

Resume

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Experience

Education

- 9/2000- 7/2005 Graduate student in Huazhong Agricultural University,
Wuhan, Hubei, P. R. China
Major: Horticulture (Molecular Biology of Potato Quality Improvement)
- 9/1994 –7/1998 Undergraduate student in Department of horticulture, Hubei Institute for
Nationalities,
Enshi, Hubei, P. R. China
Major: Horticulture

Work and Research Experience

- 1/2015-Present Professor Huazhong Agricultural University,
Wuhan, Hubei, P. R. China
- 12/2008-Present Associate Professor Huazhong Agricultural University,
Wuhan, Hubei, P. R. China
- 7/2007- 12/2007 Vistor Scholar Potato Research Centre, Agriculture and
Agri-Food Canada, Fredericton, Canada
- 7/2005-12/2008 Lecture Huazhong Agricultural University,
Wuhan, Hubei, P. R. China

Publication

1. Hou J, Liu T, Reid S, Zhang H, Peng X, Sun K, Juan Du1, Sonnewald U*, **Song B***. Silencing of α -amylase StAmy23 in potato tuber leads to delayed sprouting. *Plant Physiology and Biochemistry*, 2019, 139:411-418.
2. Liu T, Zhou T, Lian M Liu T, Hou J, Ijaz R, **Song B***. Genome-wide identification and characterization of the AREB/ABF/ABI5 subfamily members from *Solanum tuberosum*. *International Journal of Molecular Sciences*, 2019, 20:311

3. Zhang H, Yao Y, Chen S, Hou J, Yu Y, Liu T, **Song B***, Xie C. SbRFP1 regulates cold-induced sweetening of potato tubers by ubiquitination degradation of StBAM1. *Plant Physiology and Biochemistry*, 2019, 136: 215-221
4. Kou S¹, Chen L¹, Wei T, Scossa F, Wang Y, Liu J, Fernie A, **Song B***, Xie C*. Arginine decarboxylase gene ADC1 associated putrescine pathway plays critical roles in potato cold-acclimated freezing tolerance as revealed by transcriptome and metabolome analyses. *Plant Journal*, 2018, 96(6):1283-1298.
5. Li J¹, Huang W¹, Cao H, Xiao G, Zhou J, Xie C, Xia J*, **Song B***. Additive and epistatic QTL underlying the dormancy in a diploid potato population across seven environments. *Scientia Horticulturae*, 2018, 240:578-584.
6. Xiao G, Huang W, Cao H, Tu W, Wang H, Zheng X, Liu J, **Song B*** and Xie C* Genetic loci conferring reducing sugar accumulation and conversion of cold-stored potato tubers revealed by QTL analysis in a diploid population. *Frontiers in Plant Science*, 2018, doi:10.3389/fpls.2018.00315
7. Liu T, Fang H, Liu J, Reid S, Hou J, Zhou T, Tian Z, **Song B***, Xie C. Cytosolic glyceraldehyde-3-phosphate dehydrogenases play crucial roles in controlling cold-induced sweetening and apical dominance of potato (*Solanum tuberosum* L.) tubers. *Plant Cell and Environment*, 2017, 40:3043 – 3054.
8. Hou J, Zhang H, Liu J, Reid S, Liu T, Xu S, Tian Z, Sonnewald U, **Song B***, Xie C*. Three amylases regulate cold-induced sweetening of potato tubers via attacking distinct substrates. *Journal of Experimental Botany*, 2017, 68 (9):2317-2333.
9. Lin Y, Liu T, Liu J, Liu X, Ou Y, Zhang H, Li M, Sonnewald U, **Song B***, Xie C*. Subtle regulation of potato acid invertase activity by a protein complex composed of StvacINV1-StInvInh2B-SbSnRK1. *Plant Physiology*, 2015, 68:1807-1819.
10. Ou Y¹, Liu X¹, Xie C, Zhang H, Lin Y, Li M, **Song B***, Liu J*. Genome-wide identification of microRNAs and their targets in cold-stored potato tubers by deep sequencing and degradome analysis. *Plant Molecular Biology Reporter*, 2015, 33(3):584-597.
11. Zhang H, Liu J, Hou J, Yao Y, Lin Y, Ou Y, **Song B***, Xie C. The potato amylase inhibitor gene, SbAI, regulates the cold-induced sweetening of potato tubers by modulating amylase activity. *Plant Biotechnology J*, 2014, 12:984-993.
12. Zhang H¹, Hou J¹, Liu J, Xie C, **Song B***. Amylase analysis in potato starch degradation during cold storage and sprouting. *Potato Research*, 2014, 57(1):47-58.
13. Yang L, Nie B, Liu J, **Song B***. A reexamination of the effectiveness of ribavirin on eradication of viruses in potato plantlets in vitro using ELISA and quantitative RT-PCR. *American Journal of Potato Research*, 2014, 91(3):304-311.
14. Lin Y, Liu J, Liu X, Ou Y, Zhang H, Li M, **Song B***, Xie C*. Interaction proteins of invertase and invertase inhibitor in cold-stored potato tubers suggested a protein complex underlying post-translational regulation of invertase. *Plant Physiology and Biochemistry*, 2013, 73:237-244.
15. Li M¹, **Song B***, Zhang Q, Liu X, Lin Y, Ou Y, Zhang H, Liu J*. A synthetic tuber-specific and cold-induced promoter is applicable in controlling potato cold-induced sweetening. *Plant Physiology and Biochemistry*, 2013, 67: 41 - 47 (¹ Equal contribution).
16. Zhang H, Liu X, Liu J, Ou Y, Lin Y, Li M, **Song B***, Xie C*. A novel RING finger gene, SbRFP1, increases resistance to cold-induced sweetening of potato tubers. *FEBS Letters*, 2013, 587:749-755.
17. Yao C¹, **Song B***, Liu J, Wu C, Cheng Q, Li D, Xie C*. Population improvement of resistance to late blight in the tetraploid potato: a case study in combination with AFLP marker assisted background selection. *Agricultural Sciences in China*, 2011, 10 (8): 1177-1187. (¹ Equal contribution).
18. Li M, Xie C, **Song B**, Ou Y, Lin Y, Liu X, Zhang H, Liu J*. Construction of efficient, tuber-specific, and cold-inducible promoters in potato. *Plant Science*, 2015, 235:14-24.
19. Ou Y, **Song B**, Liu X, Lin Y, Zhang H, Li M, Fang H, Liu J*. Profiling of StvacINV1

expression in relation to acid invertase activity and sugar accumulation in potato cold-stored tubers. *Potato Research*, 2013, 56:157-165

20. Ou Y, **Song B**, Liu X, Li M, Lin Y, Zhang H, Zhao X, Liu J*. Promoter regions of potato vacuolar invertase gene in response to sugars and hormones. *Plant Physiology and Biochemistry*, 2013, 69:9-16
21. Jin H, Liu J, **Song B**, Xie C. Impact of plant density on the formation of potato mimitubers derived from microtubers and tip-cuttings in plastic houses. *Journal of Integrative Agriculture*, 2013, 12(6):1008-1017
22. Liu X, Lin Y, Liu J, **Song B**, Ou Y, Zhang H, Li M, Xie C*. StInvInh2 as an inhibitor of StvacINV1 regulates the cold-induced sweetening of potato tubers by specifically capping vacuolar invertase activity. *Plant Biotechnology J.*, 2013, 11:640-647
23. Liu X, Cheng S, Liu J, Ou Y, **Song B**, Zhang C, Lin Y, Li Xiu-Qing, Xie C*. The potato protease inhibitor gene, *St-Inh*, plays roles in the cold-induced sweetening of potato tubers by modulating invertase activity. *Postharvest Biology and Technology*, 2013, 86:265-271.
24. Chen L, Guo X, Xie C, He L, Cai X, Tian Z, **Song B**, Liu J*. Nuclear and cytoplasmic genome components of *Solanum tuberosum* + *S. chacoense* somatic hybrids and three SSR alleles related to bacterial wilt resistance. *Theoretical and Applied Genetics*. 2013, 126(7):1861-72
25. Chen X, **Song B**, Liu J, Yang J, He T, Lin Y, Zhang H, Xie C*. Modulation of gene expression in cold induced sweetening resistant potato species *S. berthaultii* exposed to low temperature. *Molecular Genetics and Genomics*. 2012, 287(5): 411-421
26. He T, **Song B**, Liu J, Chen X, Ou Y, Lin Y, Zhang H, Xie C. A new isoform of thioredoxin h group in potato, *SbTRXh1*, regulates cold-induced sweetening of potato tubers by adjusting sucrose content. *Plant Cell Reports*. 2012, 31(8): 1463-1471
27. Li J, L-K Hannele, Tian Z, Liu J, **Song B**, Landeo J, Portal L, Gastelo M, Frisancho J, Sanchez L, Meijer D, Xie C*, Bonierbale M*. Conditional QTL underlying resistance to late blight in a diploid potato population. *Theoretical and Applied Genetics*. 2012, 124:1339-1350
28. Liu X, Zhang C, Ou Y, Lin Y, **Song B**, Xie C, Liu J*, Li Xiu-Qing*. Systematic analysis of potato acid invertase genes reveals a cold-responsive member, StvacINV1, regulates cold-induced sweetening of tubers. *Molecular Genetics and Genomics*, 2011, 286 (2): 109-118
29. Liu X, **Song B**, Zhang H, Li XQ, Xie C, Liu J*. Cloning and molecular characterization of putative invertase inhibitor genes and their possible contributions to cold-induced sweetening of potato tubers. *Molecular Genetics and Genomics*, 2010, 284:147-159.
30. Guo X, Xie C, Cai X, **Song B**, He L, Liu J*. Meiotic behavior of pollen mother cells in relation to ploidy level of somatic hybrids between *Solanum tuberosum* and *S. chacoense*. *Plant Cell Reports*, 2010, 29 (11): 1277-1285.
31. Ni X, Tian Z, Liu J, **Song B**, Xie C*. Cloning and molecular characterizing of potato RING finger protein gene StRFP1 and its function in potato broad-spectrum resistance against *Phytophthora infestans*. *Journal of Plant Physiology*. 2010, 167: 488-496.
32. Ni X, Tian Z, Liu J, **Song B**, Li J, Shi X, Xie C*. StPUB, a novel potato UND/PUB/ARM repeat type gene, is associated with late blight resistance and NaCl stress. *Plant Science*. 2010, 178:158-169.