SCIENTIFIC PROGRAM

SESSION LECTURE

No. 49
Sustainable Agriculture
Room: 306A

Co-Chairs: Weicai Yang   **Dale Sanders**

Day 3 October 29th (Monday) 8:30 – 12:00		
Time	**Speaker**	**Title**
8:30-9:00	**Dale Sanders** *John Innes Centre, UK*	The Plant Vacuole: Roles in Plant and Human Nutrition, and Cellular Signaling
9:00-9:30	**Regine Kahmann** *Max Planck Institute of Terrestrial Microbiology, Germany*	How fungi colonize plants
9:30-10:00	**Fusuo Zhang** *China Agricultural University, China*	Improving nutrient use efficiency for cereal production to realize agriculture green development
10:00-10:30	Tea Beark	
10:30-11:00	**Julian Shroeder** *University of California San Diego, USA*	How plants sense and respond to the continuing increase in atmospheric CO_2
11:00-11:30	**Qi Xie** *Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, China*	Sweet sorghum plus ruminants as an example for sustainable agriculture
11:30-12:00	**Caixia Gao** *Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, China*	An overview of agricultural applications of genome editing: Crop plants

Dale Sanders

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FRS Director of the John Innes Centre in Norwich, UK. Professor Sanders' research explores the mechanisms of heavy metal and calcium transport in plants, and the physiological signals that trigger these processes. Under his directorship, the John Innes Centre established the Centre of Excellence for Plant and Microbial Sciences in partnership with the Chinese Academy of Sciences.

Fusuo Zhang

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Director of Centre for Resources, Environment and Food Security, China Agricultural University. His research is mainly focused on nutrient management in soil-crop systems to ensure high yield, high resource use efficiency and low environment costs, and realize the transformation of Chinese agriculture towards green development.

Julian Schroeder

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Julian Schroeder is Novartis Chair and Distinguished Professor at UC San Diego. His recent research is mainly focused on uncovering the fundamental molecular genetic and physiological mechanisms by which plants protect themselves from drought and how plants are responding to the continuing steep rise in the atmospheric CO_2 concentration. He is a member of the U.S. National Academy of Sciences, Fellow of the American Association for the Advancement of Science and member of the German National Academy of Sciences Leopoldina. He also serves on several advisory boards.

Regine Kahmann

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Professor Kahmann is a German Microbiologist, Director and Head of the Department of Organismic Interactions at the Max Planck Institute for Terrestrial Microbiology and Professor of Genetics at the Philipps Universität Marburg. Her research focuses on understanding how fungi manage to infect plants and in this context use secreted effectors to avoid and downregulate defense responses and modulate the host metabolism to support pathogen growth and development. She currently serves as President for IS-MPMI.

Caixia Gao

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Caixia Gao is Principal Investigator of the Institute of Genetics and Developmental Biology (IGDB), Chinese Academy of Sciences. Prior to joining IGDB in 2009, she served as Research Scientist of DLF's biotechnology group in Denmark, where she worked in plant genetic transformation and molecular biology. Her current research area mainly deals with developing a highly efficient and robust CRISPR platform in plant cells to enable targeted genome editing as well as employing the developed platform for targeted gene edits to modify plants traits for highquality, disease resistance and stress tolerance in crop species.

Qi Xie

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Prof. Qi Xie is a plant scientist at the Institute of Genetics and Developmental Biology, Chinese Academy of Sciences. The aims of his reach are to understand the molecular mechanism plant stress signaling and molecular breeding of C4 crop plant sweet sorghum to improve biomass, sugar/protein contents and stress tolerance for forage production.