CURRICULUM VITAE

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RESEARCH INTERESTS

Gene discovery and elucidation of the mechanisms underlying phytonutrient and micronutrient metabolism, as well as plant biotechnology for improving the nutritional quality and health-promoting properties of food crops. Current research focuses primarily on carotenoid, anthocyanin, and glucosinolate biosynthesis as well as selenium and zinc nutrition in plants.

HIGHER EDUCATION

Plant Biochemistry and Physiology, University of Reading, U. K.; Ph.D.
Horticulture, Sichuan Agricultural University, P. R. China; B.S.

PROFESSIONAL EXPERIENCE

2016-present	Adjunct Professor, Plant Breeding and Genetics Section, School of Integrative Plant Science, Cornell University
2009-2015	Adjunct Associate Professor, Plant Breeding and Genetics Section, School of Integrative Plant Science, Cornell University
2003-2009	Adjunct Assistant Professor, Department of Plant Breeding and Genetics, Cornell University
2002-present	Research Molecular Biologist (Plant), USDA-ARS, Plant, Soil and Nutrition Laboratory, Cornell University, Ithaca, NY
1995-2002	Research Associate IV, Department of Plant Biology, Department of Plant Breeding and Genetics, Cornell University
1993-1995	Postdoctoral Associate, Department of Biochemistry, University of Missouri-Columbia
1988-1992	Postdoctoral Associate, Department of Biochemistry, MSU-DOE Plant Research Laboratory, Michigan State University
1984-1988	Graduate Assistant, Department of Botany, Reading University, U. K.

TEACHING

Co-Instructor of Nutritional Quality Improvement of Food Crops (PLBRG 4070)
Guest Lecturer for several courses

PUBLICATIONS

Li L, Yuan H, Zeng Y, Xu Q (2016) Plastids and carotenoid accumulation. In "*Carotenoid Function and Biosynthesis in Plants*" (edited by Claudia Stange), the Advances in Experimental Medicine and Biology book series, Springer. Chapter 10.

Boldrin P, Figueiredo M, Yang Y, Luo H, Giri S, Hart JJ, Faquim V, Guilherme LRG, Thannhauser T, **Li L** (2016) Selenium promotes sulfur accumulation and plant growth in wheat (*Triticum aestivum*). *Physiologia Plantarum* DOI: 10.1111/ppl.12465

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Chayut N, Yuan H, Ohali S, Meir A, Yeselson Y, Portnoy V, Fei Z, Lewinsohn E, Katzir N, Schaffer AA, Gepstein S, Burger J, **Li L**, Tadmor Y (2015) A bulk segregant transcriptome analysis reveals metabolic and cellular processes associated with melon *Orange* allelic variation and fruit β-carotene accumulation. *BMC Plant Biology* 15:274

Yuan H, Zhang J, Coimbatore D, **Li L** (2015) Carotenoid metabolism and regulation in horticultural crops. *Horticulture Research* 2:15036

Yuan H, Owsiany K, Sheeja T, Zhou X, Rodriguez C, Li Y, Welsch R, Chayut N, Yang Y, Thannhauser TW, Partjasaratju MV, Xu Q, Deng X, Fei Z, Schaffer A, Katzir N, Burger J, Tadmor Y, **Li L.** (2015) A single amino acid substitution of the orange protein causes carotenoid accumulation in Arabidopsis. *Plant Physiology* 169:421-431

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Tzuri G*, Zhou X*, Chayut N*, Yuan H, Portnoy V, Meir A, Saar U, Baumkoler F, Yuan H, Mazourek M, Lewinsohn E, Fei Z, Schaffer AA, **Li L**, Burger J, Katzir N. Tadmor Y. (2015) A "golden" SNP in CmOr governs fruit flesh color in melon (*Cucumis melo*). *The Plant Journal* 82:267-279

Zhang J, Yuan H, Fei Z, Pogson BJ, Zhang L, **Li L**. (2015) Characterization and transcriptome analysis of orange head Chinese cabbage. *Planta* 241:1381-1394

Nisar N, **Li L**, Lu S, Khin NC, Pogson BJ (2015) Carotenoid metabolism in plants. *Molecular Plant* 8, 68-82

Li L (2015) Development of carotenoid-enriched vegetables with increased nutritional quality and visual appearance. *Proceedings of Mid-Atlantic Fruits & Vegetable Convention* 2015:23-24

Li. L, Avila FW, Souza GA, Boldrin PF, de Figuiredo MA, Faquin V, Andrade MJB, Guilherme LRG, Romos SJ (2015) Improving selenium nutritional value of major crops. *Global Advances in Selenium Research from Theory to Application*. CRC Press, p185-186

Zhang MK*, Zhang MP*, Mazourek M, Tadmor Y, **Li L** (2014) Regulatory control of carotenoid accumulation in winter squash during storage. *Planta* 240:1063-1074

Souza GA, Hart JJ, Carvalho JG, Rutzke M, Albrecht JC, Guilherme LRG, Kochian LV, **Li L** (2014) Genotypic variation of zinc and selenium content in grains of Brazilian wheat lines. *Plant Science* 224: 27-35

Avila FW, Yang Y, Faquin V, Ramos SJ, Guilherme LRG, Thannhauser TW, **Li L** (2014) Impact of selenium supply on Se-methylselenocysteine and glucosinolate accumulation in selenium-biofortified Brassica sprouts. *Food Chemistry* 165:578-586

Li L, Tadmor Y, Xu Q (2014) Approaches for vegetable and fruit quality trait improvement. In *Plant Biotechnology – Experience and Future Prospects* (Edited by A. Richoch, S Chopra, S Fleischer). Springer, Chapter 18, pp227-243

Li L, Yuan H (2013) Chromoplast biogenesis and carotenoid accumulation. *Archives of Biochemistry and Biophysics* 539: 102-109

Zhang J, Li H, Zhang M, Hui M, Qi W, **Li L**, Zhang L (2013) Fine mapping and identification of candidate *Bo-or* gene controlling orange head of Chinese cabbage (*Brassica rapa* L. ssp. *Pekinensis*). *Molecular Breeding* 32: 799-805

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Lv-Hui Sun, LH, Li JG, Zhao H, Shi Jing, Huang JQ, Wang KN, Xia XJ, **Li L**, and Lei XG (2013) Porcine serum can be biofortified with selenium to inhibit proliferation of three types of human cancer cells. *The Journal of Nutrition* 143: 1115-1122

Wang YQ, Yang Y, Fei Z, Yuan H, Fish T, Thannhauser TW, Mazourek M, Kochian LV, Wang X, **Li L** (2013) Proteomic analysis of chromoplasts from six crop species reveals insights into chromoplast function and development. *Journal of Experimental Botany* 64:949-961

Chiu LW, **Li L** (2012) Characterization of the regulatory network of BoMYB2 in controlling anthocyanin biosynthesis in purple cauliflower. *Planta* 236: 1153-1164

Chen XY, Li, LG, Huang JR, Ruan YL, Wang XM, **Li L** (2012) Translate plant metabolism into modern agriculture: A starting point. *Molecular Plant* 5: 291-293

Li L, Yang Y, Xu Q, Owsiang K, Welsch R, Chitchumroonchokchai C, Lu S, Van Eck J, Deng X, Failla M, Thannhauser TW (2012) The *Or* gene enhances carotenoid accumulation and stability during post-harvest storage of potato tubers. *Molecular Plant* 5: 339-352

Brown A, Paterson AH, **Li L** (2012) Genomics and breeding in food crops. In *OMICS Technologies: Tools for Food Sciences* (Edited by N. Benkenblla). Taylor & Francis Group, CRC Press, pp141-162

Zhou X, Fei Z, Thannhauser TW, **Li L** (2011) Transcriptome profiling of ectopic chloroplast development in green curd cauliflower (*Brassica oleracea* L. var. *botrytis*). *BMC Plant Biology* 11:169

Yang Y, Xu Q, Owsiany K, Zhang S, Thannhauser TW, **Li L** (2011) Evaluation of different multidimensional LC-MS/MS pipelines for iTRAQ-based proteomic analysis of potato tubers in response to cold storage. *Journal of Proteome Research* 10: 4647-4660

Zhou X, McQuinn R, Fei Z, Wolters AM, Van Eck J, Brown C, Giovannoni JJ, **Li L** (2011) Regulatory control of high levels of carotenoid accumulation in potato tubers. *Plant, Cell & Environment* 34:1020-1030

Ramos SJ, Yuan Y, Faquin V, Guilherme LRG, **Li L** (2011) Evaluation of genotypic variation of broccoli (*Brassica oleracea* var. *italic*) in response to selenium treatment. *Journal of Agriculture and Food Chemistry* 59:3657-3665

Ramos SJ, Rutzke MA, Hayes RJ, Faquin V, Guilherme LRG, **Li L** (2011) Selenium accumulation in lettuce germplasm. *Planta* 233:649-660

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Chiu LW, Zhou X, Burke S, Wu X, Prior RL, and **Li L** (2010) The purple cauliflower arises from activation of a MYB transcription factor. *Plant Physiology* 154: 1470-1480.

Zhou X, Cooke P, **Li L** (2010) Eukaryotic release factor 1-2 affects *Arabidopsis* responses to glucose and phytohormones during germination and early seedling development. *Journal of Experimental Botany* 61:357-367.

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Lu S, Van Eck J, Zhou X, Lopex AB, O'Halloran DM, Cosman KM, Conlin B, Paolillo DJ, Garvin DF, Vrebalov J, Kochian L, V, Kupper H, Earle ED, Cao J, and **Li L** (2006) The cauliflower *Or* gene encodes a DnaJ cysteine-rich domain-containing protein that mediates high-levels of β-carotene accumulation. *The Plant Cell* 18: 3594-3605. (Research Highlights in *Nature Biotechnology* (2007) 25:195 Golden Cauliflower)

Li L, Lu S, Cosman KM, Earle ED, Garvin DF, and O'Neill J (2006) β-carotene accumulation induced by the cauliflower *Or* gene is not due to an increased capacity of biosynthesis. *Phytochemistry* 67: 1177-1184.

Lyi SM, Heller LI, Rutzke M, Welch RM, Kochian LV, **Li L** (2005) Molecular and biochemical characterization of the selenocysteine *Se*-methyltransferase gene and *Se*-methylselenocysteine synthesis in broccoli. *Plant Physiology* 138:409-420 (Cited by the Journal as "Paper of the Issue")

Magalhaes JV, Garvin DF, Wang Y, Sorrells ME, Klein PE, Schaffert RE, **Li L**, Kochian LV (2004) Comparative mapping of a major aluminum tolerance gene in sorghum and other species in the Poaceae. *Genetics* 167:1905-1914

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Xu YL, **Li L**, Gage DA, Zeevaart JA (1999) Feedback regulation of GA5 expression and metabolic engineering of gibberellin levels in *Arabidopsis*. *The Plant Cell* 11:927-935

Wu K, **Li L**, Gage DA, Zeevaart JAD (1996) Molecular cloning and photoperiod-regulated expression of gibberellin 20-oxidase from the long-day plant spinach. *Plant Physiology* 110:547-554

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Xu YL, **Li L**, Wu K, Peeters AJM, Gage DA, Zeevaart JAD (1995) The *GA5* locus of *Arabidopsis thaliana* encodes a multifunctional gibberellin 20-oxidase: Molecular cloning and functional expression. *Proceedings of the National Academy of Sciences of the United States of America* 92:6640-6644

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Preiss J, Ball K, Hutney J, Smith-White B, **Li L**, Okita TW (1991) Regulatory mechanisms involved in the biosynthesis of starch. *Pure & Applied Chemistry* 63:535-544

Li L, Ross JD (1990) Starch synthesis during dormancy breakage in oilseed of *Corylus-avellana*. L. *Annals of Botany* 66:507-512

Li L, Ross JD (1990) Lipid mobilization during dormancy breakage in oilseed of *Corylus-avellana* L. *Annals of Botany* 66:501-506

Li L, Ross JD (1988) Fructose 1 6-bisphosphatase in seeds of *Corylus-avellana* L. *Phytochemistry* 27:1977-1980