SESSION LECTURE

No.44

Plant Metabolome and Human Health

Room: 302AB

Co-Chairs: Xiaoya Chen

Harry Klee

Day 3 October 29th (Monday) 8:30 – 12:00		
Time	**Speaker**	**Title**
8:30-9:00	**Xiaoya Chen** *Shanghai Institute of Plant Physiology and Ecology, Chinese Academy of Sciences, China*	Beyond domestication - biosynthesis of antinutritional sesquiterpene phytoalexins in cotton
9:00-9:30	**Harry Klee** *University of Florida, USA*	Chemical and genetic approaches to understanding and improving tomato flavor
9:30-10:00	**Asaph Aharoni** *Weizmann Institute of Science, Israel*	Unravelling Solanaceae Secondary Metabolism through the Integration of Heterogeneous and Spatial Data from Metabolomics, Genetics and Informatics
10:00-10:30	**Tea Break**	
10:30-11:00	**Robert Last** *Michigan State University, USA*	Evolution of trichome protective metabolites in tomato and other Solanaceae
11:00-11:30	**Sanwen Huang** *Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Sciences, China*	Big data and plant metabolic biology
11:30-12:00	**Xiaojiang Hao** *Kunming Institutes of Botany, Chinese Academy of Sciences, China*	The function of plant natural products in biological processes

Xiaoya Chen

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The aims of his research is to understand plant specialized (secondary) metabolism, the biosynthesis of sesquiterpenes and regulation, plant-insect interactions, and engineering specialized pathways for better crops. Particularly achievements have been made in elucidation of gossypol biosynthetic pathway and developing new technology for insect pests control.

Asaph Aharoni

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His main interest is in the regulation of plant metabolic pathways, in particularly those associated with specialized metabolism and its coordination with developmental and stress response programs.

Sanwen Huang

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Sanwen Huang, is director of the Agricultural Genomics Institute,Chinese Academy of Agricultural Sciences. he is committed to the direction of plant molecular breeding. Organized a genome project and a variation group study of a variety of major vegetables, and pioneered work in the frontiers of group big data and plant secondary metabolism. He led the team to map the cucumber genome, and the acclimation and population genetic basis of cucumber and tomato were revealed. He found the new regulation mechanism of plant secondary metabolism and provided scientific support for vegetable quality breeding.

Harry Klee

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His research program focuses on fruit flavor quality. What chemicals in the fruit drive consumer liking? How does the plant synthesize those chemicals? Why do modern commercial varieties have flavor that is inferior to older heirloom varieties and how do we produce varieties that consumers will love?

Robert Last

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He studies plant metabolism to reveal mechanisms by which biological novelty evolves. He uses structural and functional genomic, metabolomic and biochemical approaches to analyze metabolites called ‘acylsugars’, produced in glandular hairs of plants in the nightshade (Solanaceae) family. In addition to understanding the acylsugar metabolic networks he is asking how diversity in these metabolites influences insect-plant interactions.

Xiaojiang Hao

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The area of his research includes 1) natural product chemistry: new structure, and bioactivity, mechanism and structure-activity relationship; 2) bioactivity of compounds on the human diseases; 3) natural inhibitor of plant virus based on the chemical defense of plants.