

CURRICULUM VITAE

Personal Information			
Name	Zhang Jibin	Gender	Male
Position Title	Professor		
Working Department	College of Life Science and Technology, Huazhong Agricultural University		
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Research Interest			
<p>(1) Bio-conversion: Research on the mechanism, technology and application of organic waste co-conversion by functional microbes and insect (such as black soldier fly).</p> <p>(2) Bio-pesticides: Discovery of new active substances produced by microorganisms and insects, structure and function, mechanism of action, and application research.</p>			
Professional Memberships			
2 associate professor, 1 lecturer			
Other Roles			
Member, Chinese Academy for Microbiology, China Member, The Entomological Society of China, China			
Education & Working Experience			
Education: 1982.09-1986.06, Hubei University, Bachelor of Science 1986.09-1989.06, Huazhong Agricultural University, Master of Science 2001.09-2006.06, Huazhong Agricultural University, Ph.D of Science			
Working Experiences: 1989.7-2002.12, Institute of Parasitic Disease, Hubei Academy of Medical Sciences, Assistant Researcher / Associate Researcher 1994.4-1994.6, University of London, Visiting Scholar 2002.12-2006.2, Institute of Parasitic Disease, Hubei Academy of Medical Sciences, Researcher 2010.8-2011.8, USDA Plant Root Disease Biological Control Laboratory, Visiting Scholar 2006.3-present, State Key Laboratory of Agricultural Microbiology and National Engineering Research Center of Microbial Pesticides, College of Life			

Science and Technology, Huazhong Agricultural University , fixed member, professor
Microbial Product Quality Supervision and Testing Center (Wuhan), Ministry of Agriculture, Deputy Director

Publications

1. Yu Y Q, Zhang J, Zhu F L, Fan M X, Zheng J S, Cai M M, Zheng L Y, Huang F, Yu Z N and Zhang J B* Enhanced protein degradation by black soldier fly larvae (*Hermetia illucens* L.) and its gut microbes. *Frontier Microbiology*, 2023,13:1095025.
2. Zhang Y P, Xiao X P, Elhag O, Cai M M, Zheng L Y, Huang F*, Jordan H R, Tomberlin J K; Sze S H; Yu Z N; Zhang J B. *Hermetia illucens* L. larvae-associated intestinal microbes reduce the transmission risk of zoonotic pathogens in pig manure, *Microbial Biotechnology*, 2022, 15(10): 2631-2644.
3. Cheng W L, Xue H, Yang X, Huang D, Cai M M, Huang F, Zheng LY, Peng D H, Thomashow L S, Weller D M, Yu Z N, Zhang J B*. Multiple receptors contribute to the attractive response of *Caenorhabditis elegans* to pathogenic bacteria.2022, *Microbiology Spectrum*,10.1128.
4. Wanli Cheng, Xue Yang, Hua Xue, Dian Huang, Minmin Cai, Feng Huang, Longyu Zheng, Ziniu Yu and Jibin Zhang*. Reproductive toxicity of furfural acetone in *Meloidogyne incognita* and *Caenorhabditis elegans*.2022,*Cells*, 11, 401.
5. Yang C R; Ma S T; Li F; Zheng LY; Tomberlin J K; Yu Z N; Zhang J B; Yu C;Fan M X*; Cai M M*; Characteristics and mechanisms of ciprofloxacin degradation by black soldier fly larvae combined with associated intestinal microorganisms, *Science of the Total Environment*, 2022, 811(151371).
6. Wanli Cheng, Li Zeng, Xue Yang, Dian Huang, Hao Yu, Wen Chen, Minmin Cai, Longyu Zheng, Ziniu Yu, Jibin Zhang*. Preparation and efficacy evaluation of *Paenibacillus polymyxa* KM2501-1 microbial organic fertilizer against root-knot nematodes. *Journal of Integrative Agriculture*, 2022, 21(2): 542-551.
7. Osama Elhag, Yuanpu Zhang, Xiaopeng Xiao, Minmin Cai, Longyu Zheng, Heather R. Jordan, Jeffery K. Tomberlin, Feng Huang, Ziniu Yu and Jibin Zhang* Inhibition of zoonotic pathogens naturally found in pig manure by black soldier fly larvae and their intestine bacteria. *Insects*, 2022, 13, 66.
8. Wen Chen, Jinping Wang, Dian Huang, Wanli Cheng, Zongze Shao, Minmin Cai,Longyu Zheng, Ziniu Yu and Jibin Zhang* Volatile organic compounds from *Bacillus aryabhatai* MCCC 1K02966 with multiple modes against *Meloidogyne incognita*. *Molecules*, 2022, 27, 103.
9. Minmin Cai, Li Li, Zhengzheng Zhao, Ke Zhang, Fang Li, Chan Yu, Rongfang Yuan, Beihai Zhou, Zhuqing Ren, Ziniu Yu and Jibin Zhang*. Morphometric characteristic of black soldier fly (*Hermetia illucens*) Wuhan strain and its egg production improved by selectively inbreeding. *Life*, 2022, 12, 873.
10. Jingjing Zhang, Jiahui Li, Yuanzhi Peng, Xiaokun Gao, Qi Song, Hongyuan Zhang, Osama Elhag, Minmin Cai, Longyu Zheng, Ziniu Yu, Jibin Zhang*. Structural and functional characterizations and heterogenous expression of the antimicrobial peptides, Hidefensins, from black soldier fly, *Hermetia illucens* (L.). *Protein Expression and Purification*, 2022,192,106032.

11. Cheng WL, Chen Z, Zeng L, Yang X, Huang D, Zhai YL, Cai MM, Zheng LY, Thomashow LS, Weller DM, Yu ZN, Zhang JB. Control of *Meloidogyne incognita* in three-dimensional model systems and pot experiments by the attract-and-kill effect of furfural acetone. *Plant Disease*, 2021, 105:2169-2176.
12. Zhang J B, Yu Y Q, Tomberlin J K, Cai M M, Zheng L Y, Yu Z N. Organic side streams: Using microbes to make substrates more fit for mass producing insects for use as feed. *Journal of Insects as Food and Feed*, 2021; 7(5): 597-604.
13. Zhang J B, Zhang J, Li J H, Tomberlin J K, Xiao X P, ur Rehman K, Cai M M, Zheng L Y, Yu Z N. Black soldier fly: A new vista for livestock and poultry manure management. *Journal of Integrative Agriculture*, 2021, 20(5): 1167-1179.
14. Mingying Shao, Zhixin Wang, Yingzhi He, Zhen Tan, Jibin Zhang. Fecal Microbial Composition and Functional Diversity of Wuzhishan Pigs at Different Growth Stages. *AMB Express*, 2021, 11(88):1-9.
15. Fan, Mingxia; Liu, Nian; Wu, Xiangji; Zhang, Jibin; Cai, Minmin*. Tolerance and removal of four polycyclic aromatic hydrocarbon compounds (PAHs) by black soldier fly (Diptera: Stratiomyidae), *Environmental Entomology*, 2020, 49(3): 667-672.
16. A.A. Soomro, M. Cai, Z.A. Laghari, L. Zheng, K. ur Rehman, X. Xiao, S. Hu, Z. Yu and J. Zhang*. Impact of heat treatment on microbiota of black soldier fly larvae reared on soybean curd residues. *Journal of Insects as Food and Feed*, 2021, 7(3): 329-343.
17. Cheng WL, Yang X, Zeng L, Huang D, Cai MM, Zheng LY, Yu ZN, Zhang JB*. Evaluation of Multiple Impacts of Furfural Acetone on Nematodes In Vitro and Control Efficiency against Root-Knot Nematodes in Pots and Fields. *Antibiotics-Basel*. 2020, 9: 605.
18. Yaqing Huang, Yongqiang Yu, Shuai Zhan, Jeffery K. Tomberlin, Dian Huang, Minmin Cai, Longyu Zheng, Ziniu Yu, Jibin Zhang*. Dual oxidase Duox and Toll-like receptor 3 TLR3 in the Toll pathway suppress zoonotic pathogens through regulating the intestinal bacterial community homeostasis in *Hermetia illucens* L. *PLoS ONE*. 2020, 15(4): e0225873.
19. Jibin Zhang*, Dmitri V. Mavrodi, Mingming Yang, Linda S. Thomashow, Olga V. Mavrodi, Jason Kelton, and David M. Weller*. *Pseudomonas synxantha* 2-79 transformed with pyrrolnitrin biosynthesis genes has improved biocontrol activity against soilborne pathogens of wheat and canola. *Phytopathology*, 2020, 110:1010-1017.
20. Wu Li, Qing Li, YuanYuan Wang, Longyu Zheng, Yanlin Zhang, Ziniu Yu, Huanchun Chen, Jibin Zhang* Efficient bioconversion of organic wastes to value-added chemicals by soaking, black soldier fly (*Hermetia illucens* L.) and anaerobic fermentation. *Journal of Environmental Management*. 2018, 227:267-276.
21. Zhang JB*, Tomberlin JK, Cai MM, Xiao XP, Zheng LY, Yu ZN. Research and industrialization of *Hermetia illucens* L. in China. *Journal of Insects as food and feed*. 2020,6(1):5-12.
22. Dian Huang , Chen Yu, Zongze Shao, Minmin Cai, Guangyu Li , Longyu Zheng, Ziniu Yu and Jibin Zhang*. Identification and characterization of nematicidal volatile organic compounds from deep-sea *Virgibacillus dokdonensis* MCCC 1A00493. *Molecules* 2020, 25(744):1-14.
23. Mazza L, Xiao X, Ur Rehman K, Cai M, Zhang D, Fasulo S, Tomberlin JK, Zheng L, Soomro AA, Yu Z, Zhang J*. Management of chicken manure using black soldier fly (Diptera: Stratiomyidae) larvae assisted by companion bacteria. *Waste Management*. 2020, 102: 312-318.
24. Huang Dian, Yu Chen, Shao Zongze, Cai Minmin, Li Guangyu, Zheng Longyu, Yu Ziniu

- and Zhang Jibin*. Identification and characterization of nematicidal volatile organic compounds from deep-sea *Virgibacillus dokdonensis* MCCC 1A00493. *Molecules* 2020, 25(744):1-14.
25. Zhang JB*, Tomberlin JK, Cai MM, Xiao XP, Zheng LY, Yu ZN. Research and industrialization of *Hermetia illucens* L. in China. *Journal of Insects as food and feed*. 2020,6(1)-5-12.
 26. Zhan S, Fan G, Cai M, Kou Z, Xu J, Cao Y, Bai L, Zhang Y, Jiang Y, Luo X, Xu J, Xu X, Zheng L, Yu Z, Yang H, Zhang Z, Wang S, Tomberlin J*, Zhang J* and Huang Y*. Genomic landscape and genetic manipulation of the black soldier fly *Hermetia illucens*, a natural waste recycler. *Cell Research*, 2020, 30(1):50-60.
 27. Abdul Aziz Somroo, Kashif ur Rehman, Longyu Zheng, Minmin Cai, Xiaopeng Xiao, Shencai Hu, Alexander Mathy, Moritz Gold, Ziniu Yu, Jibin Zhang*. Influence of *Lactobacillus buchneri* on soybean curd residue co-conversion by black soldier fly larvae (*Hermetia illucens*) for food and feedstock production. *Waste Management*, 2019, 86:114-122.
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 29. Yile Zhai, Zongze Shao, Minmin Cai, Longyu Zheng, Guangyu Li, Ziniu Yu and Jibin Zhang*. Cyclo(L-Pro-L-Leu) of *Pseudomonas putida* MCCC 1A00316 isolated from Antarctic soil: identification and characterization of activity against *Meloidogyne incognita*. *Molecules* 2019, 24(768):1-15.
 30. Minmin Cai, Ke Zhang, Weida Zhong, Nian Liu, Xiangji Wu, Wu Li, Longyu Zheng, Ziniu Yu, Jibin Zhang*. Bioconversion-composting of golden needle mushroom (*Flammulina velutipes*) root waste by black soldier fly (*Hermetia illucens*, Diptera: Stratiomyidae) larvae, to obtain added-value biomass and fertilizer. *Waste and Biomass Valorization*. 2019, 10:265-273.
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 32. Cai Minmin, Ma Shiteng, Hu Ruiqi, Jeffery K. Tomberlin, Yu Chan, Huang Yongping, Zhan Shuai, Li Wu, Zheng Longyu, Yu Ziniu, Zhang Jibin*. Systematic characterization and proposed pathway of tetracycline degradation in solid waste treatment by *Hermetia illucens* with intestinal microbiota. *Environmental Pollution*, 2018, 242:634-642.
 33. Xiaopeng Xiao, Lorenzo Mazza, Yongqiang Yu, Minmin Cai, Longyu Zheng, Jeffery K. Tomberlin, Jeffrey Yu, Arnold van Huis, Ziniu Yu, Salvatore Fasulo, Jibin Zhang*. Efficient co-conversion process of chicken manure into protein feed and organic fertilizer by *Hermetia illucens* L. (Diptera: Stratiomyidae) larvae and functional bacteria. *Journal of Environmental Management*, 2018, 217:668-676.
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35. Yile Zhai, Zongze Shao, Minmin Cai, Longyu Zheng, Guangyu Li, Dian Huang, Wanli Cheng, Linda S. Thomashow, David M. Weller, Ziniu Yu and Jibin Zhang*. Multiple Modes of Nematode Control by Volatiles of *Pseudomonas putida* 1A00316 from Antarctic Soil against *Meloidogyne incognita*. *Frontier in Microbiology*. 2018, 9:253.
36. Xiao XX, Jin P, Zheng LY, Cai MM, Yu ZN, Yu J and Zhang JB*. Effects of black soldier fly (*Hermetia illucens*) larvae meal protein as a fishmeal replacement on the growth and immune index of yellow catfish (*Pelteobagrus fulvidraco*). *Aquaculture Research*. 2018;49:1569-1577.
37. Minmin Cai, Ruiqi Hu, Ke Zhang, Shiteng Ma, Longyu Zheng, Ziniu Yu, Jibin Zhang*. Resistance of black soldier fly (Diptera: Stratiomyidae) larvae to combined heavy metals and potential application in municipal sewage sludge treatment. *Environmental Science and Pollution Research*. 2018, 25(2):1559-1567.
38. Kashif ur Rehman, Rehman, A, Cai M, Xiao X, Zheng L, Zhang Ke, Abdul Aziz Soomro, Wang Hui, Liu Xiu, Li Wu, Yu Ziniu, Zhang, Jibin*. Conversion of mixtures of dairy manure and soybean curd residue by black soldier fly larvae (*Hermetia illucens* L.). *Journal of Cleaner Production*. 2017, 154: 366-373.
39. Wanli Cheng, Jingyan Yang, Qiyu Nie, Dian Huang, Chen Yu, Longyu Zheng, Minmin Cai, Linda S. Thomashow, David M. Weller, Ziniu Yu & Jibin Zhang*. Volatile organic compounds from *Paenibacillus polymyxa* KM2501-1 control *Meloidogyne incognita* by multiple strategies. *Scientific Report*, 2017, 7: 16213.
40. Kashif ur Rehman, Minmin Cai, Xiaopeng Xiao, Longyu Zheng, Hui Wang, Abdul Aziz Soomro, Yusha Zhou, Wu Li, Ziniu Yu, Jibin Zhang*. Cellulose decomposition and larval biomass production from the co-digestion of dairy manure and chicken manure by mini-livestock (*Hermetia illucens* L.). *Journal of Environmental Management*, 2017, 196:458-465.
41. Elhag O, Zhou D, Song Q, Soomro A A, Cai M, Zheng L, Yu Z, Zhang J*. Screening, expression, purification and functional characterization of novel antimicrobial peptide genes from *Hermetia illucens* (L.). *PLoS One*. 2017,12(1): e0169582.
42. Cao Yu, Cheng Wanli, Huang Dian, Zheng Longyu, Cai Minmin, Lin Da, Yu Ziniu, Zhang Jibin*. Preparation and characterization of Iturin a microcapsules in sodium alginate/poly(γ -glutamic acid) by spray drying. *Journal International Journal of Polymeric Materials and Polymeric Biomaterials*. 2017, 66 (10) :479-484.
43. Guo Jing#, Jing Xueping#, Peng Wen-Lei#, Nie Qiyu#, Zhai Yile, Shao Zongze, Zheng Longyu, Cai Minmin, Li Guangyu, Zuo Huaiyu, Zhang Zhitao, Wang Rui-Ru, Huang Dian, Cheng Wanli, Yu Ziniu, Chen Ling-Ling* & Zhang Jibin*. Comparative genomic and functional analyses: unearthing the diversity and specificity of nematicidal factors in *Pseudomonas putida* strain 1A00316. *Scientific Reports*. 2016. 6:29211.
44. Wang Xuefei, Mavrodi V. Dima, Ke Linfeng, Mavrodi V. Olga, Yang Mingming, Thomashow S. Linda, Zheng Na, Weller M David.* and Zhang Jibin*. Biocontrol and plant growth-promoting activity of rhizobacteria from Chinese fields with contaminated soils. *Microbial Biotechnology*. 2015, 8(3):404-418.
45. Zhou Fen, Jeffery K. Tomberlin, Zheng Longyu, Yu Ziniu, and Zhang Jibin*. Developmental and waste reduction plasticity of three black soldier fly strains (Diptera: Stratiomyidae) raised on different livestock manures. *Journal of Medical Entomology*. 2013, 50: 1224-1230.