

Department: School of Biotechnology

Professional field: Bioengineering

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Profile

Dr. Xue-Ting Liu received her Ph. D degree in Medicinal Chemistry from China Pharmaceutical University in 2006. She has the experiences of working in Shanghai Institute of Organic Chemistry, CAS (2006-2007), China, and in University of Wisconsin-La Crosse (2007-2010), USA, as a postdoctoral fellow. In October 2010, she returned to China and joined the Institute of Microbiology, Chinese Academy of Sciences as an associate researcher, and was appointed as a professor in June 2016. Then she was introduced to the School of Bioengineering, East China University of Science and Technology. Dr. Liu has published 50 peer-reviewed journal papers including on the journal of *Angew Chem*, *Org Lett*, *J Nat Prod*, *Appl Microbiol Biotech*, *Phytochemistry*. And collaborated Publications has been published on the journal of *Nat Biotechnol*, *Org Lett*. Dr. Liu has presided over one sub-project of the National Key Research and Development Program and one top-level project of the Natural Science Foundation of China, one top-level project and one youth project of the Natural Science Foundation of China, one sub-project of the major science and technology special project of the 12th Five-Year Plan on the prevention and treatment of major infectious diseases such as HIV/AIDS and viral hepatitis, two cross-sectional projects, one collaborative research project of the International Union Against Tuberculosis (IUATB) and one project of the European Union's Seventh Framework Programme on "Pharma Sea".

Research Field

1. Research on active natural products of microbial origin

Rapid discovery and identification of novel active natural products of microbial origin (including actinomycetes and fungi) using genomic bioinformatics analysis and multiple spectroscopy-oriented tools.

2. Synthetic biology strategies for the synthesis of "unnatural" active natural products.

Use synthetic biology or systems biology strategies to expand the structural diversity of active natural products.

Research results and selected published papers

1. Qian Wang, Fuhang Song, Xue Xiao, Pei Huang, Li Li, Aaron Monte, Wael M. Abdel-Mageed, Jian Wang, Hui Guo, Wenni He, Feng Xie, Huanqin Dai, Miaomiao Liu, Caixia Chen, Hao Xu, Mei Liu, Andrew M. Piggott, Xueting Liu,* Robert J. Capon,* Lixin Zhang*. Abyssomicins from a South China Sea deep-sea sediment *Verrucospora* sp.: Natural thioether Michael addition adducts as potential antitubercular prodrugs. *Angew. Chem. Int. Ed. Engl.*, 2013, 52, 1231-1234.
2. Shu-Shan Gao,^{a†} Ronghai Cheng,^{b,†} Nathchar Naowarojna,^{b,†} Lixin Zhang,^c Xueting Liu,^{b,c,*} and Pinghua Liub.* Recent Examples of α -Ketoglutarate-Dependent Mononuclear Non-Haem Iron Enzymes in Natural Product Biosyntheses. *Natural Product Reports*, 2018, 35, 792-837.
3. Wael M. Abdel-Mageed*, Soad A. L. Bayoumi, Lamyia H. Al-wahaibi, Li Li, Hanaa M. Sayed, Mohamed S. A. Abdalkader, Ali A. El-Gamal, Mei Liu, Jingyu Zhang, Lixin Zhang*, and Xueting Liu*. Noncyanogenic Cyanoglucoside Cyclooxygenase Inhibitors from *Simmondsia chinensis*. *Org. Lett.*, 2016, 18(8), 1728-1731.
4. Jingyu Zhang, Wael M. Abdel-Mageed, Miaomiao Liu, Pei Huang, Wenni He, Li Li, Fuhang Song, Huanqin Dai, Xueting Liu,* Jingyu Liang,* Lixin Zhang.* Caesanines A-D, new cassane diterpenes with unprecedented N bridge from *Caesalpinia sappan*. *Org. Lett.*, 2013, 15 (18), 4726-4729. (IF = 6.579)
5. Wenni He, Miaomiao Liu, Xiaolin Li, Xiaoping Zhang, Wael M. Abdel-Mageed, Li Li, Wenzhao Wang, Jingyu Zhang, Jianying Han, Huanqin Dai, Ronald J. Quinn, Hung-wen Liu, Houwei Luo, Lixin Zhang*, Xueting Liu*. Fungal biotransformation of tanshinone results in [4+2] cycloaddition with sorbicillinol: Evidence for enzyme catalysis and increased antibacterial activity. *Appl. Microbiol. Biotechnol.*, 2016, 100(19), 8349-8357.
6. Miaomiao Liu, Tanja Grkovic, Lixin Zhang, Xueting Liu*, Ronald J Quinn*. A model to predict anti-tuberculosis activity: value proposition for marine microorganisms. *J. Antibiot. (Tokyo)*, 2016, 69(8), 594-599.