

# Wang Peng

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## Areas of Research

Flower development and pollination mechanism in pear.

## Contact Information

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## Research Interests

### Flower development; Pollination and fertilization

As a member of the Pear Center, we focus on flower development, Pollination and fertilization in pear. Some of the problems we are currently working on are described below:

#### 1. flower development

Our primary research interest concerns how the flowers develop in pear. The formation of flower buds is critical for pear fruit production. The flower development is influenced by environmental factors and internal factors in plant. We have found LNK1/2 and COR27/28 as new regulators in circadian oscillator. They also affect the flowering time in plant.

In pear, we have identified PbCOL8, PbDof9.2 and PbSOC1d/g as photoperiod related flowering time regulator.

#### 2. Pollination and fertilization

Pollen tube growth is important for fertilization in seed plants. In collaboration with professor Wu Juyou, we focus on pollen - pistil recognition and pollen tube growth regulation in pear.

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## Education Background

Doctor: Hebei Normal University

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## Work experience

Postdoctoral Researcher, Nanjing Agricultural University, 2014-2017

Associate Professor, Nanjing Agricultural University, 2017-

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## Honors and Awards

Shennong China Agricultural Science and Technology Award, 1<sup>st</sup> Prize (15/17, 2017)

Shennong China Agricultural Science and Technology Award, Outstanding Innovation Team Award (8/16, 2019)

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## Selected Publication

Xie, Q.\* , **Wang, P.\***, Liu, X.\* , Yuan, L., Wang, L., Zhang, C., Li, Y., Xing, H., Zhi, L., Yue, Z., Zhao, C., McClung, C.R., and Xu, X. (2014). LNK1 and LNK2 are transcriptional coactivators in the Arabidopsis circadian oscillator. *Plant Cell* 26, 2843-2857.

**Wang, P.\***, Cui, X.\* , Zhao, C., Shi, L., Zhang, G., Sun, F., Cao, X., Yuan, L., Xie, Q., and Xu, X. (2017). COR27 and COR28 encode nighttime repressors integrating Arabidopsis circadian clock and cold response. *J Integr Plant Biol* 59, 78-85.

**Wang, P.\***, Liu, Z.\* , Cao, P., Liu, X.Y., Wu, X.P., Qi, K.J., Zhang, S.L., and Wu, J.Y. (2017). PbCOL8 is a clock-regulated flowering time repressor in pear. *Tree Genetics & Genomes* 13, 107.

Liu, X.Y.\* , Liu, Z.\* , Hao, Z.W., Chen, G.D., Qi, K.J., Zhang, H., Jiao, H.J., Wu, X., Zhang, S.L., Wu, J.Y. #, and **Wang, P#**. (2020). Characterization of Dof family in *Pyrus bretschneideri* and role of PbDof9.2 in flowering time regulation. *Genomics* 112, 712-720.

Liu, Z.\* , Wu, X.P.\* , Cheng, M.Y., Xie, Z.H., Xiong, C.L., Zhang, S.L., Wu, J.Y. #, and **Wang, P#**. (2020). Identification and functional characterization of SOC1-like genes in *Pyrus bretschneideri*. *Genomics* 112, 1622-1632.

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