

Shun-Fan Wu (吴非凡)



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Research interest : Insecticide Resistance and Mode of Action; Insect GPCRs and TRP Channels; Neural Circuits of Insect Courtship and Egg-laying Behaviors; Genetic Pest Management

Biography

Professional experience:

2016- Present **Associate Professor**, College of Plant Protection, Nanjing Agricultural University, Nanjing, China

2017- Present **Visiting Scholar** (Specialty: *Drosophila* Egg-laying Behavior), Department of Neurobiology, Duke University, Durham, NC, USA

2014- 2017 **Postdoctoral Research Associate** (Specialty: *Drosophila* Courtship Behavior), Southeast University, Nanjing, China

2013- 2016 **Assistant Professor**, College of Plant Protection, Nanjing Agricultural University, Nanjing, China

Education:

2008- 2013 **Ph.D. in Agricultural Entomology and Pest Control** (Specialty: Insect Physiology and Molecular Biology), Zhejiang University, Hangzhou, China

2004- 2008 **B.S. in Plant Protection**, Henan University of Science and Technology, Luoyang, China

Research Projects

1. National Natural Science Foundation of China “Molecular mechanism of sulfakinin and its receptor inhibition of food intake in the brown planthopper” (2018-2021).
2. National Natural Science Foundation of China “Pharmacological characterisation of serotonin receptors as novel insecticide target from the brown planthopper” (2015-2017).

Selected publications

Full Text (PDF): https://www.researchgate.net/profile/Shun-Fan_Wu/

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1. **Shun-Fan Wu**, Bin Zeng, Chen Zheng, Xi-Chao Mu, Yong Zhang, Jun Hu, Shuai Zhang, Cong-Fen Gao*, Jin-Liang Shen (2018) The evolution of insecticide resistance in the brown planthopper (*Nilaparvata lugens* Stål) of China in the period 2012–2016. **Scientific Reports** 8: 4586.
2. **Shun-Fan Wu**, Jian Li, Yong Zhang, Cong-Fen Gao* (2018) Molecular characterization and expression profiling of ryanodine receptor gene in the pink stem borer, *Sesamia inferens* (Walker). **Pestic. Biochem. Physiol.** 146: 1-6.
3. **Shun-Fan Wu**, Jian Li, Yong Zhang, Cong-Fen Gao* (2018) Transferrin family genes in the brown planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae) in response to three insecticides. **J. Econ. Entomol.** 111: 375-381.
4. **Shun-Fan Wu**, Xiao-Min Jv, Jian Li, Guang-Jian Xu, Xiao-Yi Cai, Cong-Fen Gao* (2017) Pharmacological characterisation and functional roles for egg-laying of a β -adrenergic-like octopamine receptor in the brown planthopper *Nilaparvata lugens*. **Insect Biochem. Mol. Biol.** 87: 55-64.
5. **Shun-Fan Wu**, Xi-Chao Mu, Yao-Xue Dong, Li-Xiang Wang, Qi Wei, Cong-Fen Gao* (2017) Expression pattern and pharmacological characterisation of two novel alternative splice variants of the glutamate-gated chloride channel in the small brown planthopper *Laodelphax striatellus*. **Pest Manag. Sci.** 73: 590-597.
6. **Shun-Fan Wu**, Gang Xu, David Stanley, Jia Huang*, Gong-Yin Ye* (2015) Dopamine modulates hemocyte phagocytosis via a D1-like receptor in the rice stem borer, *Chilo suppressalis*. **Scientific Reports** 5: 12247.
7. **Shun-Fan Wu**, Gang Xu, Gong-Yin Ye* (2015) Characterization of a tyramine receptor type 2 from hemocytes of rice stem borer, *Chilo suppressalis*. **J. Insect Physiol.** 75: 39-46.
8. **Shun-Fan Wu**, Hua-Yang Yu, Tian-Tian Jiang, Cong-Fen Gao*, Jin-Liang Shen (2015)

Superfamily of genes encoding G protein-coupled receptors in the diamondback moth *Plutella xylostella* (Lepidoptera: Plutellidae). **Insect Mol. Biol.** 24: 442-453.

9. **Shun-Fan Wu**, Gang Xun, Yi-Xiang Qi, Ren-Ying Xia, Huang Jia*, Gong-Yin Ye* (2014) Two splicing variants of a novel family of octopamine receptors with different signaling properties. **J. Neurochem.** 129: 37-47.
10. **Shun-Fan Wu**, Fang-Da Sun, Yi-Xiang Qi, Yao Yao, Qi Fang, Huang Jia, David Stanley, Gong-Yin Ye*. (2013) Parasitization by *Cotesia chilonis* influences gene expression in fatbody and hemocytes of *Chilo suppressalis*. **PLoS ONE** 8, e74309.
11. **Shun-Fan Wu**, Fei Wang, Jia Huang, Qi Fang, Zhi-Cheng Shen, Gong-Yin Ye*. (2013) Molecular and cellular analysis of a ryanodine receptor from hemocytes of *Pieris rapae*. **Dev. Comp. Immunol.** 41: 1-10.
12. **Shun-Fan Wu**, Jia Huang*, Gong-Yin Ye*. (2013) Molecular cloning and pharmacological characterization of a tyramine receptor from the rice stem borer, *Chilo suppressalis* (Walker). **Pest Manag. Sci.** 1: 26-134.
13. **Shun-Fan Wu**, Yao Yao, Jia Huang*, Gong-Yin Ye.* (2012) Characterization of a β -adrenergic-like octopamine receptor from the rice stem borer (*Chilo suppressalis*). **J. Exp. Biol.** 215: 2646-2652.
14. **Shun-Fan Wu**, Hong-Wei Yao, Zeng-Bing Lu, Xiu-Hua Li, Jia Huang, Gong-Yin Ye*. (2012) Contact toxicities of various pesticides commonly applied in the paddy field to *Cotesia chilonis* female adults from four different locations. **Acta Phytophylacica Sinica** 39: 369-375. (in Chinese).
15. **Shun-Fan Wu**, Jian-Yang Guo, Jia Huang*, Gong-Yin Ye. (2010) Advances in insect octopamine and tyramine. **Acta Entomologica Sinica**, 53: 1157-1166. (in Chinese).