

Zhu Zaibiao



Areas of Research

Medicinal plants ; Chinese medicinal materials.

Contact Information

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Research Interests

1 Resource and cultivation of medicinal plants

The bulk demands of many medicinal plants for their great medicinal and other value cause the over-exploitation of wild resources in recent years. Hence, one of our main research interests is to increase the population of medicinal plants (*Monochasma savatieri*, *Amana edulis*, etc) via germplasm resources evaluation, tissue culture, cultivation, propagation. Based on the above-mentioned researches, the mechanisms involving in organogenesis and growth are explored with ecological experiments, high-throughput transcriptome methods, and molecular biology.

2 Quality regulation of medicinal plants and Chinese medicinal materials

Secondary metabolites responses to environment factors can be useful measurements to determine favourable habitat conditions and cultivation methods for the cultivation and conservation of medicinal plants. In order to increase the quality of medicinal plants and Chinese medicinal materials, the effects and mechanism of different environmental factors (such as light, water, temperature) and exogenous signal molecular (such as hydrogen peroxide) on the regulation of secondary metabolites in some medicinal plants *Sedum sarmentosum*, *Monochasma savatieri*, *Amana edulis*, etc.

Education Background

Bachelor: College of Resources and Environment, Northwest A&F University

Master: College of Life Sciences, Northwest A&F University

Doctor: Chinese Academy of Sciences

Work experience

Professor, Nanjing Agricultural University, 2018-

Assistant Professor, Nanjing Agricultural University, 2011-2017

Lecturer, Nanjing Agricultural University, 2009-2010

Selected Publication

Guo Qiaosheng, Zhu Zaibiao, 2014. Phenotyping, in 'Handbook of chemical and biological plant analytical methods', edited by Hostettmann Kurt, Chen Shilin, Marston Andrew, Stuppner Hermann. Chichester, UK: John Wiley & Sons, Ltd, pp 827-842

Zhu Zaibiao, Liang Zongsuo, Han Ruilian, 2009. Growth and saikosaponins production of medicinal herb *Bupleurum chinense* DC. under different levels of nitrogen and phosphorus. *Ind Crop Prod*, 29, 96-101.

Zhu Zaibiao, Liang Zongsuo, Han Ruilian, 2009. Saikosaponin accumulation and antioxidative protection in drought-stressed *Bupleurum chinense* DC plants. *Environ Exp Bot*, 66, 326-333.

Zhu Zaibiao, Liang Zongsuo, Han Ruilian, Wang Xin, 2009. Impact of fertilization on drought response in the medicinal herb *Bupleurum chinense* DC.: Growth and saikosaponin production. *Ind Crop Prod*, 29, 629-633.

Zhu Zaibiao, Yu Manman, Chen Yuhang, Guo Qiaosheng, Zhang Lixia, Shi Hongzhan, Liu Li, 2014. Effects of ammonium to nitrate ratio on growth, nitrogen metabolism, photosynthetic efficiency and bioactive phytochemical production of *Prunella vulgaris*. *Pharm Biol*, 52(12): 1518 - 1525

Zhu Zaibiao, Fan Jiayi, Guo Qiaosheng, Liu Zuoyi, Zhu Guosheng, 2015. The growth and medicinal quality of *Epimedium wushanense* T. S. Ying are improved by an isolate of dark septate fungus. *Pharm Biol*, 53(9):1344-1351.

Miao Yuanyuan, Guo Qiaosheng, Zhu Zaibiao, Yang Xiaohua, Wang Changlin, Sun Yuan, Liu Li, 2016. Dynamic changes in starch metabolism and endogenous hormones during stolon formation in *Tulipa edulis*. *J. Amer. Soc. Hort. Sci.* 141: 211-221

Miao Yuanyuan, Zhu Zaibiao, Guo Qiaosheng, Zhu Yunhao, Yang Xiaohua, Sun Yuan, Transcriptome analysis of differentially expressed genes provides insight into stolon formation in *Tulipa edulis*. *Front. Plant Sci.* 7:409.

Zhu Zaibiao, Miao Yuanyuan, Guo Qiaosheng, Zhu Yunhao, Yang Xiaohua, Sun Yuan. 2016. Identification of miRNAs involved in stolon formation in *Tulipa edulis* by high-throughput sequencing. *Front. Plant Sci.* 7: 852

Zhu Zaibiao, Zhu Lifang, Guo Qiaosheng, Lin Jianluo, Miao Yuanyuan, Yang Xiaohua. Effects of culture conditions on in vitro bulblet induction in the medicinal plant *Amana*

