SESSION LECTURE

No. 5

Genome-guided Application in Insect Studies

Room: 401

Co-Chairs: Yongping Huang

Zhijian Jake Tu

Day 1 October 27th (Saturday) 13:30 – 17:00		
Time	**Speaker**	**Title**
13:30-14:00	**Zhijian Jake Tu** *Virginia Tech, Virginia, USA*	From Genomics to novel mosquito control strategies
14:00-14:30	**Wei Zhang** *Peking University, China*	The genetics basis and evolutionary history of supergene mimicry in butterflies
14:30-15:00	**Saskia Adriane Hogenhout** *John Innes Centre, UK*	How does a clonally-reproducing aphid colonize multiple plant species?
15:00-15:30	**Tea Break**	
15:30-16:00	**Xianhui Wang** *Institute of Zoology, Chinese Academy of Sciences, China*	Genomic studies on phase-related behavioral plasticity in locusts
16:00-16:30	**Owain Rhys Edwards** *CSIRO Land & Water, Australia*	The CRISPR toolkit for genetic biocontrol of pest species
16:30-17:00	**Yongping Huang** *Shanghai Institute of Plant Physiology and Ecology, Chinese Academy of Sciences, China*	The function of Black soldier fly and its gut microbiome

Yongping Huang

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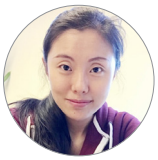
Prof. Yongping Huang focused on the insect functional genomics and molecular genetics. His group constructed genetic linkage map for silkworm using microsatellite markers and positional cloned many silkworm genes. In order to promote the functional genomics research, his team established a high efficient insect transgenic and genome editing platforms. These techniques are helpful to the non-model insects. By using these platforms, his group could extend the research to silkworm and other lepidopteran insects. Recently, he is interested in the understanding the sex determination of silkworm and tries to apply the fundamental research to insect sexual regulations.



Wei Zhang

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Professor Zhang's research tackles fundamental evolutionary questions such as speciation, adaptation, and introgression. In particular, she focuses on studying adaptive introgression in model and non-model organisms. Her research interests also include investigating anti-predator adaptation such as mimicry, aposematic coloration, and camouflage in insects.

Xianhui Wang

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Prof. Xianhui Wang is aimed at understanding behavioral plasticity involved in group-living by using '-omics' technologies. He is carrying out genomic and epigenomic mechanisms underlying phase change of the migratory locus and caste determination in bumblebees.

Zhijian Jake Tu

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Professor Tu's laboratory employs systems biology or functional genomics approaches to study the basic biology of sex-determination and embryonic development in mosquitoes. He developed novel genomic and bioinformatics approaches to study Anopheles Y chromosome genes and recently discovered a male-determining factor in Aedes aegypti. He is developing novel genetic applications to control mosquitoborne infectious diseases.

Saskia Adriane Hogenhout

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Prof. Saskia Hogenhout is a project leader in Plant-Biotic Interactions at the John Innes Centre (JIC). Her research focuses on the dissection of molecular mechanisms involved in the establishment of interactions of plants with insect pests and insect-vectored pathogens. Prof. Saskia Hogenhout is the member of Royal Entomological Society UK Brassica consortium, Editorial member of Current Opinion in Insect Science, and so on.

Owain Rhys Edwards

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A Project Leader in CSIRO based in Perth, Western Australia. His research has focused primarily on the physiological and molecular bases of aphid-host plant interactions. His work on aphids has broadened to examine the molecular basis of all aphid interactions with their environment, including the genetic and epigenetic factors controlling aphid polyphenism and the molecular basis of insecticide resistance.