

Xunliang Liu, Ph.D.

Postdoctoral Research Associate. *Mitchum Lab*,
Division of Plant Science,
University of Missouri – Columbia
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RESEARCH INTEREST

My main interest in plant biology is to study the molecular basis by which plant cell interacts/communicates with other self/non-self cells

EDUCATION

2006 – 2012 **Ph.D. in Plant Biology.** Institute of Plant Physiology and Ecology, Shanghai, China.

***Dissertation:** Carbonylation and Loss-of-Function Analyses of SBPase Reveal Its Metabolic Interface Role in Oxidative Stress, Carbon Assimilation, and Multiple Aspects of Growth and Development in Arabidopsis.*

***Advisor:** Dr. Fang-qing Guo*

2002 – 2006 **B.S. in Plant Sciences.** Zhejiang University, Hangzhou, China.

***Dissertation:** Role of Auxin and Light Signaling in photomorphogenesis of Arabidopsis.*

***Advisors:** Dr. Gong-Yin Ye (Zhejiang University)*

Dr. Hong-quan Yang (Institute of Plant Physiology and Ecology).

POSTDOCTORAL TRAINING

2016.9 – present Postdoctoral Research Associate. *Mitchum Lab*, Division of Plant Science, University of Missouri – Columbia, Columbia, MO, USA.

2012.10 – 2016.9 Postdoctoral Research Associate. *Palanivelu Lab*, School of Plant Science, The University of Arizona, Tucson, AZ, USA.

SCIENTIFIC EXPERTISE

Molecular and cellular biology, genetic analysis, biochemical analysis, 2-D gel electrophoresis, confocal microscopy, mating based ubiquitin split assay

SERVICE TO SCIENTIFIC COMMUNITY

Ad hoc Reviewer – Current Biology (1); Plant Physiology (1); Plant & Cell Physiology (1); Plant Reproduction (1)

Poster judge (Southern Arizona Science and Engineering Fair, 2014) and **outreach activities** for elementary, middle and high school students (2013 –present)

CONFERENCE COMMUNICATION

- Mar 2016, LORELEI Function in Pollen Tube Reception at the Interface of the Synergid Cell and the Pollen Tube Requires the Modified Eight-Cysteine Motif and FERONIA Receptor-Like Kinase. 24th International Congress on Sexual Plant Reproduction. Tucson, AZ. **Oral Presentation.**
- Sep 2015, Molecular Genetic Analysis of LORELEI function in pollen tube reception in the Arabidopsis female gametophyte. Shanghai Institute of Plant Physiology and Ecology, Shanghai, China. **Research Seminar Presentation**
- July 2015, Molecular Genetic Analysis of LORELEI function in pollen tube reception in the Arabidopsis female gametophyte. 2015 Annual Pollen Research Coordination Network Meeting, Minneapolis, MN. **Oral Presentation.**
- July, 2014, Localization of LORELEI, a putative glycosylphosphatidyl-inositol (GPI)-anchored protein, in the Arabidopsis female gametophyte. ASPB Plant Biology 2014, Portland, OR. **Poster presentation.**
- July, 2010, OXP1, a vulnerable Protein to Oxidative Modification, Plays a Role in Starch Accumulation and Development in Arabidopsis. National Conference of Plant Biology 2010, Tianjin, China. **Concurrent Session Presentation.**

PUBLICATION

- Liu X.**, Castro C., Wang Y., Noble J., Ponvert N., Bundy M., Hoel C., Shpak E., and Palanivelu R. (2016). LORELEI Function in Pollen Tube Reception at the Interface of the Synergid Cell and the Pollen Tube Requires the Modified Eight-Cysteine Motif and FERONIA Receptor-Like Kinase. **The Plant Cell**. 28 (5): 1035-1052. **(Cover Image)**
 *This paper was profiled in "In Brief" section in the Plant Cell. "Sticking the Landing: Probing the Roles of LORELEI in Pollen Tube Reception" by Jennifer Lockhart.
- Wang Y., Tsukamoto T., **Liu X.**, Noble J., Mosher R., and Palanivelu R. (2016) Arabidopsis LORELEI, a maternally-expressed imprinted gene, promotes early seed development. **(In Preparation)**.
- Liu X.**,¹ Yu H.D.,¹ Guan Y., Li J.K., and Guo F.Q. (2012). Carbonylation and Loss-of-Function Analyses of SBPase Reveal Its Metabolic Interface Role in Oxidative Stress, Carbon Assimilation, and Multiple Aspects of Growth and Development in Arabidopsis. **Molecular Plant** 5(5):1082-99 (Co-first author)
- Yu H.D., Yang X.F., Chen S.T., Wang Y.T., Li J.K., Shen Q., **Liu X.**, and Guo F.Q. (2012) Downregulation of Chloroplast RPS1 Negatively Modulates Nuclear Heat-Responsive Expression of HsfA2 and Its Target Genes in Arabidopsis. **Plos Genetics**. 8(5): e1002669.