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2016年7月至今, 南京农业大学 资源与环境科学学院

植物营养与肥料学系, 副教授。目前以第一作者在The ISME Journal, Microbiome, SBB, Hortic Res, AEM 等国际著名期刊上发表二十余篇文章, 他引700余次。

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#### **研究方向:**

植物-土壤反馈, 土壤微生物群落调控, 连作障碍修复, 新型肥料研发。

#### **教育经历:**

2010/09-2016/06, 南京农业大学, 植物营养系, 博士, 导师: 沈其荣

2013/09-2015/09, 美国科罗拉多大学, 根际生物学研究中心, 联合培养博士生

2006/09-2010/09, 南京农业大学, 应用化学专业, 学士

#### **奖励:**

(1) 中国植物营养与肥料学会优秀博士论文 (2017年)

(2) 江苏省高层次创新创业人才引进计划“科技副总” (2018年)

(3) 山东省科技特派员 (2018年)

(4) 农业部神农中华农业科技奖一等奖 (2019年)

#### **已发表第一或通讯作者论文情况:**

1. Tao Wen, Mengli Zhao, Ting Liu, Qiwei Huang, **Jun Yuan\***, Qirong Shen. High abundance of Ralstonia solanacearum changed tomato rhizosphere microbiome and metabolome. BMC Plant Biology. 2020; 20:166.

2. **Jun Yuan#**, Tao Wen#, He Zhang, Mengli Zhao, C. Ryan Penton, Linda S. Thomashow, Qirong Shen \*. Predicting disease occurrence with high accuracy based

on soil macroecological patterns of Fusarium wilt. ISME J, Accepted.

3. Tao Wen, **Jun Yuan\***, Xiaoming He, Yu e Lin, Qiwei Huang, Qirong Shen. Enrichment of cucumber rhizosphere beneficial microbes mediated by organic acids secretion. Horticulture Research, Accepted.

4. Mengli Zhao, Jun Zhao, **Jun Yuan\***, Lauren Hale, Tao Wen, et al. Root exudates drive soil-microbe-nutrient feedbacks in response to plant growth. Plant Cell and Environment, Accepted.

5. Tao Wen, Mengli Zhao, **Jun Yuan\***, George A. Kowalchuk , Qirong Shen. Root exudates mediate plant defense against foliar pathogens by recruiting beneficial microbes. Soil Ecology Letters, Accepted.

6. **Jun Yuan**, Jun Zhao, Tao Wen, Mengli Zhao, Rong Li, Pim Goossens, Qiwei Huang, Yang Bai, Jorge M. Vivanco, George A. Kowalchuk, Roeland L. Berendsen, Qirong Shen\*, Root exudates drive the soil-borne legacy of aboveground pathogen infection, Microbiome, 2018.09.12, 6

7. **Jun Yuan**<sup>#</sup>, Yuncheng Wu<sup>#</sup>, Mengli Zhao, Tao Wen, Qiwei Huang, Qirong Shen. Effect of phenolic acids from banana root exudates on root colonization and pathogen suppressive properties of *Bacillus amyloliquefaciens* NJN-6, Biological Control, 2018,125:131-137

8. **Jun Yuan**, Mengli Zhao, Rong Li, Qiwei Huang, Waseem Raza, Christopher Rensing, Qirong Shen\*. Microbial volatile compounds alter the soil microbial community, Environmental Science and Pollution Research, 2017, 24(28): 22485~22493

9. **Jun Yuan**<sup>#</sup>, Mengli Zhao<sup>#</sup>, Rong Li, Qiwei Huang, Christopher Rensing, Qirong Shen\*. Lipopeptides produced by *B. amyloliquefaciens* NJN-6 altered the soil fungal community and non-ribosomal peptides genes harboring microbial community, Applied Soil Ecology, 2017.9, 117: 96~105

10. **Jun Yuan**<sup>#</sup>, Mengli Zhao<sup>#</sup>, Rong Li, Qiwei Huang, Christopher Rensing, Waseem Raza, Qirong Shen\*. Antibacterial compounds-macrolactin alters the soil bacterial community and abundance of the gene encoding PKS. Frontiers in Microbiology, 2016, 7.

11. **Jun Yuan**<sup>#</sup>, Nan Zhang <sup>#</sup>, Qiwei Huang, Waseem Raza, Rong Li, Jorge

Vivanco, Qirong Shen\*. Organic acids from root exudates of banana help root colonization of PGPR strain *Bacillus amyloliquefaciens* NJN-6. Scientific Reports, 2015, 5, Article number: 13438

12. **Jun Yuan<sup>#</sup>**, Jacqueline Chaparro<sup>#</sup>, Manter Daniel, Ruifu Zhang, Jorge Vivanco\*, Qirong Shen\*. Roots from distinct plant developmental stages are capable of rapidly selecting their own microbiome without the influence of environmental and soil edaphic factors. Soil Biology and Biochemistry, 2015, 89: 206-209.

14. **Jun Yuan**, Lu Yu, Ning Ling, Waseem Raza, Qirong Shen, Qiwei Huang\*. Plant-growth-promoting traits and antifungal potential of the *Bacillus amyloliquefaciens* YL-25. Biocontrol Science and Technology, 2015, 25 (3): 276-290.

15. **Jun Yuan**, Fengge Zhang, Yuncheng Wu, Jian Zhang, Waseem Raza, Qirong Shen, Qiwei Huang\*. Recovery of several cell pellet-associated antibiotics produced by *Bacillus amyloliquefaciens* NJN-6. Letters in Applied Microbiology, 2014, 59 (2): 169-176

16. **Jun Yuan**, Yunze Ruan, Beibei Wang, Jian Zhang, Waseem Raza, Qiwei Huang\*, Qirong Shen. Plant Growth-Promoting Rhizobacteria Strain *Bacillus amyloliquefaciens* NJN-6-Enriched Bio-organic Fertilizer Suppressed Fusarium Wilt and Promoted the Growth of Banana Plants. Journal of Agricultural and Food Chemistry, 2013, 61: 3774–3780.

17. **Jun Yuan**, Bing Li, Nan Zhang, Waseem Raza, Qirong Shen\*, Qiwei Huang\*. Production of Bacillomycin- and Macrolactin-Type Antibiotics by *Bacillus amyloliquefaciens* NJN-6 for Suppressing Soilborne Plant Pathogens. Journal of Agricultural and Food Chemistry, 2012, 60: 2976-2981.

18. **Jun Yuan**, Waseem Raza, Qiwei Huang\*, Qirong Shen. The ultrasound-assisted extraction and identification of antifungal substances from *B. amyloliquefaciens* strain NJN-6 suppressing *Fusarium oxysporum*. Journal of Basic Microbiology, 2012, 52: 721–730.

19. 张超, 文涛, 张媛, 赵梦丽, 刘婷, 袁军\*, 沈其荣. 基于文献计量分析的镰刀菌枯萎病研究进展解析. 土壤学报. 2020, 57(5).

20. 刘婷, 文涛, 赵梦丽, 张媛, 张超, 袁军\*, 沈其荣. 番茄根际代谢物抵

御茄科劳尔氏菌入侵机制研究. 南农学报 2020; 43(3).

### 主持项目情况:

1. 重点研发计划“沼渣一体化制肥及高附加值利用技术与智能装备研发”，  
2017YFD0800803, 2017/06-2020/12, 60万, 在研, 主持
2. 国家自然科学青年基金, 31902107, 番茄根际代谢物招募微生物抵御青枯  
菌入侵机制研究, 2020/01-2023/12, 24万, 在研, 主持
3. 首届“博士后创新人才支撑计划”, BX201600075, 根系分泌物介导的抑  
病型土壤微生物区系形成机制研究, 2017/01-2018/12, 60万, 已结题
4. 江苏省自然科学基金青年基金项目, BK20170724, 抑病番茄根际土壤抵  
御茄科劳尔氏菌入侵机制研究, 2017/07-2020/6, 20万, 已结题
5. 农业部委托项目“有机肥料抗生素抗性基因、典型有机污染物检测”，  
2019/05-2019.12, 50万, 已结题