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### 研究方向：

杀虫剂神经毒理学与害虫抗药性

### 教育经历：

2007.09 - 2012.06 南京农业大学植物保护学院，农学博士

2003.09 - 2007.06 南京农业大学植物保护学院，理学学士

### 工作经历：

2016.12 - 今 南京农业大学植物保护学院，副教授，硕导

2014.07 - 2016.11 南京农业大学植物保护学院，讲师

2012.07 - 2014.06 华东理工大学药学院 博士后

### 执教课程：

植物化学保护实验

昆虫分子生物学（研究生）

## 承担课题:

1. 国家重点研发计划子课题 (2016-2020)
2. 国家自然科学基金青年科学基金项目 (2017-2019)

## 代表性科研成果:

- [1] Zhang, Y., X. Xu, H. Bao, X. Shao, Z. Li and Z. Liu (2018). The binding properties of cycloxadiprid 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., B. Yang, J. Li, M. Liu and Z. Liu (2017). Point mutations in acetylcholinesterase 1 associated with chlorpyrifos resistance in the brown planthopper, *Nilaparvata lugens* Stål. 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.