Ruifu Zhang

Professor of Rhizosphere Microbiology & Biofertilizer

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Education:

- Ph.D., Nanjing Agricultural University; Biological Sciences, 2004
- B.A., Laiyang Agricultural College; Agricultural Sciences, 1998

Research interests and expertise:

- Rhizosphere microbiology and Biofertilizer
- Microbial conversion of agricultural organic waste and organic fertilizer
- Microbial resources

Current projects:

- NSFC, 31870096, "Novel natural secondary metabolites encoded by a unique genomic island in plant beneficial rhizobacterium SQR9 and the cannibalism mechanism involved in biofilm formation", 590,000, 2019.1-2022.12. PI
- NSFC, 31572214, "Regulatory molecular mechanism of plant growth-promoting *Bacillus amyloliquefacien* SQR9 root colonization by two-component system ResD/E", 758,000, 2016.1-2019.12. PI

Current teaching: (Course name, classroom number, spring/autumn term)

- Resource & Environmental Biotechnology, Undergraduate student, Spring semester
- Ph.D student seminar, Ph.D student, Autumn semester

Selected publications:

- Xun W, Yan R, Ren Y, Jin D, Xiong W, Zhang G, Cui Z, Xin X* and **Zhang R* 2018.** Grazing-induced microbiome alterations drive soil organic carbon turnover and productivity in meadow steppe. ***Microbiome*** 6(1):170.
- **Zhang R,** Vivanco MJ, and Shen Q*, **2017.** The unseen rhizosphere root-soil-microbe interactions for crop production. ***Current Opinion in Microbiology*** 37:8-14.

- Xun W, Zhao J, Xue C, Zhang G, Ran W, Wang B, Shen Q and **Zhang R* 2016.** Significant alteration of soil bacterial communities and organic carbon decomposition by different long-term fertilization management conditions of extremely low-productivity arable soil in South China. ***Environmental Microbiology*** 18(6):1907-191
- Zhou X, Zhang N, Xia L, Li Q, Shao J, Shen Q and **Zhang R* 2018.** ResDE two-component regulatory system mediates oxygen limitation-induced biofilm formation of *Bacillus amyloliquefaciens* SQR9. ***Applied and Environmental Microbiology*** 84(8):e02744-17
- Wu G†, Liu Y†, Xu Y, Zhang G, Shen Q and **Zhang R* 2018.** Exploring elicitors of beneficial rhizobacterium *Bacillus amyloliquefaciens* SQR9 to induce plant systemic resistance and their interactions with the signaling pathways ***Molecular Plant-Microbe Interactions*** 31(5):560-567.
- Sun L†, Xun W†, Huang T, Zhang G, Gao J, Ran W, Li D, Shen Q and **Zhang R* 2016.** Alteration of the soil bacterial community during the parent materials maturation driven by different fertilizations ***Soil Biology & Biochemistry*** 96:207-215