters are open)

11:00 Chloroplast Genomics and Genetic Engineering

Henry Daniell, University of Central Florida

12:00 P.M.– 12:30 P.M. General Business Meeting

12:30 P.M. Meeting Adjourns