

Ya-Wen He Resume

Education

March 2007, Ph.D., National University of Singapore, Molecular Microbiology

March 2000, M.Sc., National University of Singapore, Plant Science

July 1995, M.Sc., South China Institute of Botany, CAS, Plant Physiology

July 1992, B.Sc., Central China Normal University, Biology

Post-doctoral Training

2007-2010, Research Fellow, Institute of Molecular and Cell Biology, Singapore.

Professional Experiences

06/2010-present, Professor, School of Life Sciences & Biotechnology, Shanghai Jiao Tong University, Shanghai, P.R.China

10/2006-05/2010, Research Fellow, Institute of Molecular and Cell Biology (IMCB), Singapore

07/2001-09/2006, Junior Research Fellow, IMCB, Singapore

12/1999-06/2001, Assistant Research Officer, IMCB, Singapore

08/1995-08/1997, Research assistant, South China Institute of Botany, Chinese Academy of Science, Guangzhou, China

Research interests

- 1) Microbial Quorum sensing
- 2) Synthetic Biology of Biopesticides and Biofertilizers.
- 3)

1. Papers published in international journals (underline indicates corresponding author)

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.

Jin ZJ, Zhou L, Sun S, Cui Y, Song K, Zhang X, He Ya-Wen. Identification of a Strong Quorum Sensing- and Thermo-Regulated Promoter for the Biosynthesis of a New Metabolite Pesticide Phenazine-1-carboxamide in *Pseudomonas* strain PA1201. *ACS Synthetic Biology*. 2020 Jul 17;9(7):1802-1812.

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*.

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- Cao XQ, Ouyang XY, Chen B, Song K, Zhou L, Jiang BL, Tang JL, Ji G, Poplawsky AR, **He Ya-Wen**. Genetic Interference Analysis Reveals that Both 3-Hydroxybenzoic Acid and 4-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.
- Zhou L, Li M, Wang XY, Liu H, Sun S, Chen H, Poplawsky A, **He Ya-Wen**. Biosynthesis of Coenzyme Q in the Phytopathogen *Xanthomonas campestris* via a Yeast-Like Pathway. *Mol Plant Microbe Interact*. 2019, 32(2):217-226.
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- Fang Y L, Chen B, Zhou L, **He Ya-Wen**. The mechanism underlying the regulatory roles of anti-activator QslA on the biosynthesis of phenazine-1-carboxylic acid in *Pseudomonas aeruginosa* PA1201. *Frontiers in*

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- Sun S, Chen B, Jin ZJ, Zhou L, Fang YL, Thawai C, Rampioni G, **He Ya-Wen**. Characterization of the multiple molecular mechanisms underlying RsaL control of phenazine-1-carboxylic acid biosynthesis in the rhizosphere bacterium *Pseudomonas aeruginosa* PA1201. *Molecular Microbiology*. 2017, 104(6):931-947.
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- 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.
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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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2. Paper published in Chinese journals (underline indicates corresponding author)

- (1) Jiang Haixia, Zhou Lian, **He Ya-Wen**, Progress in biocontrol rhizobacteria *Pseudomonas aeruginosa*: mechanisms and applications. *Microbiology China*, 2015, 42: 1338-1349.
- (2) Jin Kaiming, Zhou Lian, Jiang Haixia, **He Ya-Wen**. Research progress in microbial minimum genome factory. *Life Sciences*, 2015, 7: 883-891.
- (3) Zhao X, Zhu X, **He Ya-Wen**, Liang Yongheng. CDS1 is required for proper vacuole morphology but not for autophagy in *Saccharomyces cerevisiae*. *Journal of Nanjing Agricultural University*, 2015, 38 (1):70-77.
- (4) Fang Yunling, Sun shuang, Shen Yue, **He Ya-Wen**. rogress on the development and application of biopesticide Shenqinmycin. *Chinese Journal of Pesticide Science*, 2014, 16(4): 387-393.
- (5) Zhou Lian, Wang Xing-Yu, **He Ya-Wen**. DSF signal-dependent quorum sensing in plant pathogenic bacteria *Xanthomonas*. *Scientia Agricultura Sinica*, 2013, 46(14): 2910-2922.

3. Book chapters

- (1) **He Ya-Wen**. Chapter 5. Microbial pesticide: agricultural antibiotics. In: *100 questions regarding modern biopesticide* (edited by Wang Zhongkang, Zhang Xin, Zhang Lisheng, Qiu Dewen, Yang Ziwen), China Agricultural Science and Technology Press (CASTP), Beijing, 2014, pp.60-77. (IN CHINESE)
- (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*

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