

何亚文简历

一、个人信息：

新加坡公民，中华人民共和国外国人永久居留证，上海交通大学生命科学技术学院教授，微生物群体感应与合成生物学研究室主任，上海交通大学-上海农乐生物农药与生物肥料联合研发中心主任，微生物代谢国家重点实验室和代谢与发育国际合作联合实验室独立PI。手机/微信：86-13564385795；邮箱：yawenhe@sjtu.edu.cn

二、教育/工作经历：

1992年毕业于华中师范大学生物系；1995年于中国科学院华南植物研究所获植物生理学硕士学位；1997年9月赴新加坡国立大学(National University of Singapore, NUS)留学，毕业后先后在新加坡科技发展局分子农业研究院 (Institute of Molecular Agrobiolgy)和分子与细胞生物研究院 (Institute of Molecular and Cell Biology, IMCB)学习与工作。2010年6月加入上海交通大学生命科学与技术学院。

三、研究方向：

1. 微生物群体感应
2. 天然代谢产物农药与生物肥料合成生物学
3. 农业、园林废弃物和厨余角料资源化再利用

四、研究成果

1. 国际期刊论文 (下划线代表通讯作者; *代表共同第一作者; #代表共同通讯作者)

- Chen B, Li RF, Zhou L, Qiu JH, Song K, Tang JL, **He Ya-Wen**. The phytopathogen *Xanthomonas campestris* utilizes the divergently transcribed pobA/pobR locus for 4-hydroxybenzoic acid recognition and degradation to promote virulence. *Molecular Microbiology*, 2020 Nov;114(5):870-886.
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- He Ya-Wen, Cao XQ, Poplawsky AR Dr. Chemical structure, biological roles, biosynthesis and regulation of the yellow xanthomonadin pigments in the phytopathogen *Xanthomonas*. *Molecular Plant Microbe Interactions*. 2020, 33(5):705-714.
- Sun S, Tan LT, Fang YL, Jin ZJ, Zhou L, Goh BH, Lee LH, Zhou J, **He Ya-Wen**. Overexpression of oxyR Increases Phenazine-1-Carboxylic Acid Biosynthesis via Small RNA phrS in the Rhizobacterium Strain *Pseudomonas* PA1201. *Molecular Plant Microbe Interactions*. 2020 Mar;33(3):488-498.
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- Hydroxybenzoic Acid Are Involved in Xanthomonadin Biosynthesis in the Phytopathogen *Xanthomonas campestris* pv. *campestris*. **Phytopathology**. 2020 Feb;110(2):278-286.
- Keswani C, Singh HB, García-Estrada C, Caradus J, **He Ya-Wen**, Mezaache-Aichour S, Glare TR, Borriss R, Sansinenea E. Antimicrobial secondary metabolites from agriculturally important bacteria as next-generation pesticides. **Applied Microbiology and Biotechnology**. 2020 Feb;104(3):1013-1034.
- Yang Q, Song L, Miao Z, Su M, Liang W, **He Ya-Wen**. Acetylation of BcHpt Lysine 161 Regulates *Botrytis cinerea* Sensitivity to Fungicides, Multistress Adaptation and Virulence. **Front Microbiol**. 2020 Jan 8;10: 2965.
- Thawai C, Bunbamrung N, Pittayakhajonwut P, Chongruchiroj S, Pratuangdejkul J, **He Ya-Wen**, Tadtong S, Sareedenchai V, Prombutara P, Qian Y. A novel diterpene agent isolated from *Microbispora hainanensis* strain CSR-4 and its *in vitro* and *in silico* inhibition effects on acetylcholine esterase enzyme. **Sci Rep**. 2020 Jul 6;10(1):11058.
- Law JW, Chan KG, **He Ya-Wen**, Khan TM, Ab Mutalib NS, Goh BH, Lee LH. Diversity of *Streptomyces* spp. from mangrove forest of Sarawak (Malaysia) and screening of their antioxidant and cytotoxic activities. **Sci Rep**. 2019 Dec 3;9(1):15262.
- Chee PY, Mang M, Lau ES, Tan LT, **He Ya-Wen**, Lee WL, Pusparajah P, Chan KG, Lee LH, Goh BH. Epinecidin-1, an Antimicrobial Peptide Derived From Grouper (*Epinephelus coioides*): Pharmacological Activities and Applications. **Front Microbiol**. 2019 Nov 20;10:2631.
- Keswani C, Singh HB, Hermosa R, García-Estrada C, Caradus J, **He Ya-Wen**, Mezaache-Aichour S, Glare TR, Borriss R, Vinale F, Sansinenea E. Antimicrobial secondary metabolites from agriculturally important fungi as next biocontrol agents. **Appl Microbiol Biotechnol**. 2019 Dec;103(23-24):9287-9303.
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- Zhou L, Sun S, Zhang W, **He Ya-Wen**. Ultra-Performance Liquid Chromatography/Mass Spectrometry for the Detection and Quantification of Diffusible Signal Factor (DSF) Family Quorum-Sensing Signals. **Methods Mol Biol**. 2018, 1673:97-105.
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- Zhou L, Zhang LH, Cámara M, **He Ya-Wen**. The DSF Family of Quorum Sensing Signals: Diversity, Biosynthesis, and Turnover in *Xanthomonas*. **Trends in Microbiology**. 2017, 25(4):293-303.
- Sun S, Zhou L, Jin K, Jiang H, **He Ya-Wen**. Quorum sensing systems differentially regulate the production of phenazine-1-carboxylic acid in the rhizobacterium *Pseudomonas aeruginosa* PA1201. **Scientific Reports**, 2016, 6:30352.
- Wang Xing-Yu, Zhou Lian, Yang J, Ji Guang-Hai, **He Ya-Wen**. The RpfB-Dependent Quorum Sensing Signal Turnover System Is Required for Adaptation and Virulence in the Pathogen *Xanthomonas*. **Molecular Plant-Microbe Interactions**. 2016, 29(3):220-30.
- Zhou Lian, Jiang Haixia, Sun Shuang, Yang Dandan, Jin Kaiming, **He Ya-Wen**. Biotechnological potential of a rhizosphere *Pseudomonas aeruginosa* strain producing phenazine-1-carboxylic acid and phenazine-1-carboxamide. **World Journal of Microbiology and Biotechnology**, 2016, 32(3):50.
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- Wang Jia-Yuan*, Zhou Lian*, Chen Bo, Sun Shuang, Zhang Wei, Li Ming, Tang H, Jiang Bo-Le, Tang Ji-Liang, **He Ya-Wen**. A functional 4-hydroxybenzoate degradation pathway in the phytopathogen *Xanthomonas campestris* is required for full pathogenicity. **Scientific Reports**, 2015, 5: 18456.
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- Zhou Lian, Vorholter FJ, He Ying-Qiang, Jiang Bo-Le, Tang Ji-Liang, Xu Yuquan, Puhler A[#], **He Ya-Wen**[#]. Gene discovery by genome-wide CDS re-prediction and microarray-based transcriptional analysis in phytopathogen *Xanthomonas campestris*. *BMC Genomics*, 2011, 12(1):359.
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- Cheng Z^{*}, **He Ya-Wen**^{*}, Lim SC^{*}, Qamra R^{*}, Walsh MA, Zhang LH, Song H (2010) Structural Basis of the Sensor-Synthase Interaction in Autoinduction of the Quorum Sensing Signal DSF Biosynthesis. *Structure*, 18(9):1199-1209.
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- He Ya-Wen** and Loh CS (2000) Cerium and lanthanum promote floral initiation and reproductive growth of *Arabidopsis thaliana*. *Plant Science*, 159:117-124.

2. 中文期刊论文/综述 (下划线代表通讯作者):

- 宋凯, 周莲, 何亚文。DSF-家族群体感应信号生物合成途径与调控机制研究进展。《微生物学通报》, 2021, 48(4): 1239-1248。
- 宋凯#, 郭晓春#, 陈博, 何亚文。植物病原黄单胞菌退出群体感应生理状态的分子机制和生物学意义。《微生物学报》, 2021, 61(1): 68-76。
- 郑哲麟, 胡文达, 何亚文*。微生物卤化酶及其应用研究进展。《微生物前沿》, 2020, 9(4): 141-155。
- 崔莹, 金子靖, 何亚文。碳源影响水稻根际假单胞菌 PA1201 藤黄绿菌素的生物合成。《微生物学通报》, 2020, 47 (8) : 2399-2408。
- 邱嘉辉, 何亚文。微生物胞外多糖黄原胶的应用与研究进展。《激光生物学报》, 2019, 28 (5) : 385-393。
- 陈慧 周莲 陈博 宋凯 郭晓春 何亚文*。天然氨基酸诱导野油菜黄单胞菌降解 DSF-家族群体感应信号活性分析。《微生物学通报》, 2019, 46(11): 2952-2962
- 曹雪强, 何亚文。植物病原黄单胞菌菌黄素化学结构、生物学功能和生物合成机制研究进展。《微生物前沿》, 2018, 7 (4) : 156-164。
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- 赵秀, 朱小龙, 何亚文, 梁永恒。酿酒酵母中磷脂合成相关基因突变对细胞自噬和液泡形态的影响。《南京农业大学学报》, 2015,38(1):70-77。
- 方运玲, 孙爽, 申阅, 何亚文。微生物源农药申嗪毒素的研制与应用。《农药学学报》, 2014, 16 (4) : 387-393。
- 周莲, 王杏雨, 何亚文。植物病原黄单胞菌 DSF 信号依赖的群体感应记者及调控网络。《中国农业科学》, 2013, 46 (14) : 2910-2922。
- 何亚文, 李耿光, 张兰英。马铃薯栽野生种叶肉原生质体培养及其植株再生(简报)。《热带亚热带植物学报》, 1996, 4 (3) : 72-74
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- 何亚文, 李耿光, 张兰英。吡啶橙失活处理应用于不对称融合初步探讨。《热带亚热带植物学报》, 1996, 4 (1) : 5-57
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3. 参与编写的著作/章节

- (1) 何亚文, 第五章: 微生物源抗生素农药。见: 《现代生物农药 100 问》。中国农业科学技术出版社, 北京, 2014 年, 第 66-77 页。
- (2) **He Ya-Wen**, Chou Shan-Ho. Chapter 13. Cyclic di-GMP Regulation in Plant-Pathogenic Bacteria. In: *Virulence Mechanisms of Plant-Pathogenic Bacteria* (Edited by Wang N, Jones JB, Sundin GW). APS Press, St. Paul, Minnesota, USA, 2015, pp. 107-124.
- (3) Zhou Lian, Sun Shuang, Zhang Wei, **He Ya-Wen**. Ultra-Performance Liquid Chromatography/Mass Spectrometry for the detection and quantification of Diffusible Signal Factor (DSF) family quorum sensing signals. In: *Quorum Sensing Methods and Protocols* (Edited by Livia Leoni, Giordano Rampioni). Humana Press, UK, 2017, pp. 97-106.
- (4) **He Ya-Wen**, Qian Wei, Chou San-Ho. Chapter 25 Cyclic di-GMP Signaling in the Phytopathogen *Xanthomonas campestris* pv. *campestris*. In: S.-H. Chou et al. (eds.), *Microbial Cyclic Di-Nucleotide Signaling*. Springer Nature Switzerland AG2020, pp. 427-442.

4. 专利:

- (1) 周莲, **何亚文**, 高产吩嗪-1-羧酸和吩嗪-1-酰胺的根际假单胞菌。中国专利号 ZL 2013 1 0511796.2, 授权公告日: 2016 年 2 月 10 日。
- (2) 周莲, 金凯明, **何亚文**。安全高效生产申嗪毒素的基因工程菌株及其应用。中国专利号 ZL 2015 1 0056619.9, 授权公告日: 2018 年 02 月 09 日。
- (3) 周莲, 杨丹丹, 何亚文。**BDSF** 高产菌株及其发酵优化方法和应用。中国专利号: ZL201810002666.9, 授权公告日: 2020 年 11 月 06 日。授权公告号: CN108342347B
- (4) 何亚文, 金子靖。低毒高产杀菌剂吩嗪-1-酰胺的基因工程菌株及培养方法和应用。申请公布日: 2019.05.21; 申请公布号: CN109777760A。
- (5) 何亚文, 邱嘉辉。一种高产白原胶的工程菌株及其构建与应用。申请号: CN201911141660.0; 公开日: 2020 年 2 月 11 日, 公开号: CN110777105A。
- (6) 何亚文。一株高产杀粉蝶菌素 A1 和高效抑制植物病原黄单胞菌生长的链霉菌菌株。申请号: CN202011190782.1