

一、教育及工作经历

2016 至今，南京农业大学 资源与环境科学学院 植物营养学系 副教授

2011-2016，南京农业大学 资源与环境科学学院 植物营养学系 讲师

2018-2019，日本冈山大学 植物科学与资源研究所 访问学者

2006-2011，南京农业大学 资源与环境科学学院 植物营养学系 农学博士

2002-2006，南京农业大学 生命科学学院 国家生命科学与技术人才培养基地 理学学士

二、教学情况

本科生课程：资源环境生物技术

研究生课程：植物营养分子生物学实验

三、研究领域及方向

研究领域：植物营养生理与分子生物学

研究方向：1) 植物磷转运与信号转导途径解析

2) 植物磷与碳、氮信号途径的交互作用及其机制

3) 植物磷与激素信号途径的交互作用及其机制

四、主持项目

1. 国家重点研发计划项目 (2016YFD0100703; 2017YFD0200204)

2. 国家自然科学基金 (31301831; 31972489)

3. 教育部博士点基金 (20120097120016)

4. 中央高校基本科研业务费资金项目 (KYZ201306)

五、发表论文

Chang MX[#], **Gu M**^{#+*}, Xia YW, Dai XL, Dai CR, Zhang J, Wang SC, Qu HY, Yamaji N, Ma JF, Xu GH⁺. 2019. OsPHT1;3 mediates uptake, translocation, and remobilization of phosphate under extremely low phosphate regimes. **Plant Physiology** 179: 656-670 (#co-first author; +senior author; *corresponding author)

Gu M[#], Zhang J[#], Li HH, Meng DQ, Li R, Dai XL, Wang SC, Liu W, Qu HY, Xu GH^{*}. 2017. Maintenance of phosphate homeostasis and root development are coordinately regulated by MYB1, an R2R3-type MYB transcription factor in rice. **Journal of Experimental Botany** 68(13): 3603-3615

Gu M, Chen AQ, Sun SB, Xu GH^{*}. 2016. Complex regulation of plant phosphate transporters and the gap between molecular mechanisms and practical application: what is missing? **Molecular Plant** 9: 396-416

Gu M^{#*}, Liu W[#], Meng Q, Zhang WQ, Chen AQ, Sun SB, Xu GH. 2014. Identification of microRNAs in six solanaceous plants and their potential link with phosphate and mycorrhizal signalings. **Journal of Integrative Plant Biology** 56(12): 1164-1178

Gu M, Chen AQ, Dai XL, Liu W, Xu GH. 2011. How does phosphate status influence the development of the arbuscular mycorrhizal symbiosis? **Plant Signaling & Behavior** 6(9): 1300-1304

Chen AQ[#], **Gu M**[#], Sun SB, Zhu LL, Hong S, Xu GH. 2011. Identification of two conserved *cis*-acting elements, MYCS and P1BS, involved in the regulation of mycorrhiza-activated phosphate transporters in eudicot species. **New Phytologist** 189: 1157-1169 (#co-first author)

Gu M, Xu K, Chen AQ, Zhu YY, Tang GL, Xu GH. 2010. Expression analysis suggests potential roles of microRNAs for phosphate and arbuscular mycorrhizal signaling in *Solanum lycopersicum*. **Physiologia Plantarum** 138: 226-237

Chen AQ, **Gu M**, Wang SS, Chen JD, Xu GH. 2018. Transport properties and regulatory roles of nitrogen in arbuscular mycorrhizal symbiosis. **Seminars in Cell &**

Developmental Biology 74: 80-88

Chen LY, Qin L, Zhou LL, Li XX, Chen ZC, Sun LL, Wang WF, Lin ZH, Zhao J, Yamaji N, Ma JF, **Gu M**, Xu GH, Liao H. 2019. A nodule-localized phosphate transporter GmPT7 plays an important role in enhancing symbiotic N₂ fixation and yield in soybean. **New Phytologist** 221: 2013-2025

Li YT, **Gu M**, Zhang X, Li PP, Zhang J, Li ZF, Xu GH. 2014. Engineering a sensitive visual tracking reporter system for real-time monitoring phosphorus deficiency in tobacco. **Plant Biotechnology Journal** 12: 674-684

Cao Y, Yan Y, Zhang F, Wang HD, **Gu M**, Wu XN, Sun SB, Xu GH. 2014. Fine characterization of OsPHO2 knockout mutants reveals its key role in Pi utilization in rice. **Journal of Plant Physiology** 171: 340-348

Sun SB, **Gu M**, Cao Y, Huang XP, Zhang X, Ai PH, Zhao JN, Fan XR, Xu GH. 2012. A constitutive expressed phosphate transporter, OsPht1;1, modulates phosphate uptake and translocation in phosphate-replete rice. **Plant Physiology** 159: 1571-1581

Qin L, Zhao J, Tian J, Chen LY, Sun ZA, Guo YX, Lu X, **Gu M**, Xu GH, Liao H. 2012. The high-affinity phosphate transporter GmPT5 regulates phosphate transport to nodules and nodulation in soybean. **Plant Physiology** 159: 1634-1643

Qin L, Guo YX, Chen LY, Liang RK, **Gu M**, Xu GH, Zhao J, Walk T, Liao H. 2012. Functional characterization of 14 Pht1 family genes in yeast and their expressions in response to nutrient starvation in soybean. **PLoS ONE** 7(10): e47726

Sun SB, Wang JJ, Zhu LL, Liao DH, **Gu M**, Ren LX, Kapulnik Y, Xu GH. 2012 An active factor from tomato root exudates plays an important role in efficient establishment of mycorrhizal symbiosis. **PLoS ONE** 7(8): e43385

Jia HF[#], Ren HY[#], **Gu M**, Zhao JN, Sun SB, Zhang X, Chen JY, Wu P, Xu GH. 2011. The phosphate transporter gene, *OsPht1;8*, is involved in phosphate homeostasis in rice. **Plant Physiology** 156: 1164-1175

Zhang RP, Liu G, Wu N, **Gu M**, Zeng HQ, Zhu YY, Xu GH. 2011. Adaptation of plasma membrane H⁺ ATPase and H⁺ pump to P deficiency in rice roots. **Plant Soil** 349:

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顾冕^{*}, 孟大千, 徐国华. 2016. 烟草 microRNA827 及其靶基因的鉴定与分析. 南京农业大学学报 **39(6)**: 965-972 (*Corresponding author)

顾冕, 陈爱群, 徐国华^{*}. 2012. 植物缺磷及菌根信号转导网络. 南京农业大学学报 **35(5)**: 133-146

六、专利成果

徐国华, 李依婷, 顾冕. 一种植物磷素营养快速诊断和可视化动态监测方法及其重组表达载体的应用 (ZL 2013 1 0492155.7)

七、联系方式

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