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Research interest : Insecticide toxicology and insect neuropharmacology

Biography

2016-present Associated Professor in Nanjing Agricultural University
2014-2016 Lecturer in Nanjing Agricultural University
2012-2014 Postdoc in East China University of Science and Technology
2007-2012 PhD in Agriculture, Nanjing Agriculture University

Research Projects

2016.01-2019.12 National Natural Science Foundation of China (31601656)
2016.01-2020.12 National Key Research and Development Plan
(2016YFD0200501-4)

Selected publications

- [1] Zhang, Y., Xu, X., Bao, H., Shao, X., Li, Z. and Liu, Z. (2018) The binding properties of cycloxaprid on insect native nAChRs partially explain the low cross-resistance with imidacloprid in *Nilaparvata lugens*. Pest Manag. Sci. DOI 10.1002/ps.5108
- [2] Zhang, Y., Yang, B., Li, J., Liu, M. and Liu, Z. (2017) Point mutations in acetylcholinesterase 1 associated with chlorpyrifos resistance in the brown planthopper, *Nilaparvata lugens* Stal. Insect Mol. Biol. 26(4): 453-460.
- [3] Zhang, Y., Liu, Y., Bao, H., Sun, H. and Liu, Z. (2017) Alternative splicing in nicotinic acetylcholine receptor subunits from *Locusta migratoria* and its influence on acetylcholine potencies. Neurosci. Lett. 638: 151-155.
- [4] Zhang, Y., Yang, Y., Sun, H. and Liu, Z. (2016) Metabolic imidacloprid resistance in the brown planthopper, *Nilaparvata lugens*, relies on multiple P450 enzymes. Insect Biochem. Mol. Biol. 79: 50-56.

- [5] Zhang, Y., Meng, X., Yang, Y., Li, H., Wang, X., Yang, B., Zhang, J., Li, C., Millar, N.S. and Liu, Z. (2016) Synergistic and compensatory effects of two point mutations conferring target-site resistance to fipronil in the insect GABA receptor RDL. *Sci. Rep.* 6: 32335.
- [6] Zhang, Y., Wang, X., Yang, B., Hu, Y., Huang, L., Bass, C. and Liu, Z. (2015) Reduction in mRNA and protein expression of a nicotinic acetylcholine receptor $\alpha 8$ subunit is associated with resistance to imidacloprid in the brown planthopper, *Nilaparvata lugens*. *J. Neurochem.* 135: 686-694.
- [7] Zhang, J., Zhang, Y., Wang, Y., Yang, Y., Cang, X. and Liu, Z. (2016) Expression induction of P450 genes by imidacloprid in *Nilaparvata lugens*: A genome-scale analysis. *Pestic. Biochem. Physiol.* 132: 59-64.
- [4] Wang, X., Meng, X., Liu, C., Gao, H., Zhang, Y., Liu, Z. (2015) Cys-loop ligand-gated ion channel gene discovery in the *Locusta migratoria manilensis* through the neuron transcriptome. *Gene* 561, 276-282.