

Jinlian Zhao

Date of Birth: 6th August 1982. Nationality: Chinese

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I am a highly motivated natural products chemist with an interest in the isolation, purification and structural characterization of bioactive secondary metabolites from plants and microbials. With a PhD in Pharmaceutical Sciences and postdoctoral work experience in Natural Products Chemistry, I have sound skills in isolation of natural products using a variety of techniques, specifically significant preparative HPLC experience, and elucidation of their structures via a combination of techniques, including NMR and mass spectrometry. In addition, I gained solid understanding of secondary metabolite biosynthesis and experience using analytical techniques to identify potential targets. Within the multidisciplinary Goss group, my current research focuses on fermenting the heterologous BGC expression strains and identifying isolation targets with rigorous analytical chemistry (HPLC, LC/MS) from them.

Employment Record

Research Fellow (PDRA), School of Chemistry, University of St. Andrews, UK, Dr Rebecca Goss Group
May 2018 – present

Postdoctoral Researcher, Institute of Materia Medica, Chinese Academy of Medical Sciences & Peking Union Medical College, China, Dr Jungui Dai Group
October 2014 – July 2017

Biology Teacher, No. 23 Middle School, Shijiazhuang City, Hebei, China
September 2008 – July 2010

Education

PhD, University of Strathclyde, Dr Veronique Seidel
October 2010 – June 2014 (Awarded June 2014)

*Phytochemical and antibacterial studies on *Arctium lappa*, *Tussilago farfara* and *Verbascum thapsus**

MSc. Botany (Natural Products), College of Life Science, South China Normal University, Guangzhou, China
September 2005 – June 2008 (Awarded June 2008)

BSc. Bioscience, College of Life Science and Technology, University of Xiaogan, Hubei, China
September 2001 – June 2005 (Awarded June 2005)

Skills and Knowledge

- Basic knowledge in chemistry and sound experiences with analytical techniques such as HPLC/UPLC, LC-MS, NMR, and spectrometry.

- Experience in utilizing Agilent 1200/1260 HPLC, JEOL 400 MHz Delta and Bruker Advance 400/500/600 MHz FT-NMR Spectrometers, as well as Thermo Finnigan LCQ-Deca Ion Trap or Orbitrap HRESI mass spectrometer.
- Ability in HPLC method design and validation, data acquisition and processing, as well as basic maintenance and troubleshooting of the HPLC system.
- Skilled in use of chemistry-based programs including ChemBioDraw, ChemStation, Delta, Topspin, and MestReNova, and MS-based programs like Xcalibur.
- Ability in interpreting structures of new compounds by extensive spectroscopic data analysis.
- Experience of microbial fermentation and down-stream processing, and basic knowledge in secondary metabolite biosynthesis.

Research Presentations

- Antitubercular activity of *Arctium lappa* and *Tussilago farfara* extracts and constituents, TB Summit (Conference), London, UK, 26/03/2014 (Poster).
- Stachybotrysams A–E, prenylated isoindolinone derivatives with anti-HIV activity from the fungus *Stachybotrys chartarum*, 2015 China Pharmaceutical Conference and the 15th China Pharmacist Week, Tianjing, China, 07 – 11/11/2015 (Abstracts).
- Stachybotrynsins A–G, phenylspirodrimane derivatives from the fungus *Stachybotrys chartarum*, CCS 11th National Symposium on Natural Organic Chemistry, Shanghai, China, 25 – 26/09/2016 (Abstracts).

Administrative Experience/Teaching

- Helps in supervisions with graduate students (involving detailed research plans, experiment set-up and follow-up of their research progress) and ordinary lab management (postdoctoral period).
- Participated in the writing of papers and grant proposals (postdoctoral period)
- Worked as a class tutor, demonstrating phytochemistry practical to UG students (PhD period).

Publications

- **Jinlian Zhao**, Jiamin Feng, Zhen Tan, Jimei Liu, Min Zhang, Ridao Chen, Kebo Xie, Dawei Chen, Yan Li, Xiaoguang Chen, and Jungui Dai*. Bistachybotrynsins A–C, three phenylspirodrimane dimers with cytotoxicity from *Stachybotrys chartarum*. *Bioorganic & Medicinal Chemistry Letters*, 2018, 28, 355–359.
- **Jinlian Zhao**, Jiamin Feng, Zhen Tan, Jimei Liu, Jianyuan Zhao, Ridao Chen, Kebo Xie, Dewu Zhang, Yan Li, Liyan Yu, Xiaoguang Chen, Jungui Dai*. Stachybotrynsins A–G, phenylspirodrimane derivatives from the fungus *Stachybotrys chartarum*. *Journal of Natural Products*, 2017, 80, 1819–1826.
- **Jinlian Zhao**, Jimei Liu, Yun Shen, Zhen Tan, Min Zhang, Ridao Chen, Jianyuan Zhao, Dewu Zhang, Liyan Yu, Jungui Dai*. Stachybotrysams A–E, prenylated isoindolinone derivatives with anti-HIV activity from the fungus *Stachybotrys chartarum*. *Phytochemistry Letters*, 2017, 20: 289–294.
- **Jinlian Zhao**, Min Zhang, Jimei Liu, Zhen Tan, Ridao Chen, Kebo Xie, Jungui Dai*. Bioactive steroids and sorbicillinoids isolated from the endophytic fungus *Trichoderma* sp. Xy24. *Journal of Asian Natural Products Research*, 2017, 19(10):1028–1035.
- **Jinlian Zhao**, Dimitrios Evangelopoulos, Sanjib Bhakta, Aleander I. Gray, Veronique Seidel*. Antitubercular activity of *Arctium lappa* and *Tussilago farfara* extracts and constituents. *Journal of*

Ethnopharmacology, 2014, 155(1): 796–800.

- **Jinlian Zhao**, Youwei Zeng, Kuan Li, Yonghong Peng. Study on protection of flower tea on •OH-induced DNA damage through fluorescent spectrum scanning. *Journal of South China Normal University (Natural Science Edition)*, 2010, 3:92–97.
- Min Zhang, Jiamin Feng, Xiaona Jia, **Jinlian Zhao**, Jimei Liu, Ridao Chen, Kebo Xie, Dawei Chen, Yan Li, Dan zhang, Jungui Dai*. Bistachybotrysins D and E, one stereoisomeric pair of cytotoxic phenylspirodrimane dimers from *Stachybotrys chartarum*, *Chinese Chemical Letters*, 2018, <https://doi.org/10.1016/j.ccllet.2018.04.031>.
- Zhen Tan, **Jinlian Zhao**, Jimei Liu, Min Zhang, Ridao Chen, Kebo Xie, Jungui Dai*. Sesquiterpenoids from the cultured mycelia of *Ganoderma capense*. *Fitoterapia*, 2017, 118: 73–79.
- Min Zhang, **Jinlian Zhao**, Jimei Liu, Ridao Chen, Kebo, Xie, Dawei Chen, Keping Feng, Dan Zhang, Jungui Dai*. Neural anti-inflammatory sesquiterpenoids from the endophytic fungus *Trichoderma* sp. Xy24, *Journal of Asian Natural Products Research*, 2017, 19(7):651–658.
- Min Zhang, Jimei Liu, Ridao Chen, **Jinlian Zhao**, Kebo Xie, Dawei Chen, Jungui Dai*. Two Furanharzianones with 4/7/5/6/5 ring system from microbial transformation of Harzianone. *Organic Letters*, 2017, 19(5):1168–1171.
- Jimei Liu, Dewu Zhang, Wuyu Du, **Jinlian Zhao**, Ridao Chen, Kebo Xie, Jungui Dai*. Four new monoterpenoids from an endophytic fungus *Periconia* sp. F-31. *Journal of Asian Natural Products Research* 2017, 19, 541-549.
- Min Zhang, Jimei Liu, **Jinlian Zhao**, Ning Li, Ridao Chen, Kebo, Xie, Wenjing Zhang, Keping Feng, Zheng Yan, Nan Wang, Jungui Dai*. Two new diterpenoids from the endophytic fungus *Trichoderma* sp. Xy24 isolated from mangrove plant *Xylocarpus granatum*. *Chinese Chemical Letters*, 2016, 27 (6): 957–960.
- Jimei Liu, Dewu Zhang, Min Zhang, **Jinlian Zhao**, Ridao Chen, Nan Wang, Dan Zhang, Jungui Dai*. Eremophilane sesquiterpenes from an endophytic fungus *Periconia* species. *Journal of Natural Products*, 2016, 79 (9):2229–2235.
- Youwei Zeng, **Jinlian Zhao**, Yonghong Peng*. A comparative study on the free radical scavenging ability of some fresh flowers in Southern China. *Swiss Journal of LWT-Food Science and Techology*, 2008, 41, 1586–1591.
- Youwei Zeng, **Jinlian Zhao**, Fang Wang, Yonghong Peng*. DPPH Scavenging activity of 16 kinds of flower tea and their optimum mixing proportion. *Natural Product Research and Development*, 2008, 20, 325–327.
- Youwei Zeng, **Jinlian Zhao**, Yonghong Peng*. Advances in studies on absorption and metabolism of flavonoids. *Chinese Traditional and Herbal Drugs*, 2008, 39, 460–464.
- Youwei Zeng, **Jinlian Zhao**, Yonghong Peng*. Effects on free radical scavenging activity of *Rosa hybrida*. *Chinese Agricultural Science Bulletin*, 2008, 24, 205–209.