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Research Area

Target identification and mechanistic characterization of natural products.

Professional Experience

- 2014– Associate Professor, School of Pharmacy, East China University of Science and Technology, China
- 2013–2014 Postdoctoral fellow, The Scripps Research Institute, USA
Advisor: Prof. Xiang-Lei Yang and Prof. Paul Schimmel

Education

- 2007–2013 Ph.D., The Scripps Research Institute, USA
Advisor: Prof. Xiang-Lei Yang and Prof. Paul Schimmel
- 2004–2007 M.Sc., School of Life Sciences, University of Science and Technology of China, China
Advisor: Prof. Cong-Zhao Zhou
- 1999–2003 B.Sc., Department of Biology, Shantou University, Shantou, China
Advisor: Prof. Yali Han

Awards

- 2025 Thieme Chemistry Journals Award
- 2015 Shanghai Pujiang Talent Program

Publications

1. Yali Wu,[#] Shaonan Wang,[#] Zhicong Guo,[#] Min Sun,[#] Zhen Xu, Yu Du, Fahui Zhu, Yajuan Su, Zhou Xu, Yi Xu, Xu Gong, Ruan Fang, Jiaojiao Hu, Yan Peng, Zhaowen Ding, Cong Liu, Ang Li,^{*} and **Weiwei He**.^{*} Hapalindole Q suppresses autophagosome–lysosome fusion by promoting YAP1 degradation via chaperone-mediated autophagy. *Proc. Natl. Acad. Sci. U. S. A.* **2024**, *121*, e2400809121.
2. Yan Peng,[#] Yumeng Zhang,[#] Ruan Fang,[#] Hao Jiang,[#] Gongcai Lan, Zhou Xu, Yajie Liu, Zhaoyang Nie, Lu Ren, Fengcan Wang, Shou-De Zhang, Yuyong Ma, Peng Yang, Hong-Hua Ge, Wei-Dong Zhang,^{*} Cheng Luo,^{*} Ang Li,^{*} and **Weiwei He**.^{*} Target identification and mechanistic characterization of indole terpenoid mimics: proper spindle microtubule assembly is essential for Cdh1-mediated proteolysis of CENP-A. *Adv. Sci.* **2024**, *11*, 2305593.
3. Jiulong Li, Pengxin Ren, Lin Wang, Yuting Zhang, Peng Yang,^{*} **Weiwei He**,^{*} and Ang Li.^{*} Inverse-electron-demand Diels–Alder approach to densely substituted bicyclo[3,2,2]nonanes. Discovery of an autophagy regulator. *Chin. Chem. Lett.* **2025**, DOI: 10.1016/j.cclet.2025.111381.

4. Shaonan Wang,[#] Min Sun,[#] Yajuan Su, Zhou Xu, Ang Li,* and **Weiwei He**.* Deucravacitinib induces proteasomal degradation of YAP1 in human glioblastoma cells. *Synlett* DOI: 10.1055/a-2331-6463.
5. Shaonan Wang,[#] Yali Wu,[#] Mengyu Ba, Zhou Xu, Guoxing Gu, William G. Whittingham, Cong Liu, Ang Li,* and **Weiwei He**.* Discovery of the lysosome-inhibiting function of acemolactone B. *Synlett* DOI: 10.1055/a-2325-3938.
6. **Weiwei He**,[#] Hongbo Zhang,[#] Xudong Lin, Lili Zhu, Tingting Zheng, Hao Pei, Yang Tian, Min Zhang, Guoyue Shi, Lei Wu, Jianlong Zhao, Gulinuer Wumaier, Shengqing Li, Yufang Xu, Honglin Li,* and Xuhong Qian.* Advancements in life-on-a-chip: The impact of “Beyond Limits Manufacturing” technology. *Chin. Chem. Lett.* **2024**, 35, 109091.
7. Fan Yang, Jie Zhang, Jiacheng Li, Wenbo Ye, Ang Li,* and **Weiwei He**.* Synthesis of a glucose conjugate of pristimerin and evaluation of its anticancer activity. *Chin. Chem. Lett.* **2023**, 34, 107438.
8. Anqi Yang, Xiang Lin, Zijian Liu, Xin Duan, Yurou Yuan, Jiaxuan Zhang, Qilin Liang, Xianglin Ji, Nannan Sun, Huajun Yu, **Weiwei He**, Lili Zhu, Bingzhe Xu, and Xudong Lin.* Worm generator: a system for high-throughput in vivo screening. *Nano Letters* **2023**, 23, 1280–1288.
9. Litao Sun, Na Wei, Bernhard Kuhle, David Blocquel, Scott Novick, Zaneta Matuszek, Huihao Zhou, **Weiwei He**, Jingjing Zhang, Thomas Weber, Rita Horvath, Philippe Latour, Tao Pan, Paul Schimmel, Patrick R Griffin, and Xiang-Lei Yang.* CMT2N-causing aminoacylation domain mutants enable Nrp1 interaction with AlaRS. *Proc. Natl. Acad. Sci. U. S. A.* **2021**, 118, e2012898118.
10. Gongcai Lan, Jie Zhang, Wenbo Ye, Fan Yang, Ang Li,* **Weiwei He**,* and Wei-Dong Zhang.* Celastrol as a tool for the study of the biological events of metabolic diseases. *Sci. China Chem.* **2019**, 62, 409–416.
11. Zhongyin Zhang, Jinxin Wang, Jian Li, Fan Yang, Guodu Liu, Wenjun Tang, **Weiwei He**, Jian-Jun Fu, Yun-Heng Shen,* Ang Li,* and Wei-Dong Zhang.* Total synthesis and stereochemical assignment of delavatine A: Rh-catalyzed asymmetric hydrogenation of indene-type tetrasubstituted olefins and kinetic resolution through Pd-catalyzed triflamide-directed C–H olefination. *J. Am. Chem. Soc.* **2017**, 139, 5558–5567.
12. Jinpeng Pei, Shupeng Zhou, Fan Yang, Yu Sun, Ang Li,* Wei-Dong Zhang,* and **Weiwei He**.* Identification and mechanistic studies of a cell cycle regulator JP18 from a library of synthetic indole terpenoid mimics. *Chem. Asian J.* **2016**, 11, 2715–2718.
13. Zhongyin Zhang, Fan Yang, Jian-Jun Fu, Yun-Heng Shen,* **Weiwei He**,* and Wei-Dong Zhang.* Delavatine A, a structurally unusual cyclopenta[de]isoquinoline alkaloid from *Incarvillea delavayi*. *RSC Adv.* **2016**, 6, 65885–65888.
14. Litao Sun, Ana Cristina Gomes, **Weiwei He**, Huihao Zhou, Xiaoyun Wang, David W. Pan, Paul Schimmel, Tao Pan,* and Xiang-Lei Yang.* Evolutionary gain of alanine mischarging to non-cognate tRNAs with a G4:U69 base pair. *J. Am. Chem. Soc.* **2016**, 138, 12948–12955.
15. **Weiwei He**,[#] Ge Bai,[#] Huihao Zhou, Na Wei, Nicholas M. White, Janelle Lauer, Huaqing Liu, Yi Shi, Calin Dan Dumitru, Karen Lettieri, Veronica Shubayev, Albena Jordanova, Velina Guergueltcheva, Patrick Griffin, Robert W. Burgess, Samuel L. Pfaff,* and Xiang-Lei Yang.* CMT2D neuropathy is linked to the neomorphic binding activity of glycyl-tRNA synthetase. *Nature* **2015**, 526, 710–714.
16. Rongcai Yue, Xia Li, Bingyang Chen, Jing Zhao, **Weiwei He**, Hu Yuan, Xing Yuan, Na Gao, Guozhen Wu, Huizi Jin, Lei Shan*, and Weidong Zhang.* Astragaloside IV attenuates glutamate-induced neurotoxicity in PC12 cells through Raf-MEK-ERK pathway. *PLOS ONE* **2015**, 10, e0126603.
17. Xinhui Tian, Li Li, Xin Fang, Jianping Zhang, Jinpeng Pei, **Weiwei He**, Lei Shan, Yunheng Shen,* and Weidong Zhang.* (–)- and (+)-Merrilliaquinone, a pair of new quinone enantiomers from *Illicium merrillianum* and their distinctive cytotoxic effect on human hepatoma cells. *RSC Adv.* **2015**, 5, 75857–75862.
18. Xinhui Tian, Rongcai Yue, Huawu Zeng, Honglin Li, Lei Shan, **Weiwei He**, Yunheng Shen,* and Weidong Zhang.* Distinctive effect on nerve growth factor-induced PC12 cell neurite outgrowth by two unique neolignan enantiomers from *Illicium merrillianum*. *Sci. Rep.* **2015**, 5, 16982–16990.

19. Min Chul Park, Taehee Kang, Da Jin, Jung Min Han, Sang Bum Kim, Yun Jung Park, Kiwon Cho, Young Woo Park, Min Guo, **Weiwei He**, Xiang-Lei Yang, Paul Schimmel, and Sunghoon Kim.* Secreted human glycyl-tRNA synthetase implicated in defense against ERK-activated tumorigenesis. *Proc. Natl. Acad. Sci. U. S. A.* **2012**, *109*, E640–647.
20. **Weiwei He**,[#] Hui-Min Zhang,[#] Yeeting E. Chong, Min Guo, Alan G. Marshall, and Xiang-Lei Yang.* Dispersed disease-causing neomorphic mutations on a single protein promote the same localized conformational opening. *Proc. Natl. Acad. Sci. U. S. A.* **2011**, *108*, 12307–12312.
21. Yanbin Teng, Yongliang Jiang, Yongxing He, **Weiwei He**, Fuming Lian, Yuxing Chen, and Cong-Zhao Zhou.* Structural insights into the substrate tunnel of *Saccharomyces cerevisiae* carbonic anhydrase Nce103. *BMC Struct. Biol.* **2009**, *9*, 67–74.
22. **Weiwei He**,[#] Yi Wang,[#] Wei Liu, and Cong-Zhao Zhou.* Crystal structure of *Saccharomyces cerevisiae* 6-phosphogluconate dehydrogenase Gnd1. *BMC Struct. Biol.* **2007**, *7*, 38–46.
23. Xiaopeng Zhou, Yali Han,* and **Weiwei He**, Application of RAPD on the study of imposex mechanism in *Thais clavigera*. *Marine Environmental Science (Chinese)* **2004**, *23*, 31–34.