

SCIENTIFIC PROGRAM

SESSION LECTURE

No.3

Plant Science and Green Agriculture
Room: Phoenix Room 4

Co-Chairs:
Zhizhong Gong



Lee Hickey



Day 2 October 20th (Sunday) 14:00 – 17:30

Time	Speaker	Title
14:00-14:30	Lee Hickey The University of Queensland, Australia	AI-guided breeding to accelerate the development of future crops
14:30-15:00	Xiaoquan Qi Institute of Botany, Chinese Academy of Sciences, China	Genomic insight of natural bioherbicides in rice
15:00-15:30	Xuewei Chen Sichuan Agricultural University, China	Molecular basis of interaction between rice and pathogen Magnaporthe oryzae for disease controlling
15:30-16:00	Tea Break	
16:00-16:30	Zhizhong Gong China Agricultural University, China	The technique for updating crop variety: the application of VDAL and VIP protein
16:30-17:00	Brandt Wulff King Abdullah University of Science and Technology, Saudi Arabia	Putting cloned resistance genes to work in wheat
17:00-17:30	Qiaohong Duan Shandong Agricultural University, China	Interspecific barriers and interspecific breeding of Chinese cabbage



Zhizhong Gong

gongzz@cau.edu.cn

Professor of College of Biological Sciences, China Agricultural University, Vice president of Hebei University. His research group focuses on dissecting the molecular mechanisms of plant responses to drought stress. Using the accumulated information and knowledge, his group discovered some important proteins that can be efficiently used on various crops to promote both biotic and abiotic tolerance. Field experiments in large areas exhibited very promising results.



Lee Hickey

lhipkey@uq.edu.au

Professor Lee Hickey is a plant breeder and crop geneticist within the Queensland Alliance for Agriculture and Food Innovation at The University of Queensland, Australia. He is an ARC Future Fellow and Director of the ARC Training Centre in Predictive Breeding. His own research group specialises in plant breeding innovation to support development of more productive food crops, such as wheat, barley and chickpea. He has a strong interest in the integration of breeding technologies, such as genomic prediction, AI, speed breeding and genome editing.



Xiaoquan Qi

xqi@jbcas.ac.cn

Professor Qi's research group is dedicated to the study of plant metabolic biology, with a particular focus on the triterpenoid metabolic pathways. By using rice as a model organism and employing a comprehensive multi-omics strategy, they aim to reveal the detailed physiological and biological functions of these pathways. Their work is driven by an interest in uncovering the molecular mechanisms that give rise to the metabolic diversity in plants.



Xuwei Chen

xwchen88@sicua.edu.cn

Professor and Director of the State Key Laboratory of Crop Gene Exploration and Utilization in Southwest China, Sichuan Agricultural University. His research group focuses on unravelling the molecular basis of interaction between rice host and the pathogen *Magnaporthe oryzae*, and using the conceptual innovation to develop rice varieties with both disease resistance and yield improved simultaneously and discover new green pesticides for controlling disease.



Brande Wulff

brande.wulff@kaust.edu.sa

Associate Professor, Plant Science Program, King Abdullah University of Science and Technology (KAUST), Saudi Arabia. Research in the Wulff lab focuses on the molecular pathology of cereals. We use DNA sequencing and bioinformatics to identify immune receptors restricting the major diseases of wheat. Our long-term aim is to use cloned genes from wild ancestors of wheat to engineer durable resistance to these diseases in cultivated wheat.



Qiaohong Duan

duanhq@sdau.edu.cn

Ph.D, Professor at Shandong Agricultural University, China, College of Horticulture Science and Engineering. Research in the Duan Lab focuses on self-incompatibility and interspecific reproductive barriers in the Brassicaceae. She uses Chinese cabbage, a representative cruciferous vegetable crops, to reveal the underlying regulatory mechanisms. She also utilizes her findings to break barriers between species, facilitating germplasm innovation and breeding of Chinese cabbage and other vegetables.