

Molecular physiology of reproductive behavior in *B. dorsalis* and its novel control methods

The oriental fruit fly *Bactrocera dorsalis* is a very severe invasive insect pest threatening the fruit industry across the world. It has very strong plasticity in behaviors such as foraging, mating and oviposition to adapt to the adverse environment. My group is particularly interested in the molecular physiology of the reproductive behaviors in this species. We are currently involved in the projects for exploring the molecular mechanism of the chemoperception of sex pheromones, mating physiology, oviposition. Our ultimate goal is to find vital targets for novel insect control agent development, which will contribute to the better control of those insect pests in field.



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He got the Ph.D in entomology at Southwest University, China in 2010. Later, he joined Dr. Yoonseong Park's lab at Kansas State University as a postdoctoral researcher focusing on the neurophysiology of the insect behavior. He returned to Southwest University as a faculty member in 2014. Since then, he has been interested in the chemical ecology, neurophysiology and genetic control of several destructive invasive insect pests worldwide, including the oriental fruit fly, spotted wing drosophila, tomato leaf miner and Asian citrus psyllid. He has undertaken several important national grants from National Research & Development Program of China, National Science Foundation of China and Chongqing National Science Foundation. He has published more than 80 peer reviewed papers on many journals such as PNAS, eLife, Advanced Science and Communications Biology. He also serves as the editor of several journals such as Communications Biology, Archives of Insect Biochemistry and Physiology, Arthropod Plant Interaction and Frontiers in Physiology.



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