



Department: School of Biotechnology

Professional field: molecular and cellular biology

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Profile

Associate professor and master's tutor for biochemistry and molecular biology, microbiology and bioengineering majors. Research including metabolic engineering and cell factory optimization, enzyme structure and function, discovery and application of functional microbes, and biology of therapeutic cells in culture process etc. Published over 30 research articles in SCI indexed journals. The master candidate students with great passion in scientific research, good knowledge and skill background in molecular and cellular biology, and good communication ability are welcome.

Oversea experience as visiting scholar:

2010.8-2011.8: Duke University, USA

2017.1-12: Chalmers University of Technology, Sweden

Research Field

Now my research focused on microbial metabolic engineering, synthetic biology and biology of therapeutic cells in culture process.

Research results and selected published papers

1. SafiyhTaghavi, Xiao Wu, Liming Ouyang, Yian Biao Zhang, Andrea Stadler, Sean McCorkle, Wei Zhu, Sergei Maslov, Daniel van der Lelie*. Transcriptional responses to sucrose mimic the plant-associated life style of the plant growth promoting endophyte *Enterobacter* sp. 638. *PLoS ONE*.2015, 10(1): e0115455
2. Donglin Zhu, Liming Ouyang*, Zhaohui Xu, Lili Zhang. Rhizobacteria of *Populuseuphratica* promoting plant growth against heavy metals.*International Journal of Phytoremediation*. 2015. 17 (10), 973-980
3. Yufei Sui, Liming Ouyang*, Hongzhong Lu, Yingping Zhuang*, Siliang Zhang. Progress in Omics Research of *Aspergillus niger*. *Chinese Journal of Biotechnology*.2016, 32(8): 20-35
4. Hongzhong Lu, Weiqiang Cao, Liming Ouyang, Jianye Xia, Mingzhi Huang, Ju Chu, Yingping Zhuang, Siliang Zhang and HenkNoorman. Comprehensive reconstruction and in silico analysis of *Aspergillus niger* genome-scale metabolic network model that accounts for 1210 ORFs. *Biotechnology and Bioengineering*. 2017. 114(3):685-695.
5. Chong c Chen; Ming Hong; Ju Chu, Ming z Huang; Li m Ou yang; Xi w Tian; Ying p Zhuang. Blocking the flow of propionate into TCA cycle through a *mutB* knockout leads to a significant increase of erythromycin production by an industrial strain of *Saccharopolysporaerythraea*. *Bioprocess and Biosystems Engineering*. 2017. 40: 201.
6. Liming Ouyang*, Haiyan Pei, Zhaohui Xu. Low nitrogen stress stimulating the indole-3-acetic acid biosynthesis of *Serratia* sp. ZM is vital for the survival of the bacterium and its plant growth-promoting characteristic. *Archives of Microbiology*. 2017, 199(3): 425-432
7. Yu-fei Sui, Li-ming Ouyang*, Ju Chu, Wei-qiang Cao, Ying-ping Zhuang*, Shu Cheng, HenkNoorman, Si-liang Zhang, Geng-yun Zhang. Global transcriptional response of *Aspergillus niger* in the process of glucoamylase fermentation. *Bioresources and Bioprocessing*. 2017.4:44(doi: 10.1186/s40643-017-0160-x)
8. Hongzhong Lu*, Weiqiang Cao*, Xiaoyun Liu, Yufei Sui, Liming Ouyang**, Jianye Xia, Mingzhi Huang, Yingping Zhuang, Siliang Zhang, HenkNoorman, Ju Chu**. Multi-omics integrative analysis with GEMs simulation reveals global cellular adaptations of *Aspergillus niger* under industrial enzyme production conditions. *Scientific Reports*. 2018;8(1):14404.
9. LimingOuyang; Petter Holland; HongzhongLu; David Bergenholm; Jens Nielsen*. Integrated analysis of the yeast NADPH-regulator *Stb5* reveals distinct differences in NADPH requirements and regulation in different states of yeast metabolism. *FEMS Yeast Research*. 2018, 18 (8); DOI:10.1093/femsyr/foy091
10. Yuan Zhang; Liming Ouyang*; Yilin Nan; Ju Chu. Efficient gene deletion and replacement in *Aspergillus niger* by modified in vivo CRISPR/Cas9 systems. *Bioresources and Bioprocessing*. (2019) 6:4. DOI: 10.1186/s40643-019-0239-7