Greetings from Dr. Shahid Mukhtar  
2018-2019 SS-ASPB Chair

I’m very excited about the venue of our upcoming SS-ASPB annual meeting - a state of the art new facility, the Watt Family Innovation Center at Clemson University. We look forward to another exceptional event organized by Dr. Magaly Rincón-Zachary (Secretary/Treasurer) and Dr. Julia Frugoli (local organizer). The 2019 Kriton Hatzios Symposium theme will be “Foundational to Translational: The Impact of Plant Science Research” (organizer: Dr. Aruna Kilaru, Vice-Chair). We have a great line-up of speakers for this symposium, featuring Dr. Toni M. Kutchan (Donald Danforth Plant Science Center), Dr. Anthony Kinney (DowDuPont), Dr. Henry Daniell (University of Pennsylvania), and Dr. Harry Klee (University of Florida), all of whom will talk about the latest discoveries in plant translational research. The friendly atmosphere of our conference provides a number of benefits to undergraduate and graduate students, from networking opportunities with other Southern Section colleagues, to gaining experience presenting their exciting work, to exposure to cutting-edge science and being inspired by new ideas. So, come join us at this exciting meeting, held from March 16th – 18th, 2019. Registration will open in February – stay tuned for the email notification!

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Congratulations to our newly elected Secretary/Treasurer Dr. Mustafa Morsy, Associate Professor at the University of West Alabama (UWA). He has been an active member of ASPB and the Southern Section, and I am confident that he will be an excellent addition to our leadership. We would also like to thank Dr. Mautusi Mitra (University of West Georgia) and Dr. Hong-Gu Kang (Texas State University) for their willingness to run for the same office.

Mark your calendar for March 16th – 18th and be ready to meet your old friends and make new ones at the Annual Southern Section Meeting of ASPB! We look forward to seeing you all in Clemson, SC. Thank you for your continuous support of our Section. Please feel free to contact me or any others officers with questions, concerns or new ideas.

Show your support for ASPB!

Include your ASPB affiliation in your electronic email signature.
Dr. Mustafa Morsy

2019-2020
SS-ASPB
Secretary/Treasurer

Dr. Morsy earned his Ph.D. degree in Cell and Molecular Biology from the University of Arkansas with research focused on plant response to abiotic stress. He joined John Cushman’s lab at the University of Nevada, Reno, as a postdoctoral fellow to continue his work on plant response to abiotic stress. Later, in Marilyn Roossinck’s lab at the Samuel Robert Noble Foundation, he studied the molecular mechanisms that govern plant-fungal-viral interaction that lead to increasing plant thermotolerance. In 2011, he joined the University of West Alabama (UWA) as a full-time faculty in the Department of Biology. The Morsy lab at UWA focuses at the discovery of novel endophytes that can be employed to improve crop productivity, under normal and abiotic stress conditions. His lab is using tomato and corn as model systems to test novel endophytes under greenhouse and field conditions. The Morsy lab identified many fungal endophytes that improve tomato and corn production under greenhouse and field conditions. The Morsy lab collaborates with several industry partners to develop biofertilizers to help with the dire need of increasing crop production to meet the demand of the growing global population and climatic changes. In addition, the Morsy lab studies the molecular mechanisms that control a three-way symbiosis between a plant, a fungus, and a mycovirus that lead to a significant increase of plant heat tolerance. The Morsy lab research is funded by the National Science Foundation, the Alabama Department of Agriculture, and other private foundations. See Morsy the lab website for more details and recent publications at http://facstaff.uwa.edu/mmorsy/.

In addition, Dr. Morsy is a committed educator who encourages undergraduate students’ involvement in research via independent studies in his lab and through research-based curriculum. He is the Principal Investigator of two National Science Foundation grants that focus on improving undergraduate education at UWA, a minority serving institute, through implementation of a comprehensive research-based curriculum.

Dr. Morsy serves as the Chair and co-founder of the UWA Research Symposium, and is also chair of the annual Symposium of the Tiny Earth: Student Sourcing Antibiotic Discovery, a global network of more than 120 universities headquartered at the University of Wisconsin, Madison. Additionally, Dr. Morsy provides an outreach program to local K-12 students through the Science Saturdays program he coordinates every fall and spring semester on the UWA campus.
SS-ASPB 2019
March 16-18, 2019
Clemson University
Clemson, SC


Program

Saturday, March 16th
- Registration 3:00-6:00 pm, Watt Family Innovation Center
- Botanical Garden Tour
- Planetarium Show
- Opening Night Mixer 6:30 pm, Best Western Plus

Sunday, March 17th
- Registration 8:00 am-12:00 pm, Watt Family Innovation Center
- Plenary Oral & Poster Presentations, Watt Family Innovation Center
- Banquet & Student Awards, Best Western Plus

Monday, March 18th
- Kriton Hatzios Symposium
- Business Meeting, Watt Family Innovation Center

Accommodations
- Best Western Plus
- Hampton Inn
- James F. Martin Conference Center & Inn (Clemson University owned)
- Hotel Tilman
- The Abernathy

More information is available on our website.

Questions?

Contact the meeting organizers:
Dr. Magaly Rincón-Zachary
magaly.rincon@msutexas.edu
2019 SS-ASPB Secretary/Treasurer

Dr. Julia Frugoli
jfrugol@clemson.edu
Local Site Coordinator
Dr. Toni Kutchan spent twenty years leading research in Germany, most recently as Professor and Department Head at the Leibniz Institute for Plant Biochemistry in Halle, as well as its Managing Director. Her primary research interests are the biosynthesis of plant medicinal compounds such as alkaloids and the development of plant synthetic biology systems. She is a member of the Board of Scientific Advisors of the Schering Research Foundation, Central Selection Committee of the Alexander von Humboldt Foundation, Scientific Advisory Committee of the William L. Brown Center for Plant Genetic Resources of the Missouri Botanical Garden, Forshungszentrum Jülich and BioDiscovery Institute of the University of North Texas. She is also a member of the STEM Advisory Committee of the Girl Scouts of Eastern Missouri, Board of Trustees of the Academy of Science–St. Louis, Berlin-Brandenber Academy of Sciences, German National Academy of Science Leopoldina, and a Fellow of the Academy of Science–St. Louis, and the American Association for the Advancement of Science. She also serves as an Adjunct Professor of Biology at Washington University and the University of Missouri, St. Louis. Dr. Kutchan holds a B.S. in Chemistry from the Illinois Institute of Technology, a Ph.D. in Biochemistry from St. Louis University, the Dr. Habil. and venia legendi in biochemistry from the University of Munich.
Chloroplast bioreactors: leaf as a production system for biopharmaceuticals, enzymes and vaccines

HENRY DANIELL, Ph.D.

The Chouncey Egel Endowed Professor and Director of Translational Research at the University of Pennsylvania, School of Dental Medicine.

Henry Daniell is the Fellow of the American Association for the Advancement of Science and a foreign member of the Italian National Academy of Sciences and the Editor in Chief of the Plant Biotechnology Journal, Oxford, UK. He is recipient of several awards including the American Diabetes Association Award, American Heart Association, Bayer Hemophilia global award and Bill and Melinda Gates Foundation Award for his outstanding contributions. Prof. Daniell pioneered chloroplast genetic engineering as a new platform to produce and orally deliver low cost vaccines and biopharmaceuticals bioencapsulated in plant cells. Proteins drugs are protected from acids and enzymes in the stomach by bioencapsulation within plant cells and the gut bacteria digest plant cell wall to release them into the blood circulation system. This novel production and delivery platform are agnostic to diseases or indications. The proof-of-concept has been demonstrated to treat major metabolic or genetic disorders, including Alzheimer’s, diabetes, hypertension, hemophilia and retinopathy. Booster vaccines to prevent global infectious diseases like tuberculosis, malaria, cholera, polio and biological threats, such as anthrax and plague. Studies with FDA and CDC funded by the Gates Foundation, NIH SMARTT program or major pharmaceutical companies help to advance these inventions to the clinic. Chloroplasts are also advanced as bioreactors to produce enzymes for textile, detergent or biofuel industrial applications. Ranked by Nature Biotechnology among the top ten inventions of the past decade and among Biomed Central’s Hot 100 authors in the globe, he has >100 published or granted global patents and >250 scientific publications.

A multi-disciplinary approach to understanding the genetic control of tomato flavor

HARRY J. KLEE, Ph.D.

Professor, Horticultural Sciences Department, Plant Molecular and Cellular Biology Program, University of Florida

Harry Klee received a PhD in Biochemistry from the University of Massachusetts. He did postdoctoral research at the University of Washington. He was employed by Monsanto Company from 1984-1995 where he was a member of the team that developed herbicide resistant crops. In 1995, he took an endowed chair at the University of Florida where he established a program to understand the biochemistry and genetics underlying flavor of fruit crops. Working in collaboration with sensory and

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food scientists, his laboratory has identified the chemicals that define good tomato flavor. He has used large-scale genomics approaches to understand why modern commercial tomatoes have lost good flavor and to develop a genetic roadmap for recovering heirloom flavor. Harry is a Fellow of the American Association for the Advancement of Sciences, a member of the National Academy of Sciences and currently serves as Past-President of the American Society of Plant Biologists.

**Improving the Composition of Seeds for Food, Feed and Aquaculture**

ANTHONY J KINNEY, D. Phil,

Research Director, Corteva Agriscience™, Agricultural Division of Dow DuPont

Anthony J. Kinney is the leader of the Output Traits group in the Trait Discovery organization at Corteva Agriscience™, Agricultural Division of Dow DuPont, based in Johnston, Iowa. In this role, he leads a group of scientists responsible for the discovery, optimization and lead development of traits that add value to seeds by modifying their composition. Tony earned a doctorate in plant sciences from Oxford University in 1985 and a bachelor’s degree in biology from the University of Sussex, UK, in 1980. He has had postdoctoral research experience in plant metabolism at Louisiana State University, and in food science, yeast biochemistry and molecular biology at Rutgers University. Tony joined DuPont in 1989 as a research scientist in the Agricultural Products department at the DuPont Experimental Station in Wilmington, Delaware. He is an adjunct Professor in the Plant and Soil Sciences Department at the University of Delaware, has served on the scientific advisory board of various universities and research institutions and was an editor at Plant Physiology for over 25 years.

Clemson University, site of the SS-ASPB 2019 meeting.
We’re on the web!
http://ss-aspb.org/

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