

Hao Yin



Areas of Research

Pear germplasm, Fruit quality, Transposon evolution.

Contact Information

Office location: Room A6009 Biology Building
(Mailing Address: Weigang No.1, Xuanwu district, Nanjing, Jiangsu, College of Horticulture, Nanjing Agricultural University.)

Office phone: 025-84396485

Email address: yinhao@njau.edu.cn

Research Interests

1. Pear germplasm collection, protection and evaluation;
2. Volatile compounds synthesis of pear fruit ;
3. Cuticular wax synthesis of pear fruit;
4. Evolution and function of Transposons

Education Background

Bachelor: Qingdao Agricultural University

Master: Qingdao Agricultural University

Doctor: Nanjing Agricultural University

Work experience

Assistant Professor, Nanjing Agricultural University, 2015-2019

Associate Professor, Nanjing Agricultural University, 2020-

Selected Publication

1. Yin, H., Du, J., Li, L., Jin, C., Fan, L., Li, M., ... & Zhang, S. (2014). Comparative genomic analysis reveals multiple long terminal repeats, lineage-specific amplification, and frequent interelement recombination for Cassandra retrotransposon in pear (*Pyrus bretschneideri* Rehd.). *Genome Biology and Evolution*, 6(6), 1423-1436.
2. Yin, H., Wu, X., Shi, D., Chen, Y., Qi, K., Ma, Z., & Zhang, S. (2017). TGTT and AACA: two transcriptionally active LTR retrotransposon subfamilies with a specific LTR structure and horizontal transfer in four Rosaceae species. *Mobile DNA*, 8(1), 14.
3. Yin, H., Du, J., Wu, J., Wei, S., Xu, Y., Tao, S., ... & Zhang, S. (2015). Genome-wide annotation and comparative analysis of long terminal repeat retrotransposons between pear species of *P. bretschneideri* and *P. communis*. *Scientific Reports*, 5, 17644.
4. Shi, D.#, Wu, J.#, Tang, H.#, Yin, H.#, Wang, H., Wang, R., ... Zhang, S. (2019). Single-pollen-cell sequencing for gamete-based phased diploid genome assembly in plants. *Genome Research*, 29(11), 1889-1899. (Co-first author)
5. Wu, X.#, Yin, H.#, Chen, Y., Li, L., Wang, Y., Hao, P., ... & Zhang, S. (2017). Chemical composition, crystal morphology and key gene expression of cuticular waxes of Asian pears at harvest and after storage. *Postharvest Biology and Technology*, 132, 71-80. (Co-first author)
6. Wang, G. M.#, Yin, H.#, Qiao, X., Tan, X., Gu, C., Wang, B. H., ... & Zhang, S. L. (2016). F-box genes: Genome-wide expansion, evolution and their contribution to pollen growth in pear (*Pyrus bretschneideri*). *Plant Science*, 253, 164-175. (Co-first author)
7. Sun, J.#, Yin, H.#, Li, L., Song, Y., Fan, L., Zhang, S., & Wu, J. (2015). Evaluation of new IRAP markers of pear and their potential application in differentiating bud sports and other Rosaceae species. *Tree Genetics & Genomes*, 11(2), 25. (Co-first author)
8. Chen, Y.#, Yin, H.#*, Wu, X., Shi, X., Qi, K., & Zhang, S*. (2018). Comparative analysis of the volatile organic compounds in mature fruits of 12 Occidental pear (*Pyrus communis* L.) cultivars. *Scientia Horticulturae*, 240, 239-248. (Co-first and Co-correspondent author)
9. Wu, X.#, Yin, H.#*, Shi, Z., Chen, Y., Qi, K., Qiao, X., ... & Zhang, S.* (2018). Chemical composition and crystal morphology of epicuticular wax in mature fruits of 35 pear (*Pyrus* spp.) cultivars. *Frontiers in plant science*, 9. (Co-first and Co-correspondent author)
10. Wu X, Shi X, Bai M, ... Yin H.*, Zhang S.* (2019). Transcriptomic and Gas

Chromatography-Mass Spectrometry Metabolomic Profiling Analysis of the Epidermis Provides Insights into Cuticular Wax Regulation in Developing 'Yuluxiang' Pear Fruit. *J Agric Food Chem.* 2019;67(30):8319-8331. (Co-correspondent author)

11. Wu, X., Chen, Y., Shi, X., Qi, K., Cao, P., Liu, X., ..Yin, H.* & Zhang, S.* (2020). Effects of palmitic acid (16:0), hexacosanoic acid (26:0), ethephon and methyl jasmonate on the cuticular wax composition, structure and expression of key gene in the fruits of three pear cultivars. *Functional Plant Biology*, 47(2), 156-169.
(Co-correspondent author)

12. Liu, C.#, Qiao, X.#, Li, Q., Zeng, W., Wei, S., ...Yin, H.* & Zhang, S.* (2020). Genome-wide comparative analysis of the BAHD superfamily in seven Rosaceae species and expression analysis in pear (*Pyrus bretschneideri*). *BMC Plant Biology*, 20(1). (Co-correspondent author)

13. Zeng, W.#, Qiao, X.#, Li, Q., Liu, C., Wu, J., Yin, H.* & Zhang, S.* (2020). Genome-wide identification and comparative analysis of the ADH gene family in Chinese white pear (*Pyrus bretschneideri*) and other Rosaceae species. *Genomics*, 112, 3484-3496. (Co-correspondent author)

14. 吴潇, 齐开杰, 殷豪*, & 张绍铃*. (2016). 诱变技术在落叶果树育种中的应用. *园艺学报*, 43(9), 1633-1652. (Co-correspondent author)

15. 陈杨杨, 吴潇, 谷超, 殷豪*, & 张绍铃. (2018). '砀山酥梨' 实时荧光定量 PCR 内参基因的筛选. *中国果树*, 1, 006. (correspondent author)

16. 吴潇, 陈杨杨, 石新杰, 齐开杰, 曹鹏, 殷豪*, & 张绍铃. (2018). 喷施外源激素对 '玉露香' 梨叶片表皮蜡质组分, 结构及渗透性的影响. *南京农业大学学报*, 41(4), 647-654. (correspondent author)

17. 石新杰, 吴潇, 陈杨杨, 曹鹏, 白冰, 李明智, 殷豪*, 张绍铃. 60Co- γ 射线辐射对翠冠和玉露香梨枝条的生物损伤效应[J]. *核农学报*, 2019,33(11):2095-2102.
(correspondent author)

18. Qiao, X., Yin, H., Li, L., Wang, R., Wu, J., Wu, J., & Zhang, S. (2018). Different modes of gene duplication show divergent evolutionary patterns and contribute differently to the expansion of gene families involved in important fruit traits in pear (*Pyrus bretschneideri*). *Frontiers in plant science*, 9, 161.

19. Zhou, H., Yin, H., Chen, J., Liu, X., Gao, Y., Wu, J., & Zhang, S. (2016). Gene-expression profile of developing pollen tube of *Pyrus bretschneideri*. *Gene Expression Patterns*, 20(1), 11-21.

20. Kou, X., Qi, K., Qiao, X., Yin, H., Liu, X., Zhang, S., & Wu, J. (2017). Evolution, expression analysis, and functional verification of *Catharanthus roseus* RLK1-like

kinase (CrRLK1L) family proteins in pear (*Pyrus bretschneideri*). *Genomics*, 109(3), 290-301.

21. Jin, C., Huang, X. S., Li, K. Q., Yin, H., Li, L. T., Yao, Z. H., & Zhang, S. L. (2016). Overexpression of a bHLH1 transcription factor of *Pyrus ussuriensis* confers enhanced cold tolerance and increases expression of stress-responsive genes. *Frontiers in plant science*, 7, 441.

22. Zhou, H., Qi, K., Liu, X., Yin, H., Wang, P., Chen, J., ... & Zhang, S. (2016). Genome-wide identification and comparative analysis of the cation proton antiporters family in pear and four other Rosaceae species. *Molecular genetics and genomics*, 291(4), 1727-1742.

23. Zhang, Q. J., Tao, S. T., Li, M., Qi, X. X., Wu, J., Yin, H., ... & Zhang, S. L. (2015). Identification of differentially expressed genes using digital gene expression profiles in *Pyrus pyrifolia* Nakai cv. Hosui bud release following early defoliation. *Tree Genetics & Genomes*, 11(3), 34.

24. Wang, L., Li, X., Wang, L., Xue, H., Wu, J., Yin, H., & Zhang, S. (2017). Construction of a high-density genetic linkage map in pear (*Pyrus communis* × *Pyrus pyrifolia* nakai) using SSRs and SNPs developed by SLAF-seq. *Scientia Horticulturae*, 218, 198-204.

25. Wu, J., Wang, Y., Xu, J., Korban, S. S., Fei, Z., Tao, S., ... Yin, H., ... & Zhang, S. (2018). Diversification and independent domestication of Asian and European pears. *Genome biology*, 19(1), 77.

26. Chen, G., Li, X., Chen, Q., Wang, L., Qi, K., Yin, H., ... & Huang, Z. (2018). Dynamic transcriptome analysis of root nitrate starvation and re-supply provides insights into nitrogen metabolism in pear (*Pyrus bretschneideri*). *Plant Science*.

27. Yin, H., Liu, J., Xu, Y., Liu, X., Zhang, S., Ma, J., and Du, J. (2013). *TARE1*, a mutated copia-like LTR retrotransposon followed by recent massive amplification in tomato. *Plos One* 8(7): e68587
