

Li Li, Ph.D.

Supervisor of Master in Food and Agriculture Science

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Current Research Responsibility

Dr. Li Li serves as a young scientist assigned to the College of Biosystems Engineering and Food Science, Zhejiang University, China. Dr. Li develops, evaluates, validates, and transfers the food preservative and processing intervention technologies (such as controlled and modified atmospheres) to enhance the physiological and flavor quality of fresh fruits and vegetables. Dr. Li works in the area of food proteomics and transcriptomics, develops/elucidates the food metabolic networks, and evaluates the proteome and transcriptome in response to abiotic stress stimuli (such as temperature, humidity, exogenous gas). Dr. Li investigates all aspects of quality traits (appearance, texture, nutritional, chemical and sensorial quality) and develops innovative approaches to minimize postharvest loss of fresh products.



Accomplishments

Dr. Li has authored and co-authored over 60 scientific publications, which consist of over 40 peer-reviewed research articles to date. Dr. Li has been obtained 13 Ministerial and Provincial-Level Science and Technology Awards and she has presided/participated in 25 research projects in the last eight years. Dr. Li and her team members have applied 16 Chinese and International patents. Dr. Li has established an internationally recognized research program in the area of fruit postharvest and has made several high impact contributions to the field of the research.

Dr. Li obtained the funding from National Natural Science Foundation of China (NSFC), Natural Science Foundation of Zhejiang Province, and the China Postdoctoral Science Foundation.

Educational Background:

2011-2013 AAFC-Atlantic Food and Horticulture Research Centre, Canada; major, Postharvest Biology and Technology; Joint Ph.D. 2013

2009-2013 Tianjin University of Science and Technology, China; major, Postharvest Biology and Technology; Ph.D. 2013

2006-2009 Tianjin University of Science and Technology, China; major, Postharvest Biology and Technology; M.S. 2009

2002-2006 Yantai University, China; major, Food Science and Engineering; B.S. 2006

Professional Experience:

2015-present Lecturer; Zhejiang University, Hangzhou, China.

2014-2015 Research Associate/Postdoctoral fellow; Department of Postharvest Science, Agricultural Research Organization, Israel

Open Positions

Graduate students with interests in Postharvest biology of fruit, Food sensory evaluation and flavor regulation, Food preservation and processing technology are strongly encouraged to contact Dr. Li Li for details.

Postdoctoral positions are available now and then, and we continually look for talented and driven researchers to join our scientific endeavors.

Please send a cover letter including a statement of purpose and expected start date, your CV with publication list, reprints of three selected publications, copies of undergraduate and graduate transcripts, and three reference letters to Dr. Li Li <lili1984@zju.edu.cn>.

Publications

Peer-Reviewed Journal Publications

(As the first author/corresponding author)

1. Jiawei Yan, Zisheng Luo, Hongyan Lu, Dong Li, Dongmei Yang, Zhaojun Ban, **Li Li***, The effect of the layer-by-layer (LBL) edible coating on strawberry quality and metabolites during storage, *Postharvest Biology and Technology*, 2019, 147: 29-38.
2. Qiong Wu, Xiaoya Tao, Xinzi Ai, Zisheng Luo, Linchun Mao, Tiejun Ying*, **Li Li***, Effect of exogenous auxin on aroma volatiles of cherry tomato (*Solanum lycopersicum* L.) fruit during postharvest ripening, *Postharvest Biology and Technology*, 2018, 146: 108-116.

3. Hongyan Lu[§], Kaidi Wang[§], Lei Wang[§], Dong Li, Jiawei Yan, Zhaojun Ban, Zisheng Luo*, **Li Li***, Dongmei Yang. Effect of superatmospheric oxygen exposure on strawberry (*Fragaria × ananassa* Duch.) volatiles, sensory and chemical attributes, *Postharvest Biology and Technology*, 2018, 142: 60-71.
4. Hongyan Lu, Wenhao Wu, Jarukitt Limwachiranon, Dongmei Yang, Gongnian Xiao, Zisheng Luo*, **Li Li***, Effect of micro-perforated film packing on fatty acid-derived volatile metabolism of “Red globe” table grapes, *Food and Bioprocess Technology*, 2018, 11: 1807-1817.
5. Qiong Wu[§], Xiaoya Tao[§], Xinzi Ai, Zisheng Luo, Linchun Mao, Tiejin Ying*, **Li Li***. Contribution of abscisic acid to aromatic volatiles in cherry tomato (*Solanum lycopersicum* L.) fruit during postharvest ripening, *Plant Physiology and Biochemistry*, 2018, 130: 205-214.
6. Jiawei Yan[§], Zhaojun Ban[§], Hongyan Lu, Dong Li, Elena Poverenov, Zisheng Luo*, **Li Li***. The aroma volatile repertoire in strawberry fruit: a review, *Journal of The Science of Food and Agriculture*, 2018, 98: 4395-4402.
7. Qiong Wu, Jiawei Bai, Xiaoya Tao, Wangshu Mou, Zisheng Luo, Linchun Mao, Zhaojun Ban, Tiejin Ying*, **Li Li***. Synergistic effect of abscisic acid and ethylene on color development in tomato (*Solanum lycopersicum* L.) fruit, *Scientia Horticulturae*, 2018, 235: 169-180.
8. **Li Li**, Zhaojun Ban, Jarukitt Limwachiranon, Zisheng Luo*. Proteomic studies on fruit ripening and senescence, *Critical Reviews in Plant Sciences*, 2017, 36(2): 116-127.
9. **Li Li**, Yael Kashash, Livnat Goldenberg, Amit Sabag, Adi Doron-Faigenboim, Ron Porat*. Effects of 1-methylcyclopropene on postharvest storage performance and the transcriptome of cactus pear fruit. *International Journal of Food Science and Technology*, 2017, 52: 1801-1809.
10. Hongyan Lu, Zhaojun Ban, Kaidi Wang, Dong Li, Dongdong Li, Elena Poverenov, **Li Li***, Zisheng Luo*. Aroma volatiles, sensory and chemical attributes of strawberry (*Fragaria × ananassa* Duch.) achenes and receptacle, *International Journal of Food Science and Technology*, 2017, 52, 2614-2622.
11. Zhaojun Ban, Zisheng Luo, Cunkun Chen, Jinyan Gong, Qiuping Yuan, Linkai Yu, Wen Yu, **Li Li***. Cloning of *PcPAL* gene from *pyrus communis* and characterization of its

- expression in two cultivars with different anthocyanin accumulation levels, *Journal of Biobased Materials and Bioenergy*, 2017, 11: 343-348.
12. Wentao Zhang, Xihong Li*, **Li Li***, Yao Tang, Wei Qi, Xia Liu, Liping Qiao, Wei Wang, Xiaoyu Jia. A label-free quantitative proteomic investigation reveals stage-responsive ripening genes in apricot fruits, *Journal of Horticultural Science and Biotechnology*, 2017, 92(3): 261-269.
 13. **Li Li**[§], Dongdong Li[§], Zisheng Luo*, Xinhong Huang, Xihong Li. Proteomic response and quality maintenance in postharvest fruit of strawberry (*Fragaria × ananassa*) to exogenous cytokinin. *Scientific Reports*, 2016, 6: 27094.
 14. **Li Li**, Amnon Lichter, Daniel Chalupowicz, Dan Gamrasni, Tali Goldberg, Ohad Nerya, Ruth Ben-Arie, Ron Porat*. Effects of the ethylene-action inhibitor 1-methylcyclopropene on postharvest quality of non-climacteric fruit crops, *Postharvest Biology and Technology*, 2016, 111, 322-329.
 15. Dongdong Li, Wangshu Mou, Zisheng Luo*, **Li Li***, Jarukitt Limwachiranon, Linchun Mao, Tiejun Ying. Developmental and stress regulation on expression of a novel miRNA, Fan-miR73, and its target ABI5 in strawberry. *Scientific Reports*, 2016, 6: 28385.
 16. **Li Li**, Zisheng Luo, Xinhong Huang, Lu Zhang, Pengyu Zhao, Hongyuan Ma, Xihong Li, Zhaojun Ban, Xia Liu. Label-free quantitative proteomics to investigate strawberry proteome changes under controlled atmosphere and low temperature storage, *Journal of Proteomics*, 2015, 120, 44-57.
 17. **Li Li**, Tatiana Kaplunov, Yohanan Zutahy, Avinoam Daus, Ron Porat, Amnon Lichter*. The effects of 1-methylcyclopropane and ethylene on postharvest rachis browning in table grapes. *Postharvest Biology and Technology*, 2015, 107, 16-22.
 18. **Li Li**, Amnon Lichter, David Kenigsbuch, Ron Porat*. Effects of cooling delays at the wholesale market on fruit and vegetables quality after retail marketing. *Journal of Food Processing and Preservation*, 2015, 39, 2533-2547.
 19. **Li Li**, Dan Wang, Xihong Li, Yu Wang, Xiaofeng Ju. Elucidation of color development and microstructural characteristics of *Allium sativum* fumigated with acetic acid. *International Journal of Food Science and Technology*, 2015, 50: 1083-1088.

20. Dongdong Li[§], **Li Li**[§], Zisheng Luo, Wangshu Mou, Linchun Mao, Tiejun Ying. Comparative transcriptome analysis reveals the influence of abscisic acid on the metabolism of pigments, ascorbic acid and folic acid during strawberry fruit ripening. *PLoS One*, 10(6): e0130037, 2015.
21. **Li Li**, Zhaojun Ban, Xihong Li*, Ting Xue. Effect of 1-methylcyclopropene and calcium chloride treatments on quality maintenance of 'Lingwu Long' Jujube fruit. *Journal of Food Science and Technology*, 2014, 51(4): 700-707.
22. **Li Li**, Xihong Li*, Zhaojun Ban, Yunhong Jiang. Variation in antioxidant metabolites and enzymes of 'Red Fuji' apple pulp and peel during cold storage. *International Journal of Food Properties*, 2014, 17(5): 1067-1080.
23. Xiaotang Yang[§], **Li Li**[§], Jun Song*, Leslie Campbell Palmer, Xihong Li, Zhaoqi Zhang. Peptide pre-fractionation is essential for proteomic approaches employing multiple reaction monitoring of fruit proteomic research, *Journal of Separation Science*, 2014, 37: 77-84.
24. **Li Li**, Jun Song*, Wilhelmina Kalt, Charles Forney, Rong Tsao, Devanand Pinto, Kenneth Chisholm, Leslie Campbell, Sherry Fillmore, Xihong Li. Quantitative proteomic investigation employing stable isotope labeling by peptide dimethylation on proteins of strawberry fruit at different ripening stages. *Journal of Proteomics*, 2013, 94(6): 219-239.
25. **Li Li**, Xihong Li*, Aili Wang, Yuqian Jiang, Zhaojun Ban, Effect of heat treatment on physiochemical, colour, antioxidant and microstructural characteristics of apples during storage, *International Journal of Food Science and Technology*, 2013, 48(4): 727-734.
26. **Li Li**, Zhaojun Ban, Xihong Li*, Maoyu Wu. Differential expression of anthocyanin biosynthetic genes and transcription factor *PcMYB10* in pears (*Pyrus communis* L.). *PLOS ONE*, 2012, 7(9): e46070.
27. **Li Li**, Zhaojun Ban, XiHong Li*, Xiuli Wang, Junfeng Guan, Phytochemical and microbiological changes of honey pomelo (*Citrus grandis* L.) slices stored under super atmospheric oxygen, low-oxygen and passive modified atmospheres, *International Journal of Food Science and Technology*, 47(10), pp2205–2211, 2012

28. **Li Li**, Xihong Li*, Zhaojun Ban. A mathematical model of the modified atmosphere packaging (MAP) system for the gas transmission rate of fruit produce, *Food Technology and Biotechnology*, 2010, 48(1): 71-78.

(As the co-author)

29. Di Wang, **Li Li**, Yanqun Xu, Jarukitt Limwachiranon, Dong Li, Zhaojun Ban, and Zisheng Luo*, Effect of exogenous nitro oxide on chilling tolerance, polyamine, proline, and γ -aminobutyric acid in bamboo shoots (*Phyllostachys praecox* f. *prevernalis*), *Journal of Agricultural and Food Chemistry*, 2017, 65: 5607–5613.
30. Dong Li, **Li Li**, Zhiwei Ge, Jarukitt Limwachiranon, Zhaojun Ban, Dongmei Yang, Zisheng Luo*. Effects of hydrogen sulfide on yellowing and energy metabolism in broccoli. *Postharvest Biology and Technology*, 2017, 129: 136-142.
31. Hao Huang, Zhiwei Ge, Jarukitt Limwachiranon, **Li Li**, Weirong Li, Zisheng Luo*. UV-C treatment affects browning and starch metabolism of minimally processed lily bulb. *Postharvest Biology and Technology*, 2017, 128: 105-111.
32. Yanqun Xu, Jarukitt Limwachiranon, **Li Li**, Qiaomei Ru, Zisheng Luo*. Characterisation of volatile compounds of farmed soft-shelled turtle (*Pelodiscus sinensis*) by solid-phase microextraction and the influence of matrix pH on the release of volatiles. *International Journal of Food Science and Technology* 2017, 52: 275-281.
33. Fangfang Zeng, Zhiwei Ge, Jarukitt Limwachiranon, **Li Li**, Simin Feng, Yansheng Wang, Zisheng Luo. Antioxidant and tyrosinase inhibitory activity of *Rosa roxburghii* fruit and identification of main bioactive phytochemicals by UPLC-Triple-TOF/MS. *International Journal of Food Science and Technology*, 2017, 52: 897-905.
34. Dong Li, Jarukitt Limwachiranon, **Li Li**, Ruixue Du, Zisheng Luo*. Involvement of energy metabolism to chilling tolerance induced by hydrogen sulfide in cold-stored banana fruit. *Food Chemistry*, 2016, 208, 272-278.
35. Jiayin Li[§], Xiaoya Tao[§], **Li Li**, Linchun Mao, Zisheng Luo, Zia Ullah Khan, Tiejun Ying. Comprehensive RNA-seq analysis on the regulation of tomato ripening by exogenous auxin. *PLoS One*, 2016, 11(5): e0156453.
36. Dongdong Li, Wangshu Mou, Yansheng Wang, **Li Li**, Linchun Mao, Tiejun Ying, Zisheng Luo*. Exogenous sucrose treatment accelerates postharvest tomato fruit

- ripening through the influence on its metabolism and enhancing ethylene biosynthesis and signaling. *Acta Physiologiae Plantarum*, 2016, 38(9): 225.
37. Hongyan Lu, **Li Li**, Jarukitt Limwachiranon, Jing Xie, Zisheng Luo*. Effect of UV-C on ripening of tomato fruits in response to wound. *Scientia Horticulturae*, 2016, 213: 104-109.
38. Jun Song*, Lina Du, **Li Li**, Wilhelmina Kalt, Leslie Campbell Palmer, Sherry Fillmore, Ying Zhang, ZhaoQi Zhang, XiHong Li, Targeted quantitative proteomic investigation employing multiple reaction monitoring on quantitative changes in proteins that regulate volatile biosynthesis of strawberry fruit at different ripening stages, *Journal of Proteomics*, 2015, 126, 288-295.
39. Jun Song,* Lina Du, **Li Li**, Wilhelmina Kalt, Leslie Campbell Palmer, Sherry Fillmore, Ying Zhang, ZhaoQi Zhang, XiHong Li, Quantitative changes in proteins responsible for flavonoid and anthocyanin biosynthesis in strawberry fruit at different ripening stages: A targeted quantitative proteomic investigation employing multiple reaction monitoring, *Journal of Proteomics*, 2015, 122: 1-10.
40. Zhanli Liu, **Li Li**, Zisheng Luo*, Fangfang Zeng, Lei Jiang, Kaichen Tang. Effect of brassinolide on energy status and proline metabolism in postharvest bamboo shoot during chilling stress. *Postharvest Biology and Technology*, 2016, 111: 240-246.
41. Zhaojun Ban, Wenwen Wei, Xiangzheng Yang, Jianhua Feng,* Junfeng Guan*, **Li Li**. Combination of heat treatment and chitosan coating to improve postharvest quality of wolfberry (*Lycium barbarum*). *International Journal of Food Science and Technology*, 2015, 50(4): 1019-1025.
42. Zhaojun Ban, **Li Li**, Junfeng Guan, Jianhua Feng*, Maoyu Wu, Xinming Xu, Jiang Li, Modified atmosphere packing (MAP) and coating for improving preservation of whole and sliced *Agaricus Bisporus*, *Journal of Food Science and Technology*, 2014, 51(12): 3894-3901.
43. Qifa Zheng, Jun Song*, Leslie Campbell-Palmer, Kristen Thompson K, **Li Li**, Brad Walker, Yunsong Cui, Xihong Li, A proteomic investigation of apple fruit during ripening and in response to ethylene treatment. *Journal of Proteomics*, 2013, 93: 276-294.

44. Xihong Li*, **Li Li**, Xia Liu, Wei Wang, Jiuchun Han, Microstructural characteristics of *Punica granatum* fruit at dynamic temperature inside the fibre insulation materials, *Applied Mechanics and Materials*, 2014, 518: 8-11.
45. Xihong Li*, **Li Li**, A mathematical model for gas transmission through modified atmosphere packaging (MAP) film, *Advanced Materials Research*, 2011, 148-149: 425-428.
46. Xihong Li*, **Li Li**, Ting Xue, Xiuli Wang, Li Zhang. Effect of 1-methylcyclopropene on bioavailability of in vitro digests from Lingwu Jujube. *Energy Procedia*, 2011, 11: 2946-2952.
47. Weidong Yang, Xihong Li*, **Li Li**. Effect of Polyethylene Films Coated Capsaicin on Rodent Repellent, *Advanced Materials Research*, 2011, 174: 470-474.
48. Xihong Li*, **Li Li**, Xiuli Wang, Li Zhang, Improved keeping quality of fresh-cut garlic sprouts by atmosphere packaging conditions. *Advanced Materials Research*, 2010, 3: 317-320.
49. Kai Gao, **Li Li***, Xihong Li, Ting Xue. Effect of 1-methylcyclopropene on bioavailability of in vitro digests from 'Fuji' apple. *International Conference on Future Information Technology and Management Engineering*, 2010, 1: 147-151.
50. Zhaojun Ban, Jianhua Feng, Xihong Li, **Li Li**. Development and validation of mathematical model for gas transmission through thin film. *Advanced Materials Research*, 2011, 199-200: 2005-2009.

Other Publications (thesis, books, book chapters and proceedings)

51. Song, J., Fan, L., Hughes, T., Campbell Palmer, L., **Li, L.**, Li, X.H. Quantitative proteomic investigation on the effect of 1-methylcyclopropene treatments on postharvest quality of selected cut flowers. *Acta Horticulturae*, 2015, 1104: 311-317. (ISTP)
52. Xiaotang Yang, **Li Li**, Jun Song, Leslie Campbell-Palmer, Xihong Li, Zhaoqi Zhang, Application of OFFGEL and dimethylation labelling as quantitative proteomic analysis procedure to investigate protein changes in fruit during ripening and in response to postharvest treatment, *Annual Conference of the American Society for Horticultural Science*, Supplement to *HortScience*, 2012, 47(9): S169.

53. J. Song, X. Tang, **L. Li**, L.C. Palmer, D. Pinto and K.Chisholm. OFFGEL peptide pre-fractionation is essential for proteomic approaches employing quantitative stable isotope dimethyl labeling and multiple reaction monitoring (MRM) in fruit proteomic research. 7th International Symposium on Enabling Technologies for Life Sciences (ETP). Metro Toronto Convention Centre 255 Front Street West, Toronto, Canada, April 30-May 1, 2013 (Poster)