Jinrong Tang

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EDUCATION EXPERIENCE

- **2020.09 – Present** **Institute of Plant Protection, Chinese Academy of Agricultural Sciences**

  Ph.D student (Insect Biochemistry and Toxicology). Supervisor: Prof. Gemei Liang

- **2017.09 – 2020.07** **College of Plant Protection Henan Agriculture University**

  Master of Agriculture (Plant Protection). Supervisor: Prof. Xianru Guo & Dr. Man Zhao

- **2013.09 – 2017.07** **College of Plant Protection Henan Agriculture University**

  Bachelor of Engineering (Pharmaceutical Engineering)

WORK EXPERIENCE

- **2020.12 – Present** **Institute of Plant Protection, Chinese Academy of Agricultural Sciences**

  Laboratory Assistant

- **2017.12 – 2020.06** **College of Plant Protection Henan Agriculture University**

  Assistant teacher & Laboratory Assistant

- **2015.07 – 2016.11** **Institute of Plant Protection, Chinese Academy of Agricultural Sciences**

  Intern, Cotton Pest Research Group

RESEARCH SKILLS

- **Insect rearing and bioassay** (Including Lepidoptera such as cotton bollworm, fall armyworm, black cutworm, yellow peach grub, etc. And Hemiptera such as aphid, fleahopper, etc. As well as natureal predators such as ladybeetle, lacewing, and parasitoid wasp etc.)
- **Molecular biology operations** (Including cloning, PCR, qPCR, RNAi, western Blot, ELISA, pull-down, recombinant protein production and purification, etc.)
- **Basic skills in insect chemical ecology** (Including insect behavioral tests, plant volatile collection, identification of volatile components using GC/MS, insect feeding and oviposition preference tests, etc.)
- **Basic Bioinformatics analysis** (Application of basic software such as MEGA, PyMOL, ImageJ, SPSS, Graph Pad, SnapGene, GeneDoc, DNAMAN, TBtools and several other online tools.)

RESEARCH EXPERIENCE

1. Molecular Mechanisms of *Conogethes punctiferalis* Adaptation to Host Plants with Different Fitness

2018 – 2020 National Science Foundation of Chian

2. Integrated Research and Demonstration of Fertilizer and Pesticide Reduction Technology for Corn in Huanghuaihai Area. 2018 – 2020 National Key Reseach and Development Program of China

3. Integrated Research and Demonstration of Fertilizer and Pesticide Reduction Technology for Wheat in Huanghuaihai Area. 2017 – 2020 National Key Reseach and Development Program of China

4. Ecological safety monitoring and control technology innovation and application support system construction. 2022 – Present Science and Technological Innovarion 2030 – Major Projects

5. Molecular mechanism of Bt resistance in major agricultural pests
2023 – Present Innovation Program of CAAS

PUBLICATIONS

1. **Tang J**, Lu J, Zhang C, Fang F, Naing ZL, Soe ET, Yu H, Liang G. () Suppressing expression of the immune gene *Ha102* increases the toxicity of both Cry1Ac and Cry2Ab to *Helicoverpa armigera*. Preparing

2. **Tang J**, Lu J, Zhang C, Zhang D, Yu S, Fang F, Naing ZL, Soe ET, Ding Z, Liang G. (2023) Reduced expression of the P-glycoprotein gene *HaABCB1* is linked to resistance to *Bacillus thuringiensis* Cry1Ac toxin but not Cry2Ab toxin in *Helicoverpa armigera*. *International Journal of Biological Macromolecules*. https://doi.org/10.1016/j.ijbiomac.2023.127668 (**IF 8.2, Q1**)

3. **Tang J**, Lu J, Zhang C, Yu S, Ding Z, Soe ET, Liang G. (2023) The evaluation of resistance risk to Cry2Ab and cross-resistance to other insecticedes in *Helicoverpa armigera*. *Journal of Pest Science*. https://doi.org/10.1007/s10340-023-01646-0 (**IF 4.8, Q1**)

4. **Tang J**, Liang G, Dong S, Shan S, Zhao M, Guo X. (2022) Selection and Validation of Reference Genes for Quantitative Real-Time PCR Normalization in *Athetis dissimilis* (Lepidoptera: Noctuidae) Under Different Conditions. *Frontiers in Physiology*. https://doi.org/10.3389/fphys.2022.842195 (**IF 4.755, Q2**)

5. **Tang J**, Dong S, Li W, Wang G, Yuan G, Guo X, Zhao M. (2020) Effects of host plants on the development and oviposition selection behavior of *Conogethes punctiferalis*. *Acta Ecologica Sinica*. DOI: 10.5846/stxb201902180284

6. Naing ZL, Soe ET, Zhang C, Niu L, **Tang J**, Ding Z, Yu S, Lu J, Fang F, Liang G. (2023) Cadherin Is a Binding Protein but Not a Functional Receptor of Bacillus thuringiensis Cry2Ab in *Helicoverpa armigera*. *Applied and Environmental Microbiology.* https://doi.org/10.1128/aem.00625-23 (**IF 4.4, Q2**)

7. Soe ET, Naing ZL, Zhang C, Niu LL, **Tang J**, Yu S, Ding Z, Liang G. (2023) Cry51Aa proteins are active against *Apolygus lucorum* and show a mechanism similar to pore formation model. *Journal of Agricultural and Food Chemistry*. https://doi.org/10.1021/acs.jafc.2c07244 (**IF 6.1, Q1**)

8. Zhang C, Wei J, Naing ZL, Soe ET, **Tang J**, Liang G. (2022) Up-regulated serpin gene involved in Cry1Ac resistance in *Helicoverpa armigera*. *Pesticide Biochemistry and Physiology*. https://doi.org/10.1016/j.pestbp.2022.105269 (**IF 4.966, Q1**)

9. Yu S, **Tang J**, Zhang C, Soe ET, Liang G. (2023) Cloning and expression analysis of *JNKs* gene in cotton bollworm *Helicoverpa armigera*. *Plant Protection*. DOI: 10.16688/j.zwbh.2022607

10. Liu S, Wang Y, **Tang J**, Zhang Y, Fu X, Liang G. (2023) Effects of different wavelengths of light on the phototactic behavior and opsin expression in *Spodoptera frugiperda* adults. *Plant Protection*. DOI: 10.16688/j.zwbh.2021678

11. Zhao M, **Tang J**, Niu L, Chen L, Liang G. (2019) Ecological Safety Evaluation of Different Bt Proteins on the Predator *Chrysopa pallens*. *Scientia Agricultural Sinica*. DOI: 10.3864/j.issn.0578-1752.2019.09.006

12. Zhao M, **Tang J**, Niu L, Chen L, Liang G. (2019) Tritrophic Effects of Different Bt Insecticidal Proteins on *Chrysopa pallens*. *Chinese journal of Biological Control*. DOI: 10.16409/j.cnki.2095-039x.2019.04.003

13. Miao C, Li W, **Tang J**, Li G, Wang G, Yuan G, Guo X. (2018) Studies on Olfactory and Feeding Preferences of *Helicoverpa armigera* and *H. assulta* to Two Tobacco Species. *Chinese Tobacco Science*. DOI: 10.13496/j.issn.1007-5119.2018.06.008

14. Dong S, Tian C, Guo X, Yuan X, **Tang J**, Wang X, Zhao M. (2021) Adult activity and hatching rhythms of Athetis dissimilis (Lepidoptera: Noctuidae). *Chinese Journal of Applied Entomology*. DOI: 10.7679/j.issn.2095−1353.2021.041

15. Zhao M, Wang G, Li W, Dong S, Wang X, **Tang J**, Guo X. (2021) *Cyperus rotundus*, a new host plant of *Trionymus agrestis* (Hemiptera, Pseudococcidae). *Plant Protection*. DOI: 10.16688/j.zwbh.2019487

16. Zhao M, **Tang J**, Dong S, Wang G, Miao C, Guo X. (2020) Effects of Seed Coating Agents on the Occurrence of Main Pests and Maize Yield in Corn Field. *Journal of Henan Agricultural Sciences*. DOI: 10.15933/ j.cnki.1004-3268.2020.06.012

17. **Tang J**, Dong S, Zhang X, Li W, Wang G, Yuan G, Guo X, Zhao M. (2018) Reseach Progress in Insect Saliva Elicitors and Effectors. (Conference paper)

18. Dong S, **Tang J**, Wang X, Guo X, Zhao M. (2019) Current Situation of the Occurrence and Control of Atheis lepigone and *Athetis dissimilis*. (Conference paper)

PATENTS

1. Zhao M, **Tang J**, Dong S, Guo X, Li W, Wang G, Yuan G. A simple method for rapid collection of *Conogethes punctiferalis* eggs. Patent No.: ZL 2018 1 1547977. X

2. Zhao M, **Tang J**, Miao C, Dong S, Wang X, Guo X, Li W, Wang G, Yuan G. A device for rapid screening of active substances for attracting or avoiding oviposition of lepidopterous insects and its method of use. Patent Application No.: 2018 1 1547582. X

3. Guo X, Miao C, Zhao M, **Tang J**, Dong S, Wang X, Li W, Wang G, Yuan G. A method and application for rapid collection of volatile odorants from tobacco. Patent Application No.: 2018 1 11406723. 6

4. Zhao M**,** Dong S, Guo X, Yuan X, **Tang J**. A *Athetis dissimilis* sex attractant and its preparation method and application. Patent No.: ZL 2020 1 0055904. X

CONFERENCE

1. Twelfh National Symposium on Chemical Ecology. Fuzhou, China

2. Seventeenth National Symposium of Young Bacillus Workers. Beijing, China

3. 2023 Academic Annual Meeting of the Chinese Society for Plant Protection Zhengzhou, China

4. FAO Global Symposium on Sustainable Fall Armyworm Management IPPCAAS, Beijing, China

AWARDS

- **2017 – 2019:** Henan Agricultural University Graduate Scholarship Winner for consecutive three years
- **2020:** Excellent Graduated Graduate Student of Henan Agriculture University
- **2018:** Outstanding Group of Graduate Student Social Practice
- **2017:** First Prize of Henan Agriculture University Campus Photography Competition

SELF-ASSESSMENT

I am an extroverted, friendly person with strong responsibility. I am good at studying and always have creativity. I always think logically and have a high-level executive function. And I also have a passion on life and work. In life, I can manage my life routine regularly and I like reading, cooking, swimming and jogging. In research, I focus on logical and critical thinking and always make summary. I have curiosity about new findings, knowledge, technology and mechanism and would like to make progress. Through systematic studying and training during master's and Ph.D. journey, I have become proficient in molecular biology, cell biology techniques, as well as bioinformatics analysis skills, and have achieved a certain degree of results. My main direction is to explore host plasticity in insects, pest resistance mechanisms, insect toxicology, and pest resistance management, as well as to gain an in-depth understanding of insect chemical ecology and insect ecology. In the future, I would like to learn novel technologies and ideas, broaden my horizons step by step, do more in-depth and interesting research, and tell a complete scientific story to contribute to the exploration and explanation of nature, as well as the production and ecological friendly green agriculture.