

CURRICULUM VITAE

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Research Interest			
<p>Our research interests include microbial functional genomics, the function of bacterial nucleotide second messenger molecules and non-coding RNA, as well as the global regulation of bacterial metabolism. In recent years, the research direction has gradually expanded to include the aspects of synthetic biology and intestinal microorganisms. The main research directions now include: (1) Starting from the basic theoretical research on the nucleotide second messenger molecules of c-di-GMP and c-di-AMP to reveal their regulatory mechanism on the physiological functions of bacteria to lay basis for the application of beneficial microorganisms and prevention and control of harmful microorganisms; (2) Studying the regulatory mechanism of non-coding RNA, such as anti-sense RNA, 6S RNA, and tmRNA, to lay the foundation for the transformation and utilization of bacteria; (3) Developing various synthetic biological regulatory elements; (4) Studying related intestinal microbial flora and colorectal cancer.</p>			
Professional Memberships			
Other Roles			
Education & Working Experience			
Education:			
09/1985-06/1989: Bachelor of Science in Agriculture (Agricultural Chemistry) at			



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College of Resources and Environment,

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09/1991-06/1994: Master of Science in Agriculture (Food Science) at College of Food Science and Technology,

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09/1999-06/2003: Doctor of Science (Microbiology) at College of Life Science and Technology,

Huazhong Agricultural University Wuhan, Hubei, China.

Professional Experiences:

07/1989-08/1991: Technician, Wuhan Shuangfeng Citric Acid Co., Ltd., Wuhan, Hubei, China.

01/2010-Present: Lecturer, Associate Professor, and Professor (Level 3), College of Life Science and Technology, Huazhong Agricultural University, Wuhan, Hubei, China.

12/2006-03/2008: Postdoc/Visiting Scholar, Department of Microbiology, University of Illinois at Urbana-Champaign, Illinois, USA.

Publications

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2. Jin He#*, Wen Yin#, Michael Y. Galperin*, Shan-Ho Chou*. Cyclic di-AMP, a second messenger of primary importance: tertiary structures and binding mechanisms. Nucleic Acids Research, 2020, 48(6):2807–2829.
3. Siyang Xu#, Wen Yin#, Yuling Zhang, Qimei Lv, Yijun Yang, Jin He*. Foes or friends? Bacteria enriched in the tumor microenvironment of colorectal cancer. Cancers, 2020, 12(2): 00372.

4. Cao Zheng, Zhaoqing Yu, Cuiying Du, Yujing Gong, Wen Yin, Xinfeng Li, Zhou Li, Ute Römling, Shan-Ho Chou, Jin He*. 2-Methylcitrate cycle: a well-regulated controller of *Bacillus* sporulation. *Environmental Microbiology*, 2020(3): 1125–1140.
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7. Xinfeng Li[#], Han Mei[#], Fang Chen, Qing Tang, Zhaoqing Yu, Xiaojian Cao, Binda Tembeng Andongma, Shan-Ho Chou, Jin He*. Transcriptome landscape of *Mycobacterium smegmatis*. *Frontiers in Microbiology*, 2017, 8: 2505.
8. Maria Kanwal Ali, Xinfeng Li, Qing Tang, Xiaoyu Liu, Fang Chen, Jinfeng Xiao, Muhammad Ali, Shan-Ho Chou, Jin He*. Regulation of inducible potassium transporter *KdpFABC* by *KdpD/KdpE* two-component system in *Mycobacterium smegmatis*. *Frontiers in Microbiology*, 2017, 8: 570.
9. Hang Zhou[#], Cao Zheng[#], Jianmei Su[#], Bo Chen, Yang Fu, Yuqun Xie, Qing Tang, Shan-Ho Chou, Jin He*. Characterization of a natural triple-tandem c-di-GMP riboswitch and application of the riboswitch-based dual-fluorescence reporter. *Scientific Reports*, 2016, 6: 20871.
10. Cao Zheng, Yang Ma, Xun Wang, Yuqun Xie, Maria Kanwal Ali, Jin He*. Functional analysis of the sporulation-specific diadenylate cyclase *CdaS* in *Bacillus thuringiensis*. *Frontiers in Microbiology*, 2015, 6: 908.
11. Qing Tang, Yunchao Luo, Cao Zheng, Kang Yin, Maria Kanwal Ali, Xinfeng Li, Jin

- He*. Functional analysis of a c-di-AMP-specific phosphodiesterase MsPDE from *Mycobacterium smegmatis*. *International Journal of Biological Sciences*, 2015, 11(7): 813-824.
12. Qing Tang, Xinfeng Li, Tingting Zou, Huimin Zhang, Yingying Wang, Rongsui Gao, Zhencui Li, Jin He*, Youjun Feng*. *Mycobacteria smegmatis* BioQ defines a new regulatory network for biotin metabolism. *Molecular Microbiology*, 2014, 94 (5): 1006-1023.
 13. Shumeng Zhang, Jieping Wang, Yale Wei, Qing Tang, Maria Kanwal Ali, Jin He* Heterologous expression of VHb can improve the yield and quality of biocontrol fungus *Paecilomyces lilacinus*, during submerged fermentation. *Journal of Biotechnology*, 2014, 187, 147-153.
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 15. Jieping Wang, Han Mei, Cao Zheng, Hongliang Qian, Cui Cui, Yang Fu, Jianmei Su, Ziduo Liu, Ziniu Yu, Jin He*. The metabolic regulation of *Bacillus thuringiensis* for the formation of spores and parasporal crystals revealed by the transcriptomics and proteomics. *Molecular and Cellular Proteomics*, 2013, 12(5): 1363-1376.