

Publications:

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1. **Zhang, H.**, and Somerville, C. (1987). Transfer of the maize transposable element Mu1 into *Arabidopsis thaliana*. *Plant Science* 48, 165-173. (Cited **21** times, Google Scholar).
2. **Zhang, H.**, and Somerville, C. (1988). The primary structure of chicken liver cytochrome b₅ deduced from the DNA sequence of a cDNA clone. *Arch. Biochem. Biophys.* 264, 343-347. (Cited **14** times, Google Scholar)
3. **Zhang, H.**, Scholl, R., Browse, J., and Somerville, C. (1988). Double stranded DNA sequencing as a choice for DNA sequencing. *Nucleic Acids Res.* 16, 1220. (Cited **321** times, ISI Web of Knowledge; **313**, Google Scholar)
4. Kim, Y., **Zhang, H.**, and Scholl, R. L. (1990). Two evolutionarily divergent genes encode a cytoplasmic ribosomal protein of *Arabidopsis thaliana*. *Gene* 93, 177-182. (Cited **45** times, Google Scholar)
5. **Zhang, H.**, and Somerville, C. (1990). Soluble and membrane-bound forms of cytochrome b₅ are the products of a single gene in chicken. *Arch. Biochem. Biophys.* 280, 412-415. (Cited **11** times, Google Scholar)
6. **Zhang, H.**, Hanley, S., and Goodman, H. M. (1991). Isolation, characterization, and chromosomal location of a new cab gene from *Arabidopsis thaliana*. *Plant Physiol.* 96, 1387-1388. (Cited **26** times, Google Scholar)
7. **Zhang, H.**, Scheirer, D. C., Fowle, W. H., and Goodman, H. M. (1992). Expression of antisense or sense RNA of an ankyrin repeat-containing gene blocks chloroplast differentiation in *Arabidopsis*. *Plant Cell* 4, 1575-1588. (Cited **86** times, Google Scholar)
8. Lazar, G., **Zhang, H.**, and Goodman, H. M. (1993). The origin of the bifunctional dihydrofolate reductase-thymidylate synthase isogenes of *Arabidopsis thaliana*. *Plant J.* 3, 657-668. (Cited **58** times, Google Scholar)
9. Wang, J., **Zhang, H.**, and Goodman, H. M. (1994). An *Arabidopsis* cab gene homologous to cab-8 of tomato. *Plant Physiol.* 104, 297. (Cited **8** times, Google Scholar)
10. **Zhang, H.**, Wang, J., and Goodman, H. M. (1994). Expression of the *Arabidopsis* gene *Akr* coincides with chloroplast development. *Plant Physiol.* 106, 1261-1267. (Cited **10** times, Google Scholar)
11. **Zhang, H.**, Wang, J., and Goodman, H. M. (1994). Differential expression in *Arabidopsis* of *Lhca2*, a PSI cab gene. *Plant Mol. Biol.* 25, 551-557. (Cited **9** times, Google Scholar)
12. **Zhang, H.**, Wang, J., and Goodman, H. M. (1995). Isolation and expression of an *Arabidopsis* 14-3-3-like protein gene. *Biochim. Biophys. Acta* 1266, 113-116. (Cited **15** times, Google Scholar)
13. **Zhang, H.**, Wang, J., Allen, R. D., Nickel, U., and Goodman, H. M. (1997). Cloning and expression of an *Arabidopsis* gene encoding a putative peroxisomal ascorbate peroxidase. *Plant Mol. Biol.* 34, 967-971. (Cited **124** times, Google Scholar)
14. **Zhang, H.**, Wang, J., and Goodman, H. M. (1997). An *Arabidopsis* gene encoding a putative 14-3-3-interacting protein, caffeic acid/5-hydroxyferulic acid *O*-methyltransferase. *Biochim. Biophys. Acta* 1353, 199-202. (Cited **54** times, Google Scholar)

15. **Zhang, H.**, Goodman, H. M., and Jansson, S., (1997). Antisense inhibition of the photosystem I antenna protein Lhca4 in *Arabidopsis thaliana*. *Plant Physiol.* 115, 1525-1531. (Cited **64** times, Google Scholar)
16. Wang, J., **Zhang, H.**, and Allen, R.D. (1999). Overexpression of an Arabidopsis peroxisomal ascorbate peroxidase gene in tobacco increases protection against oxidative stress. *Plant Cell Physiol.* 40, 725-732. (Cited **298** times)
17. Wang, J., Yan, J., and **Zhang, H.** (1999). AKR-deficiency disturbs the balance of some signal transduction pathways in *Arabidopsis thaliana*. *Plant Physiol. Biochem.* 37, 465-471. (Cited **2** times, Google Scholar)
18. Wang, J., Goodman, H.M., and **Zhang, H.** (1999). An Arabidopsis 14-3-3 protein can act as a transcriptional activator in yeast. *FEBS Lett.* 443, 282-284. (Cited **16** times, Google Scholar)
19. Fankhauser, C., Yeh, K.-C., Lagarias, J.C., **Zhang, H.**, Elich, T.D., and Chory, T.D. (1999). PKS1, a substrate phosphorylated by phytochrome that modulates light signaling in Arabidopsis. *Science* 284, 1539-1541. (Cited **467** times, Google Scholar)
20. Muzac, I., Wang, J., Anzellotti, D., **Zhang, H.**, and Ibrahim, R. (2000). Functional expression of an Arabidopsis cDNA clone encoding a flavonol 3'-O-methyltransferase and characterization of the gene product. *Arch. Biochem. Biophys.* 375, 385-388. (Cited **97** times, Google Scholar)
21. Yan, J, Wang, J., and **Zhang, H.** (2002). An ankyrin repeat-containing protein plays a role in both disease resistance and antioxidation metabolism. *Plant J.* 29, 193-202. (Cited **131** times, Google Scholar)
22. Yan, J, Wang, J., Tissue, D., Holaday, A.S., Allen, R., and **Zhang, H.** (2003). Photosynthesis and seed production under water-deficit conditions in transgenic tobacco plants that overexpress an Arabidopsis ascorbate peroxidase gene. *Crop Sci.*, 43, 1477-1483. (Cited **108** times, Google Scholar)
23. Yan, J, He, C., and **Zhang, H.** (2003). The BAG-family proteins in *Arabidopsis thaliana*. *Plant Sci.*, 165, 1-7. (Cited **24** times, Google Scholar)
24. Yan, J, Wang, J., Huang, J.R., Patterson, C., and **Zhang, H.** (2003). AtCHIP, a U-box-containing E3 ubiquitin ligase, plays a critical role in temperature stress tolerance in Arabidopsis. *Plant Physiol.*, 132, 861-869. (Cited **159** times, Google Scholar)
25. Li, Q., Wang, J., Yan, J., and **Zhang, H.** (2003). The role of an Arabidopsis 14-3-3 protein and its interacting proteins in antioxidation metabolism and stress tolerance. *Recent Res. Devel. Plant Mol. Biol.* 1, 57-65.
26. Zhang, D., Hrmova, M., Wan, C.-H., Wu, C., Balzen, J., Cai, W., Wang, J., Densmore, L., Fincher, G.B., **Zhang, H.**, and Haigler, C. (2004). Members of a new group of chitinase-like genes are expressed preferentially in cotton cells with secondary walls. *Plant Mol. Biol.*, 54, 353-372. (Cited **80** times, Google Scholar)
27. Yan, J., He, C., Wang, J., Holaday, A.S. R. Allen, and **Zhang, H.** (2004). Overexpression of the Arabidopsis 14-3-3 protein GF14 λ in cotton leads to a "stay-green" phenotype and improves stress tolerance under moderate drought conditions. *Plant Cell Physiol.* 45, 1007-1014. (Cited **195** times, Google Scholar)
28. He, C., Yan, J., Shen, G., Fu, L., Holaday, S., Auld, D., Blumwald, E., and **Zhang, H.** (2005). Expression of an Arabidopsis vacuolar sodium/proton antiporter gene in cotton improves photosynthetic performance under salt conditions and

- increases fiber yield in the field. *Plant Cell Physiol.* 46, 1848-1854. (Cited **248** times, Google Scholar)
29. Luo, J., Yan, J., Shen, G., He, C., and **Zhang, H.** (2006). AtCHIP functions as an E3 ubiquitin ligase of protein phosphatase 2A subunits and alters plant response to abscisic acid treatment. *Plant J.* 46, 649-657. (Cited **128** times, Google Scholar)
 30. Narendra, S., Venkataramani, S., Wang, J., Shen, G., Lin, Y., Kornyejev, D., Holaday, S., and **Zhang, H.** (2006). The Arabidopsis ascorbate peroxidase 3 is a peroxisomal membrane-bound antioxidant enzyme, and is dispensable for Arabidopsis growth and development. *J. Exp. Bot.* 57, 3033-3042. (Cited **115** times, Google Scholar)
 31. Shen, G., Yan, J., Luo, J., He, C., Pasapula, V., Clarke, A.K., and **Zhang, H.** (2007). The chloroplast protease subunit ClpP4 is a substrate of the E3 ligase AtCHIP and plays an important role in chloroplast function. *Plant J.* 49, 228-237. (Cited **44** times, Google Scholar)
 32. Shen, G., Adam, Z., and **Zhang, H.** (2007). The E3 ligase AtCHIP ubiquitylates FtsH1, a component of the chloroplast FtsH protease, and affects protein degradation in chloroplasts. *Plant J.*, 52, 309-321. (Cited **67** times, Google Scholar)
 33. He, C., Shen, G., Pasapula, V., Luo, J., Venkataramani, S., Qiu, X., Kuppu, S., Kornyejev, D., Holaday, A.S., Auld, D., Blumwald, E., and **Zhang, H.** (2007). Ectopic expression of *AtNHX1* in cotton (*Gossypium hirsutum L.*) increases proline content and enhances photosynthesis under salt stress conditions. *J. Cotton. Sci.* 11, 266-274. (Cited **17** times, Google Scholar)
 34. Qiu, X., Shen, G., Li, Q., Wang, J., and **Zhang, H.** (2008). The Arabidopsis 14-3-3 protein, GF14 λ , localizes to cytoplasm and nucleus and plays important roles in plant growth and development. *Current Topics in Plant Biology*, Vol. 9, 115-127.
 35. Shen, G., Kuppu, S., Venkataramani, S., Wang, J., Yan, J., Qiu, X., and **Zhang, H.** (2010). Ankyrin repeat-containing protein 2A is an essential molecular chaperone for peroxisomal membrane-bound ascorbate peroxidase3 in Arabidopsis. *Plant Cell* 22, 811-831. (Cited **63** times, Google Scholar)
 36. **Zhang, H.**, Li, X., Kuppu, S., and Shen, G. (2010). Is AKR2A an essential molecular chaperone for a class of membrane-bound proteins in plants? *Plant Sig. Beh.* 5, 1520-1522. (Cited **14** times, Google Scholar)
 37. Pasapula, V., Shen, G., Kuppu, S., Paez-Valencia, J., Mendoza, M., Hou, P., Chen, J., Qiu, X., Zhu, L., Zhang, X., Auld, D., Blumwald, E., **Zhang, H.**, Gaxiola, R., and Payton, P. (2011). Expression of an Arabidopsis vacuolar H⁺-pyrophosphatase gene (*AVPI*) in cotton improves drought- and salt-tolerance and increases fiber yield in the field conditions. *Plant Biotech. J.*, 9, 88-99. (Cited **275** times, Google Scholar)
 38. **Zhang, H.**, Shen, G., Kuppu, S., Gaxiola, R., and Payton, P. (2011). Creating drought- and salt-tolerant cotton by overexpressing a vacuolar pyrophosphatase gene. *Plant Sig. Beh.* 6, 861-863. (Cited **45** times, Google Scholar)
 39. Kuppu, S., Shen, G., Payton, P., and **Zhang, H.** (2011). Developing drought tolerant crops. In *Drought: New Research*. Nova Science, Hauppauge, New York.

40. Qin, H., Gu, Q., Zhang, J., Sun, L., Kuppu, S., Zhang, Y., Burow, M., Payton, P., Blumwald, E., and **Zhang, H.** (2011). Regulated expression of an isopentenyltransferase gene (*IPT*) in peanut significantly improves drought tolerance and increases yield under field conditions. *Plant Cell Physiol.* 52, 1904-1914. (Cited **147** times, Google Scholar)
41. Zhu, L.F., He, X., Yuan, D., Xu, L., Xu, L., Tu, L.L., Shen, G.X., **Zhang, H.**, Zhang, X.L. (2011). Genome-wide identification of genes responsive to ABA and cold/salt stresses in *Gossypium hirsutum* by data-mining and expression pattern analysis. *Agr. Sci. China* 10, 499-508. (Cited **7** times, Google Scholar)
42. Banjara, M., Zhu, L., Shen, G., Payton, P., and **Zhang, H.** (2012). Expression of an Arabidopsis sodium/proton antiporter gene (*AtNHX1*) in peanut to improve salt tolerance. *Plant Biotech. Rep.* 6, 59-67. (Cited **71** times, Google Scholar)
43. Kuppu, S., Mishra, N., Hu, R., Sun, L., Zhu, X., Shen, G., Blumwald, E., Payton, P., and **Zhang, H.** (2013). Water-deficit inducible expression of a cytokinin biosynthetic gene *IPT* improves drought tolerance in cotton. *PLoS ONE* 8(5): e64190. doi:10.1371/journal.pone.0064190 (<http://dx.plos.org/10.1371/journal.pone.0064190>). (Cited **78** times, Google Scholar)
44. Qin, H., Gu, Q., Kuppu, S., Sun, L., Zhu, X., Mishra, N., Shen, G., Zhang, J., Zhang, Y., Burow, M., Payton, P., and **Zhang, H.** (2013). Expression of the Arabidopsis vacuolar H⁺-pyrophosphatase gene *AVP1* in peanut to improve drought and salt tolerance. *Plant Biotech. Rep.* 7, 345–355. (Cited **47** times, Google Scholar)
45. Sun, L., Hu, R., Shen, G., and **Zhang, H.** (2013). Genetic engineering peanut for higher drought- and salt-tolerance. *Food Nutrition Sci.* 4, 1-7. (Cited **17** times, Google Scholar) (<http://www.scirp.org/journal/PaperInformation.aspx?PaperID=33008>).
46. Hu, R., Zhu, Y., Shen, G., and **Zhang, H.** (2014). TAP46 plays a positive role in the abscisic acid insensitive 5-regulated gene expression in Arabidopsis. *Plant Physiol.* 164, 721-734. (Cited **46** times, Google Scholar).
47. Chen, J., Hu, R., Zhu, Y., Shen, G., **Zhang, H.** (2014). Arabidopsis phosphotyrosyl phosphatase activator is essential for protein phosphatase 2A holoenzyme assembly and plays important roles in hormone signaling, salt stress response, and plant development. *Plant Physiol.* 166, 1519-1534. (Cited **17** times, Google Scholar)
48. Shen, G., Wei, J., Qiu, X., Hu, R., Kuppu, S., Auld, D., Blumwald, E., Gaxiola, R., Payton, P., and **Zhang, H.** (2015). Co-overexpression of *AVP1* and *AtNHX1* in cotton further improves drought and salt tolerance in transgenic cotton Plants. *Plant Mol. Biol. Rep.* 33, 167-177. (Cited **44** times, Google Scholar)
49. Wei, J., Chen, L., Qiu, X., Hu, W., Sun, H., Chen, X., Bai, Y., Gu, X., Wang, C., Chen, H., Hu, R., **Zhang, H.**, Shen, G. (2015). Optimizing refining temperatures to reduce the loss of essential fatty acids and bioactive compounds in tea seed oil. *Food and Bioprocess Processing* 94, 136-146. (Cited **27** times, Google Scholar)
50. Chen, J., Zhu, X., Shen, G., and **Zhang, H.** (2015). Overexpression of *AtPTPA* in Arabidopsis increases protein phosphatase 2A activity by promoting holoenzyme formation and ABA negatively affects holoenzyme formation. *Plant Sig. Beh.*, e1052926. (Cited **2** times, Google Scholar)

51. Wei, J., Qiu, X., Chen, L., Hu, R., Chen, J., Sun, L., Li, L., **Zhang, H.**, Lv, Z., and Shen, G. (2015). The E3 ligase AtCHIP positively regulates Clp proteolytic subunit homeostasis. *J. Exp. Bot.* 66, 5809–5820. (Cited **8** times, Google Scholar)
52. Chen, J., Shen, G., and Zhang, H. (2015). A non-radioactive method for measuring PP2A activity in plants. *Bio-protocol.* 5(17): e1577. (<http://www.bio-protocol.org/e1577>).
53. Pehlivan, N., Sun, L., Jarrett, P., Yang, X., Chen, L., Shen, G., Kadioglu, A., **Zhang, H.** (2016). Co-overexpressing a plasma membrane sodium/proton antiporter and a vacuolar membrane sodium/proton antiporter significantly improves salt tolerance in transgenic Arabidopsis plants. *Plant Cell Physiol.* 57, 1069-1084. (Cited **29** times, Google Scholar)
54. Hu, W., Chen, L., Qiu, X., Lu, H., Wei, J., Bai, Y., He, N., Hu, R., Sun, L., **Zhang, H.**, Shen, G. (2016). Morphological, physiological and proteomic analyses provide insights into the improvement of castor bean productivity of a dwarf variety in comparing with a high-stalk variety. *Frontier Plant Sci.* September 2016 | Volume 7 | Article 1473 (Cited **3** times, Google Scholar)
55. Hu, R., Zhu, Y., Wei, J., Chen, J., Shen, G., H. Shi., and **Zhang, H.** (2017). Overexpression of *PP2A-C5* that encodes the catalytic subunit 5 of protein phosphatase 2A in Arabidopsis confers better root and shoot development under salt conditions. *Plant Cell Env.* 40, 150-164. (Cited **26** times, Google Scholar)
56. Hu, R., Zhu, Y., Shen, G., and **Zhang, H.** (2017). Overexpression of the *PP2A-C5* gene confers increased salt tolerance in *Arabidopsis thaliana*. *Plant Sig. Beh.*, Vol. 12, No. 2, e1276687. (Cited **4** times, Google Scholar)
57. Mishra, N., Sun, L., Zhu, X., Smith, J., Srivastava, A.P., Yang, X., Pehlivan, N., Esmaeili, N., Luo, H., Shen, G., Jones, D., Auld, D., Burke, J., Payton, P., **Zhang, H.** (2017). Overexpression of the rice SUMO E3 ligase gene *OsSIZ1* in cotton enhances drought and heat tolerance, and substantially improves fiber yields in field under reduced irrigation and rainfed conditions. *Plant Cell Physiol.* 58, 735-746. (Cited **30** times, Google Scholar)
58. Jiang, W., Sun, L., Yang, X., Wang, M., Esmaeili, N., Pehlivan, N., Zhao, R., **Zhang, H.**, and Zhao, Y. (2017). The effects of transcription directions of transgenes and the gypsy insulators on the transcript levels of transgenes in transgenic Arabidopsis. *Sci. Rep.* | 7: 14757 | DOI:10.1038/s41598-017-15284-x. (Cited **3** times, Google Scholar)
59. Welsch, R., Zhou, X., Yuan, H., Alvarez, D., Sun, T., Schlossarek, D., Yang, Y., Shen, G., **Zhang, H.**, Rodriguez-Concepcion, M., Thannhauser, T., and Li, L. (2018). Clp protease and OR directly control the proteostasis of phytoene synthase, the critical enzyme for carotenoid biosynthesis in Arabidopsis. *Mol. Plant.* 11, 149-162. (Cited **40** times, Google Scholar)
60. Zhu, X., Sun, L., Kupp, S., Hu, R., Mishra, N., Smith, J., Esmaeili, N., Herath, M., Gore, M., Payton, P., Shen, G., **Zhang, H.** (2018). The yield difference between wild-type cotton and transgenic cotton that expresses *IPT* depends on when water-deficit stress is applied. *Sci. Rep.* 8, Article No. 2538. (Cited **20** times, Google Scholar)
61. Zhang, L., Li, X., Li, D., Sun, Y., Li, Y., Luo, Q., Liu, Z., Wang, J., Li, X., **Zhang, H.**, Lou, Z., and Yang, Y. (2018). CARK1 mediates ABA signaling

- by phosphorylation of ABA receptors. *Cell Discovery* 4:30. DOI: <http://dx.doi.org/10.1038/s41421-018-0029-y> (Cited 4 times, Google Scholar)
62. Sun, L., Pehlivan, N., Esmaili, N., Jiang, W., Yang, X., Jarrett, P., Mishra, N., Zhu, X., Cai, Y., Herath, M., Shen, G., **Zhang, H.** (2018). Co-overexpression of *AVPI* and *PP2A-C5* in Arabidopsis increases tolerance to multiple abiotic stresses. *Plant Sci.* 274, 271-283. (Cited 4 times, Google Scholar)
 63. Lu, H., Cui, X., Liu, Z., Liu, Y., Wang, X., Zhou, Z., Cai, X., Zhang, Z., Guo, X., Hua, J., Ma, Z., Wang, X., Zhang, J., **Zhang, H.**, Liu, F., and Wang, K. (2018). Discovery and annotation of a novel transposable element family in *Gossypium*. *BMC Plant Biology*, 18: 307 (<https://doi.org/10.1186/s12870-018-1519-7>). (Cited 4 times, Google Scholar)
 64. Chen, L., Hu, W., Qiu, X., Lu, H., Wei, J., Yu, S., He, N., **Zhang, H.**, Shen, G. (2018). The molecular chaperon AKR2A enhances mulberry cold-tolerance capacity by maintaining SOD activity and unsaturated fatty acids composition. *Sci. Rep.* 8, Article No. 12120. (Cited 1 time, Google Scholar)
 65. Esmaili, N., Yang, X., Cai, Y., Sun, L., Zhu, X., Shen, G., Payton, P., Fang, W., and Zhang, H. (2019). Co-overexpression of *AVPI* and *OsSIZ1* in Arabidopsis substantially enhances plant tolerance to drought, salt, and heat stresses. *Sci. Rep.* 9, 7642 (www.nature.com/articles/s41598-019-44062-0). (Cited 4 times, Google Scholar)
 66. Yu, M., Yang, W., Zou, C., Lu, C., Yu, D., Cheng, H., Jiang, P., Feng, X., Zhang, Y., Wang, Q., **Zhang, H.**, Song, G., Zhou, Z. (2019). Genome-wide comparative analysis of RB-GRP family genes between *Gossypium arboreum* and *Gossypium raimondii*. *PLoS One*, 14(6): e0218938. (Cited 1 time, Google Scholar)
 67. Hu, W., Chen, L., Qiu, X., Wei, J., Lu, H., Sun, G., Ma, X., Yang, Z., Zhu, C., Hou, Y., Han, X., Sun, C., Hu, R., Cai, Y., **Zhang, H.**, Li, F., Shen, G. (2020). AKR2A participates in the regulation of cotton fiber development by modulating biosynthesis of very-long-chain fatty acids. *Plant Biotech. J.*, 18, 526-539.
 68. Wijewardene, I., Mishra, N., Sun, L., Smith, J., Zhu, X., Payton, P., Shen, G. and **Zhang, H.** (2020). Improving drought-, salinity-, and heat-tolerance in transgenic plants by co-overexpressing Arabidopsis vacuolar pyrophosphatase gene *AVPI* and *Larrea* Rubisco activase gene *RCA*. *Plant Sci.* 296, 110499.
 69. Gao, H.-J., Lü, X.-P., Bai, R., Zhao, Q., Wang, R.-J., Ren, W., Wang, Y.-P., Cheng, J.-N., Wang, S.-M., **Zhang, H.**, Zhang, J.-L. and Meng, L.-S. (2020). HaASR1 from a desert shrub, *Haloxylon ammodendron*, confers plant drought and salt tolerance (submitted).
 70. Chen, L., Hu, W., Mishra, N., W., Lu, H., Hou, Y., Qiu, X., Yu, S., Wang, C., **Zhang, H.**, Cai, Y., Sun, C., Shen, G. (2020). AKR2A interacts with KCS1 to improve VLCFAs contents and chilling tolerance of *Arabidopsis thaliana* (submitted).
 71. Esmaili, N., Cai, Y., Tang, F., Zhu, X., Smith, J., Mishra, N., Hequet, E., Ritchie, G., Jones, D., Shen, G., Payton, P., and **Zhang, H.** (2020). Towards doubling fiber yield for cotton in the semiarid agricultural area by increasing tolerance to drought, heat, and salinity simultaneously (submitted).