

# Curriculum Vitae

Name: **Lingling Zhang** Professor

**Date of Birth:** December 10, 1979

**Nationality:** P R China

**Address:** Key Laboratory of Biopesticide and Chemical Biology,  
Ministry of Education, Fujian Agriculture and Forestry  
University, Fuzhou, Fujian 350002, P R China.

**Tel:** +86-13314951215

**Fax:** +86-591 83789258

**E-mail:** lingling00264@163.com



## EDUCATION

### Ph.D. studies:

Key Laboratory of Biopesticide and Chemical Biology, Ministry of Education, Fujian Agriculture and Forestry University (FAFU), Fuzhou, Fujian 350002

Thesis: Isolation of *Bacillus thuringiensis* LLP29 and the mechanism on *Aedes albopictus*

Research fields: *Aedes albopictus* rear , cell culture , Immunohistochemistry , Indirect immunofluorescence assay , *Bacillus thuringiensis* isolation, Receptor binding

September 2004-June 2007

Advisors: Professor Xiong Guan (FAFU)

### B.Sc. studies:

Department of Plant Protection, Fujian Agricultural University, Fuzhou, Fujian 350002, P R China.

Thesis: The inhibition of *Bacillus thuringiensis* against fungal plant pathogens

Research fields: fungal plant pathogens ; fungistasis, bio-statistics

September 1998-June 2002

Advisor: Professor Xiong Guan

## CAREER

From August, 2007 up to now have been working in School of Life Science, Fujian Agriculture

and Forestry University.

**Lecturer:**

Key Laboratory of Biopesticide and Chemical Biology, Ministry of Education, Fujian Agriculture and Forestry University, Fuzhou, Fujian 350002, P R China.

**Fields:**

- (1) Isolation of *Bacillus thuringiensis* from kinds of habitats, which will be of great significance for the knowledge of the ecology and resource *B. thuringiensis*.
- (2) Mechanism of Bt on mosquitoes.
- (3) Mechanism of Bt against UV stress

**Teaching:**

Biochemistry and Molecular Biology

**MAJOR PUBLICATIONS**

Wang JX, Wang XZ, He H, Chen JR, Liu YY, Huang WT, Ou LR, Yang ZH, Guan X, **Zhang LL\*** and Wu SQ\*. Knockout of two-Cry-binding Aminopeptidase N isoforms does not change susceptibility of *Aedes aegypti* larvae to *Bacillus thuringiensis* subsp. *israelensis* Cry4Ba and Cry11Aa toxins. *Insects*. 2021, 12:223

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Ma WB\*, Chen HC\*, Jiang XY\*, Wang JX, Gelbic I, Guan X and Zhang LL\*. Whole genome sequence analysis of the mosquitocidal *Bacillus thuringiensis* LLP29. *Archives of Microbiology*. 2020, 202:1693-1700

Xiaohua Hu, Hong Chen, Jin Xu, Guohui Zhao, Xianhui Huang, Jiannan Liu, Khadija Batool, Chenxu Wu, Songqing Wu, Enjiong Huang, Juan Wu, Munmun Chowhury, Jie Zhang, Xiong Guan, Xiaoqiang Yu, **Lingling Zhang**. Function of *Aedes aegypti* galectin-6 in modulation of Cry11Aa toxicity. *Pesticide Biochemistry and Physiology*. 2020, 162, 96-104

Khadija Batool, Intikhab Alam, Liang Jin, Jin Xu, Chenxu Wu, Junxiang Wang, Enjiong Huang, Xiong Guan, Xiaoqiang Yu and **Lingling Zhang**. CTLGA9 interacts with ALP1 and APN receptors to

modulate Cry11Aa toxicity in *Aedes aegypti*. j. Agric. Food Chem. 2019,67(32):8896-8904

Guo-hui Zhao ,Jian-nan Liu , Xiao-hua Hu, Khadija Batool, Liang Jin, Cheng-xu Wu, Juan Wu, Hong Chen, Xiao-yan Jiang, Zhao-hui Yang, Xian-hui Huang, En-jiong Huang, Xiao-Qiang Yu, Xiong Guan and **Ling-ling Zhang**. Cloning, expression and activity of ATP-binding protein in *Bacillus thuringiensis* toxicity modulation against *Aedes aegypti*. Parasites & Vectors, 2019, 2:319

**Lingling Zhang** (#), Xiaohua Hu, Songqing Wu, Kahdija Batool, Munmun Chowdhury, Yi Lin, Zhang J, Sarjeet S. Gill, Xiong Guan (\*) and Xiaoqiang Yu (\*). 2018. *Aedes aegypti* Galectin competes with Cry11Aa for binding to ALP1 to modulate Cry toxicity, Journal of Agricultural and Food Chemistry, 66(51):13435-13443

**Lingling Zhang**(#), Xiaojuan Zhang, Khadija Batool, Xiaohua Hu, Mingfeng Chen, Jin Xu, Junxiang Wang, Xiaohong Pan, Tianpei Huang, Lei Xu, Xiaoqiang Yu(\*) and Xiong Guan (\*). 2018. Comparison and mechanism of the UV-resistant mosquitocidal Bt mutant LLP29-M19, Journal of Medical Entomology, 55 ( 1 ) : 210-216

Khadija Batool, Intikhab Alam, Guohui Zhao, Junxiang Wang, Jin Xu, Xiaoqiang Yu, Enjiong Huang, Xiong Guan and **Lingling Zhang**. 2018. C-type Lectin-20 interacts with ALP1 receptor to reduce Cry toxicity in *Aedes aegypti*. Toxins. 10: 390

Khadija Batool, Intikhab Alam, Songqing Wu, Wencheng Liu, Guohui Zhao, Mingfeng Chen, Junxiang Wang, Jin Xu, Tianpei Huang, Xiaohong Pan, Xiaoqiang Yu, Xiong Guan, **Lei Xu & Lingling Zhang** (\*). 2018. Transcriptomic Analysis of *Aedes aegypti* in Response to Mosquitocidal *Bacillus thuringiensis* LLP29 Toxin. Scientific Reports, 8:12650

**Lingling Zhang** (#), Guohui Zhao, Xiaohua Hu, Jiannan Liu, Mingwei Li, Kahdija Batool, Mingfeng Chen, Junxiang Wang, Jin Xu, Tianpei Huang, Xiaohong Pan, Lei Xu, Xiaoqiang Yu(\*) and Xiong Guan(\*),Cry11Aa interacts with the ATP-Binding protein from *Culex quinquefasciatus* to improve the toxicity, Journal of Agricultural and Food Chemistry, 2017, 65:10884-10890

Ensi Shao, Guifang Lin, Sijun Liu (\*), Xiaoli Ma, Ming-feng Chen, Li Lin, Songqing Wu, Li Sha, Zhaoxia Liu, Xiaohua Hu, Xiong Guan, **Lingling Zhang**(\*). 2017. Identification of transcripts involved in digestion, detoxification and immune response from transcriptome of *Empoasca vitis* ( Hemiptera: Cicadellidae) nymphs. Genomics, 109 ( 1 ) : 58-66

Qiuqiu Lin, Pengli Zhu, Rebeca Carballar-Lejarazu, Ivan Gelbic, Xiong Guan, Lei Xu(\*), **Lingling Zhang** (\*). 2017. The colonization of *Bacillus thuringiensis* strains in bryophytes. Turkish

Xiaohua Hu, Yajie Guo, Songqing Wu, Zhaoxia Liu, Tao Fu, Ensi Shao, Carballar-Lejarazú Rebeca, Guohui Zhao, Zhipeng Huang, Ivan Gelbič , Xiong Guan, Shuangquan Zou, Lei Xu(\*), and **Lingling Zhang** (\*). 2017. Effect of proteolytic and detoxification enzyme inhibitors on *Bacillus thuringiensis* var. *israelensis* tolerance in the mosquito *Aedes aegypti*. *Biocontrol Science & Technology*, 27 ( 2 ) : 169-179

**Lingling Zhang** (#), Xiaojuan Zhang, Yi Zhang, Songqin Wu, Ivan Gelbic, Lei Xu, Xiong Guan(\*). 2016. A new formulation of *Bacillus thuringiensis*: UV protection and sustained release mosquito larvae studies, scientific report, 6: 39425

Songqing Wu, Yan Peng, Zhangmin Huang, Zhipeng Huang, Lei Xu, Ivan Gelbič, Xiong Guan, **Lingling Zhang** (\*), and Shuangquan Zou (\*). 2016. Isolation and characterization of a novel native *Bacillus thuringiensis* strain BRC-HZM2 capable of degrading chlorpyrifos, *Journal of Basic Microbiology*, 26: 227-238

Songqing Wu, Wei Wu, Xiaoli Zhu, Zhaoxia Liu, Carballar-Lejarazú Rebeca, Tao Fu, Chaoqiang Han, Ensi Shao, Xiaohong Pan, Zhipeng Huang, Lei Xu, Shuangquan Zou, **Lingling Zhang**(\*) & Xiong Guan(\*). 2016. Physiological and biochemical response of *Aedes aegypti* tolerance to *Bacillus thuringiensis*. *Biocontrol Science and Technology*, 26: 227-238

**Lingling Zhang** (#), Jie Yu, Yufei Xie, Hongli Lin, Zhipeng Huang, Lei Xu, Ivan Gelbič and Xiong Guan (\*), Biological activity of *Bacillus thuringiensis* chitinase against *Caenorhabditis elegans*. *Journal of Economic Entomology*, 2014, 107 (2) : 551-558

Songqing Wu, Yanjiao Lan, Dongmei Huang, Yan Peng, Zhipeng Huang, Lei Xu, Ivan, Gelbič Rebeca Carballar-Lejarazu, Xiong Guan, **Lingling Zhang** (\*), and Shuangquan Zou (\*), Use of spent mushroom substrate for production of *Bacillus thuringiensis* by solid-state fermentation, *J Econ Entomol.*, 2014, 107 (1) : 137-143

**Lingling Zhang** (#), Baozhen Tang, Eenjiong Huang, Zhipeng Huang, Zhaoxia Liu, Tianpei Huang, Ivan Gelbič and Xiong Guan (\*), Different toxicity of the novel *Bacillus thuringiensis* strain LLP29 against *Aedes albopictus* and *Culex quinquefasciatus*, *J Econ Entomol.*, 2013, 160 (2): 1098-1102

**Lingling Zhang** (#), Sixin Qiu, Tianpei Huang, Zhipeng Huang, Lei Xu, Changbiao Wu, Ivan

Gelbič and Xiong Guan (\*), Effect of chemical additives on *Bacillus thuringiensis* against *Plutella xylostella*, J Econ Entomol, 2013, 160 (3): 1075-1080

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Changbiao Wu, Lili Wu, Lei Xu, **Lingling Zhang** (\*) and Xiong Guan, Parasporal crystal proteins of *Bacillus thuringiensis* strain BT6, originated from the faecal of Sika Deer, demonstrates anticoccidial activity against *Eimeria tenella*, African Journal of Microbiology Research, 2013, 7(33): 4261-4264

**Lingling Zhang** (#), Qi Zhang, Enjiong Huang, Mingwei Li, Tianpei Huang, Changbiao Wu, Xiong Guan (\*) and Ivan Gelbič (\*), A differentially displayed mRNA relates to the resistance of *Aedes albopictus* selected in vitro-activated Cyt1Aa6, Journal of the America Mosquito Control Association, 2012, 28: 327-329

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**Zhang L** (#), Huang E, Gelbič I, Guan C, Guan Y and Guan X. Cloning, expression and characterisation of a promising mosquitocidal gene. Indian Journal of Experimental Biology, 2009, 47: 799-803

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