

SUNGHUN PARK (80% Research, 20% Teaching)

Professor and Director of Graduate Programs

Department of Horticulture and Natural Resources (HNR)

3731 Throckmorton Plant Science Center, Kansas State University, Manhattan, KS 66506

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EDUCATION

Ph.D. Plant Physiology - Texas A&M University, 1995

Advisor: Dr. Roberta H. Smith

M.S. Agronomy - Seoul National University, 1989

Advisor: Dr. Young-Am Chae

B.S. Agronomy - Seoul National University, 1987

PROFESSIONAL EXPERIENCES

2018-Present Professor, Dept. of Horticulture and Natural Resources, Kansas State Univ.

2012-2018 Associate Professor, Dept. of Horticulture and Natural Resources, Kansas State Univ.

2007-2012 Assistant Professor, Dept. of Horticulture and Natural Resources, Kansas State Univ.

2006-2007 Research Associate Professor, Dept. of Hort. Sci., Texas A&M Univ.

2001-2006 Assistant Research Scientist, Dept. of Hort. Sci., Texas A&M Univ.

Supervisor: Dr. Leonard M. Pike

1999-2001 Research Associate, Dept. of Soil & Crop Sci., Texas A&M Univ.

Mentor: Dr. Roberta H. Smith

1995-1999 Post-Doctoral Research Associate, Dept. of Soil & Crop Sci., Texas A&M Univ.

Mentor: Dr. Roberta H. Smith

1991-1995 Graduate Research Assistant, Dept. of Soil & Crop Sci., Texas A&M Univ.

1987-1989 Graduate Research Assistant, Dept. of Agronomy, Seoul National Univ.

TEACHING AND RESEARCH INTERESTS

Teaching

- Plant cell, tissue and organ culture (HORT 710)
- Advances in plant cell culture (HORT 910)
- Undergraduate research in horticulture (HORT 640/495)
- Plant Propagation (HORT 350)

Research

Abiotic Stress Physiology and Functional Genomics

- Understanding plant growth and adaptation mechanisms to heat/cold/drought/salt stress
- Understanding physiological disorder mechanisms of tomato blossom-end rot

Nutritional quality improvement of horticultural crops

- Enhancing calcium and flavonoids in crops

AWARDS & HONORS

- Outstanding Research Award - Gamma Sigma Delta, Kansas State University, 2018
- Honorary Scientist of the Rural Development Administration, Korea, 2004
- Soil & Crop Sciences Award - Research Collaboration, Texas A&M University, 1999

PUBLICATIONS

REFERRED JOURNAL ARTICLES

(*Denotes Graduate students/postdocs/technicians directly supervised by **S.H. Park**)

63. M. Zhao, Z. Peng, Y. Qin, T.M. Tamang*, L. Zhang, B. Tian, Y. Chen, Y. Liu, J. Zhang, G. Lin, H. Zheng, C. He, K. Lv, A. Klaus, C. Marcon, F. Hochholdinger, H.N. Trick, Y. Liu, M.J. Cho, **S.H. Park**, H. Wei, J. Zheng, F.F. White, and S Liu (2023) Bacterium-enabled transient gene activation by artificial transcription factor for resolving gene regulation in maize. *The Plant Cell*. In Press
62. E. Oliveira-Garcia, T.M. Tamang*, J. Park*, M. Dalby, M. Martin-Urdiroz, C.R. Herrero, **S.H. Park**, N.J. Talbot, and B. Valent (2023) Clathrin-mediated Endocytosis Facilitates Internalization of *Magnaporthe oryzae* Effectors into Rice Cells. *The Plant Cell*. In Press
61. B. Han, Y. Tai, J. Shi, X. Wu, T. Kakeshpour*, J. Weng, C. Xianguo, **S.H. Park**, and Q. Wu (2022) Redefining the N-terminal regulatory region of the Ca²⁺/H⁺ antiporter CAX1 in tomato. *Frontiers in Plant Science*. 13: 938839
60. S.A. Sprague*, T.M. Tamang*, T. Steiner*, Q. Wu*, Y. Hu*, T. Kakeshpour*, J. Park*, J. Yang, Z. Peng, B. Bergkamp, I. Somayanda, M. Peterson, E. Oliveira-Garcia, Y. Hao, Paul St. Amand, G. Bai, P.A. Nakata, I. Rieu, D.P. Jackson, N. Cheng, B. Valent, K.D. Hirschi, K.S.V. Jagadish, S. Liu, F.F. White, and **S.H. Park** (2022) Redox-engineering enhances maize thermotolerance and grain yield in the field. *Plant Biotechnology Journal*. 20: 1819-1832
“Cover article”
59. T. Kakeshpour*, T.M. Tamang*, G. Motolai*, Z. Fleming*, J. Park*, Q. Wu*, and **S.H. Park** (2021) CGFS-type glutaredoxin mutations reduce tolerance to multiple abiotic stresses in tomato. *Physiologia Plantarum*. 173: 1263-1279
58. G. Lin, C. He, J. Zheng, D.H. Koo, H. Le, H. Zheng, H. Le, H. Zheng, T.M. Tamang*, J. Lin, Y. Liu, M. Zhao, Y. Hao, F. McFarland, B. Wang, Y. Qin, H. Tang, D.R. McCarty, H. Wei, M.J. Cho, **S.H. Park**, H. Kaepler, S. Kaepler, Y. Liu, N.M. Springer, P.S. Schnable, G. Wang, F.F. White, and S Liu (2021) Chromosome-level genome assembly of a regenerable maize inbred line A188. *Genome Biology*. 22: 175
57. T.M. Tamang*, S.A. Sprague*, T. Kakeshpour*, S. Liu, F.F. White, and **S.H. Park** (2021) Ectopic expression of a heterologous glutaredoxin enhances drought tolerance and grain yield in field grown maize. *International Journal of Molecular Sciences*. 22: 5331
56. N. Cheng, H. Yu, X. Rao, **S.H. Park**, E.L. Connolly, K.D. Hirschi, and P.A. Nakata (2020) Alteration of iron responsive gene expression in Arabidopsis glutaredoxin S17 deletion plants with or without iron stress. *Plant Signaling & Behavior*. 15: 1758455
55. C. He, Y. Du, J. Fu, E. Zeng, **S.H. Park**, F.F. White, J. Zheng, and S. Liu (2020) Early drought-responsive genes are variable and relevant to drought tolerance. *G3: Genes|Genomes|Genetics*. 10: 1657-70
54. T. Kakeshpour*, T.M. Tamang*, W.D. Park, M. Manohar, J. Yang, K.D. Hirschi and **S.H. Park** (2020) Expression of mouse small interfering RNAs in lettuce using artificial microRNA technology. *BioTechniques*. 68: 214-218
53. Z. Peng, Y. Hu*, J. Zhang, J.C. Huguet-Tapia, A.K. Block, **S.H. Park**, S. Sapkota, Z. Liu, S. Liu, and F.F. White (2019) *Xanthomonas translucens* commandeers the host rate-limiting step in ABA biosynthesis for disease susceptibility. *Proc. Natl. Acad. Sci. USA*. 116: 20938-20946
52. B-C. Kang, Q. Wu*, S.A. Sprague*, **S.H. Park**, F.F. White, S-J. Bae, K. Kim, and J-S. Han (2019) Ectopic overexpression of an *Arabidopsis* monothiol glutaredoxin *AtGRXS17* affects floral development and enhances tolerance to heat stress in chrysanthemum (*Chrysanthemum morifolium* Ramat.). *Environmental and Experimental Botany*. 167: 103864

51. Y. Hu*, Q. Wu*, Z. Peng, S.A. Sprague*, W. Wang, J. Park*, E. Akhunov, K.S.V. Jagadish, P. Nakata, N. Cheng, K.D. Hirschi, F.F. White, and **S.H. Park** (2017) Silencing of *OsGRXS17* in rice improves drought stress tolerance by modulating ROS accumulation and stomatal closure. *Scientific Reports*. 7: 15950
- “Top 100 Scientific Reports Plant Science papers in 2017”**
50. Q. Wu*, Y. Hu*, S.A. Sprague*, T. Kakeshpour*, J. Park*, P. Nakata, N. Cheng, K.D. Hirschi, F.F. White, and **S.H. Park** (2017) Expression of a monothiol glutaredoxin, *AtGRXS17*, in tomato (*Solanum lycopersicum*) enhances drought tolerance. *Biochemical and Biophysical Research Communications*. 491: 1034-1039
49. H. Yu, J. Yang, Y. Shi, J. Donelson, S.M. Thompson, S.A. Sprague*, T. Roshan, D. Wang, J. Liu, **S.H. Park**, P.A. Nakata, E.L. Connolly, K.D. Hirschi, M.A. Grusak, and N. Cheng (2017) Arabidopsis Glutaredoxin S17 Contributes to Vegetative Growth, Mineral Accumulation, and Redox Balance during Iron Deficiency. *Frontiers in Plant Science*. 8: 1024
48. Q. Wu*, J. Yang, N. Cheng, K.D. Hirschi, F.F. White, and **S.H. Park** (2017) Glutaredoxins in plant development, abiotic stress response, and iron homeostasis: From model organisms to crops. *Environmental and Experimental Botany*. 139: 91-98
47. Q. Wu*, **S.H. Park**, M.B. Kirkham, and K.A. Williams (2017) Transcriptome analysis reveals potential mechanisms for inhibition of intumescence development by UV radiation in tomato. *Environmental and Experimental Botany*. 134: 130-140
46. F. Müller, J. Xu, L. Kristensen, M. Wolters-Arts, P.F. M. de Groot, S.Y. Jansma, C. Mariani, **S.H. Park**, and I. Rieu (2016) High-Temperature-Induced Defects in Tomato (*Solanum lycopersicum*) Anther and Pollen Development Are Associated with Reduced Expression of B-Class Floral Patterning Genes. *PLOS ONE*. 11: e0167614
45. P. Li, G. Zhang, N. Gonzales, Y. Guo, H. Hu, **S.H. Park**, and J. Zhao (2016) Ca²⁺-and diurnal rhythm-regulated Na⁺/Ca²⁺ exchanger AtNCL affects flowering time and auxin signaling in Arabidopsis. *Plant Cell & Environment*. 39: 377-392
44. Y. Hu*, Q. Wu*, S.A. Sprague*, J. Park*, M. Oh, C.B. Rajashekar, H. Koiwa, P. Nakata, N. Cheng, K.D. Hirschi, F.F. White, and **S.H. Park** (2015) Tomato expressing *Arabidopsis* glutaredoxin gene *AtGRXS17* confers tolerance to chilling stress via modulating cold responsive components. *Horticulture Research*. 2: 15051
- “Featured Article”**
43. N. Driedonks, J. Xu, J.L. Peters, **S.H. Park**, and I. Rieu (2015) Multi-level interactions between heat shock factors, heat shock proteins and the redox system regulate acclimation to heat. *Frontiers in Plant Science*. 6: 999
42. J. Zhao, P. Li, C.M. Motes, **S.H. Park**, and K.D. Hirschi (2015) CHX14 is a plasma membrane K⁺-efflux transporter that regulates K⁺ redistribution in Arabidopsis thaliana. *Plant Cell & Environment*. 38: 2223-2238
41. J-S. Han, K. Park, S. Jeon, **S.H. Park**, A.H. Naing, and C. Kim (2015) Assessments of salt tolerance in a bottle gourd line expressing the *Arabidopsis* H⁺-pyrophosphatase *AVPI* gene and in a watermelon plant grafted onto a transgenic bottle gourd rootstock. *Plant Breeding*. 134: 233-238
40. M. Park, J-S. Han*, Y. Ahn, J. Kim, H. Lee, Y. Jang, R. Gaxiola, K.D. Hirschi, and **S.H. Park**. (2014) Ectopic expression of Arabidopsis H⁺-pyrophosphatase *AVPI* enhances drought resistance in bottle gourd (*Lagenaria siceraria* Standl.). *Plant Cell, Tissue and Organ Culture (PCTOC): Journal of Plant Biotechnology*. 118: 383-389
39. W. Lim*, R. Miller, J. Park*, and **S.H. Park**. (2014) Consumer sensory analysis of high flavonoid transgenic tomatoes. *Journal of Food Science*. 79: S1212-S1217
- “Cover article”**

38. M. Montero-Astúa, D. Rotenberg, A. Leach, B. Schneeweis, **S.H. Park**, J. Park*, T.L. German, and A.E. Whitfield. (2014) Disruption of vector transmission by a plant-expressed viral glycoprotein. *Molecular Plant-Microbe Interactions*. 27: 296-304
37. Q. Wu*, T. Shigaki, J-S. Han, C. Kim, K.D. Hirschi, and **S.H. Park**. (2012) Ectopic expression of a maize calreticulin mitigates calcium deficiency-like disorders in *sCAX1*-expressing tobacco and tomato. *Plant Molecular Biology*. 80: 609-619
36. Q. Wu*, J. Lin, J-Z. Liu, X. Wang, W. Lim*, M. Oh, J. Park*, C.B. Rajashekar, S.A. Whitham, N. Cheng, K.D. Hirschi, and **S.H. Park**. (2012) Ectopic expression of Arabidopsis glutaredoxin *AtGRXS17* enhances thermotolerance in tomato. *Plant Biotechnology Journal*. 10: 945-955
35. S.T. de Freitas, A.K. Handa, Q. Wu*, **S.H. Park**, and E.J. Mitcham. (2012) Role of pectin methylesterases in cellular calcium distribution and blossom-end rot development in tomato fruit. *The Plant Journal*. 71: 824-835
34. N. Cheng, J-Z. Liu, X. Liu, J. Q. Wu*, S.M. Thompson, J. Lin, J. Chang, S.A. Whitham, **S.H. Park**, J.D. Cohen, and K.D. Hirschi. (2011) *Arabidopsis* monothiol glutaredoxin, AtGRXS17, is critical for temperature-dependent postembryonic growth and development via modulating auxin response. *Journal of Biological Chemistry*. 286: 20398-20406
33. W. Lim*, J. Park*, and **S.H. Park** (2011) Re-evaluation of the effects of growth regulators on callus induction and shoot regeneration in *Agrobacterium*-mediated transformation of lettuce. *Acta Physiol Plant*. 33:1631-1637
32. S.T. de Freitas, M Padda, Q. Wu*, **S.H. Park**, and E.J. Mitcham. (2011) Dynamic alternations in cellular and molecular components during blossom-end rot development in tomatoes expressing *sCAX1*, a constitutively active $\text{Ca}^{2+}/\text{H}^{+}$ antiporter from Arabidopsis. *Plant Physiology*. 156: 844-855
31. Y. Feng, C-M. Cao, M. Vikram, **S.H. Park**, J. Hong, L. Cisneros-Zevallos, and H. Koiwa. (2011) A three-component gene expression system and its application for inducible flavonoid overproduction in transgenic Arabidopsis thaliana. *PLoS ONE*. 6: e17603
30. M. Manohar, T. Shigaki, H. Mei, **S.H. Park**, J. Marshall, J. Aguilar, and K D. Hirschi (2011) Characterization of Arabidopsis $\text{Ca}^{2+}/\text{H}^{+}$ Exchanger CAX3. *Biochemistry*. 50: 6189-61952
29. Q. Wu*, T. Shigaki, K. Williams, J. Han*, C. Kim, K.D. Hirschi and **S.H. Park** (2011) Expression of an Arabidopsis $\text{Ca}^{2+}/\text{H}^{+}$ antiporter CAX1 variant in petunia enhances cadmium tolerance and accumulation. *J Plant Physiol*. 168: 167-173
28. J-S. Han, **S.H. Park**, T. Shigaki, K.D. Hirschi, and C.K. Kim. (2009) Improved watermelon quality using bottle gourd rootstock expressing a $\text{Ca}^{2+}/\text{H}^{+}$ antiporter. *Molecular Breeding*. 24: 201-211
27. H. Mei, N-H. Cheng, J. Zhao, **S.H. Park**, R.A. Escareno, J.K. Pittman, and K.D. Hirschi. (2009) Root development under metal stress in Arabidopsis thaliana requires the H^{+} /cation antiporter CAX4. *New Phytologist*. 183: 95-105
26. **S.H. Park**, M.P. Elless, J. Park*, A. Jenkins, W. Lim*, E.IV. Chambers and K.D. Hirschi. (2009) Sensory analysis of calcium biofortified lettuce. *Plant Biotechnology Journal*. 7: 106-117
“Cover article”
25. J. Morris, H. Tain, **S.H. Park**, C. Sreevidya, J. Ward, and K.D. Hirschi. (2008) AtCCX3 is an Arabidopsis endomembrane H^{+} -dependent K^{+} transporter. *Plant Physiology*. 148: 1474-1486
24. R.P. Adams, S. Nguyen, D.A. Johnston, **S.H. Park**, T.L. Provin and M. Habte. (2008) Comparison of vetiver root essential oils from cleansed (bacteria- and fungus-free) vs. non-cleansed (normal) vetiver plants. *Biochemical Systematics and Ecology*. 36: 177-182
23. H. Mei, J. Zhao, K. Pittman, J. Lachmansingh, **S.H. Park**, and K.D. Hirschi. (2007) *In Planta* regulation of the Arabidopsis $\text{Ca}^{2+}/\text{H}^{+}$ antiporter CAX1. *Journal of Experimental Botany*. 58: 3419-3427
22. V. Koren'kov, **S.H. Park**, N-H. Cheng, C. Sreevidya, J. Lachmansingh, J. Morris, K. Hirschi, and G.J. Wagner. (2007) Enhanced Cd^{2+} selective root-tonoplast-transport in tobaccos expressing Arabidopsis cation exchangers. *Planta*. 225: 403-411

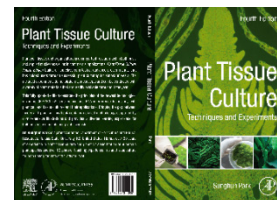
21. C. K. Kim, J-S. Han, H.S. Lee, J. Y. Oh, T. Shigaki, **S.H. Park**, and K. D. Hirschi. (2006) Expression of an Arabidopsis *CAX2* variant in potato tubers increases calcium levels with no accumulation of manganese. *Plant Cell Reports*. 25: 1226-1232
20. **S.H. Park**, J Li, J.K. Pittman, G. Berkowitz, S. Undurraga, H. Yang, J.L. Morris, K.D. Hirschi, and R.A. Gaxiola. (2005) Up-regulation of a vacuolar H⁺-PPase as a strategy to engineer drought resistant crop plants. *Proc. Natl. Acad. Sci. USA*. 102: 18830-18835
19. **S.H. Park**, N.H. Cheng, J.K. Pittman, K.S. Yoo, J. Park, R.H. Smith, and K.D. Hirschi. (2005) Increased calcium levels and prolonged shelf life in tomatoes expressing Arabidopsis H⁺/Ca²⁺ transporters. *Plant Physiol*. 139: 1194-1206
18. **S.H. Park**, T-S. Kang, C-K. Kim, J-S. Han, S. Kim, R.H. Smith, L.M. Pike, and K.D. Hirschi. (2005) Genetic manipulation for enhancing calcium content in potato tuber. *J. Agric. Food Chem*. 53: 5598-5603
17. J.S. Han, C-K. Kim, **S.H. Park**, K.D. Hirschi, and I.-G. Mok. (2005) *Agrobacterium*-mediated transformation of bottle gourd (*Lagenaria siceraria* Stand.). *Plant Cell Rep*. 23: 692-698
16. **S.H. Park**, C-K. Kim, L.M. Pike, R.H. Smith, and K.D. Hirschi. (2004) Increased calcium in carrots by expression of an Arabidopsis H⁺/Ca²⁺ transporter. *Molecular Breeding*. 14: 275-282
15. S. Kim, M.L. Binzel, K-S. Yoo, **S.H. Park**, and L.M. Pike. (2004) Pink (P), a new locus responsible for pink trait in onions (*Allium cepa*) resulting from natural mutations of anthocyanidin synthase. *Molecular Genetics and Genomics*. 272: 18-27
14. S. Kim, M.L. Binzel, **S.H. Park**, K-S. Yoo, and L.M. Pike. (2004) Inactivation of DFR (Dihydroflavonol 4-reductase) gene transcription results in blockage of anthocyanin production in yellow onions (*Allium cepa*). *Molecular Breeding*. 14: 253-263
13. R.P. Adams, M. Habte, **S.H. Park**, and M.R. Dafforn. (2004) Preliminary comparison of vetiver root essential oils from cleansed (bacteria- and fungus-free) versus non-cleansed (normal) vetiver plants. *Biochem. Syst. Ecol*. 32: 1137-1144
12. C.K. Kim, J.D. Chung, **S.H. Park**, A.M. Burrell, K.K. Kamo, and D.H. Byrne. (2004) *Agrobacterium tumefaciens*-mediated transformation of *Rosa hybrida* using the green fluorescent protein (GFP) gene. *Plant Cell, Tissue and Organ Culture*. 78: 107-111
11. **S.H. Park**, J.L. Morris, J. Park, K.D. Hirschi, and R.H. Smith. (2003) Efficient and genotype independent *Agrobacterium*-mediated tomato transformation. *J Plant Physiol*. 160: 1253-1257
10. **S.H. Park**, J. Park, and R.H. Smith. (2001) Herbicide and insect resistant elite transgenic rice. *J Plant Physiol*. 158: 1221-1226
9. M.G. Salas, **S.H. Park**, M. Srivatanakul, and R.H. Smith. (2001) Temperature influence on stable T-DNA integration in plant cells. *Plant Cell Rep*. 20: 701-705
8. M. Srivatanakul, **S.H. Park**, M.G. Salas, and R.H. Smith. (2001) Transformation parameters enhancing T-DNA expression in kenaf (*Hibiscus cannabinus* L.). *J Plant Physiol*. 158: 255-260
7. **S.H. Park**, B.M. Lee, M.G. Salas, M. Srivatanakul, and R.H. Smith. (2000) Shorter T-DNA or additional virulence genes improve *Agrobacterium*-mediated transformation. *Theor. Appl. Genet*. 101: 1015-1020
6. M. Srivatanakul, **S.H. Park**, M.G. Salas, and R.H. Smith. (2000) Additional virulence genes influence transgene expression: transgene copy number, integration pattern and expression. *J Plant Physiol*. 157: 685-690
5. M. Srivatanakul, **S.H. Park**, J.R. Sanders, M.G. Salas, and R.H. Smith. (2000) Multiple shoot regeneration of Kenaf (*Hibiscus cannabinus* L.) from a shoot apex culture system. *Plant Cell Rep*. 19: 1165-1170
4. C. Zapata, **S.H. Park**, K.M. El-Zik, and R.H. Smith. (1999) Transformation of a Texas cotton cultivar by using *Agrobacterium* and the shoot apex. *Theor. Appl. Genet*. 98: 252-256
3. C. Zapata, M. Srivatanakul, **S.H. Park**, B.M. Lee, M. Salas, and R.H. Smith. (1999) Improvements in shoot apex regeneration of two important fiber crops: cotton (*Gossypium hirsutum* L.), and kenaf

(*Hibiscus cannabinus* L.). *Plant Cell, Tissue and Organ Culture*. 56: 185-191

2. **S.H. Park**, S.C. Rose, C. Zapata, M. Srivatanakul, and R.H. Smith. (1998) Cross-protection and selectable marker genes in plant transformation. *In Vitro Cell. Dev. Biol.-Plant*. 34: 117-121
1. **S.H. Park**, S.R.M. Pinson, and Roberta H. Smith. (1996) T-DNA integration into genomic DNA of rice following *Agrobacterium* inoculation of isolated shoot apices. *Plant Mol. Biol.* 32: 1135-1148

BOOK

1. **S.H. Park** (2021) *Plant Tissue Culture: Techniques and Experiments*, 4th Edition: Ed. S.H. Park, Academic Press



BOOK CHAPTERS

(*Denotes Graduate students/postdocs/technicians directly supervised by **S.H. Park**)

(**Denotes Undergraduate students directly supervised by **S.H. Park**)

6. J. Park*, **S.H. Park** and J.E. Craven**. (2012) Protoplast Isolation and Fusion. *Plant Tissue Culture: Techniques and Experiments*, 3rd Edition: Ed. R.H. Smith, Academic Press. pp147-154
5. J. Park*, **S.H. Park**, Q. Wu* and S. Sprague**. (2012) *Agrobacterium*-Mediated Transformation of Plants. *Plant Tissue Culture: Techniques and Experiments*, 3rd Edition: Ed. R.H. Smith, Academic Press. pp155-166
4. R.H. Smith, J.W. Smith, and **S.H. Park**. (2004) Cotton Transformation: Success and Challenges. *Genetic Transformation in Crops*: Eds. G.H. Liang & D.Z. Skinner, Haworth Press. pp247-257
3. R.H. Smith and **S.H. Park**. (2002) Tissue culture for crop improvement. *Quantitative Genetics, Genomics and Plant Breeding*: Ed M.S. Kang, CABI Publishing. pp189-196
2. R.H. Smith, C. Zapata, **S.H. Park**, M. Srivatanakul, B.M. Lee, and M.G. Salas. (2000) Plant transformation using *Agrobacterium* and the shoot apex. *A Spectrum of Achievement in Agronomy: Women Fellows of the Tri-Societies*. ASA Special Publication 62: 43-46
1. **S.H. Park**, D. Kirubi, C. Zapata, M. Srivatanakul, T.S. Ko, S. Bhaskaran, S. Rose, and R.H. Smith. (1998) Monocot and dicot transformation using *Agrobacterium tumefaciens* and the shoot apex. *Cell Biology: A Laboratory Handbook*, 2nd Edition: Ed. J.E. Celis, Academic Press. pp176-182

OTHER PUBLICATIONS

(TOTAL: 6 Proceedings, 55 Abstracts, 1 Popular Press and 12 Oral Presentations)

Abstracts (2006-present):

(*Denotes Graduate students/postdocs/technicians directly supervised by **S.H. Park**)

(**Denotes Undergraduate students directly supervised by **S.H. Park**)

47. G. Motolai*, T.M. Tamang*, N. Stewart*, J. Avalos-Calleros*, F.F. White, S. Liu, **S.H. Park** (2023) Monothiol glutaredoxin AtGRXS17-expressing maize plants increase yield under combined heat and drought stress. Annual Maize Genetics Conference – Maize GDB, March/2023. Saint Louis, MO
46. T.M. Tamang, G. Lin, Y. Liu, **S.H. Park**, F.F. White, H. Wei, MJ. Cho, Y. Liu, and S Liu (2023) Identification of candidate callus regenerative genes using genetic mapping and transcriptional profiling. Annual Maize Genetics Conference – Maize GDB, March/2023. Saint Louis, MO
45. E. Oliveira-Garcia, J. Park, M. Dalby, M. Martin-Urdiroz, C.R. Herrero, **S.H. Park**, N.J. Talbot, and B. Valent (2022) Cytoplasmic effector translocation during early biotrophic invasion by the rice blast fungus. 31st Fungal Genetics Conference, March/2022. Pacific Grove, CA
44. G. Lin, C. He, J. Zheng, Y. Liu, H. Le, T.M. Tamang*, M. Zhao, Y. Hao, F. McFrand, B. Wang, H. Wei, M-J. Cho, **S.H. Park**, H. Kaeppler, S.M. Kaeppler, Y. Liu, P.S. Schnable, F.F. White, and S. Liu

- (2021) Genome Assembly of A188 and Genetic Mapping of Regeneration. Annual Maize Genetics Conference – Maize GDB, March/2021. Saint Louis, MO
43. T.M. Temang* and **S.H. Park** (2021) Ectopic Expression of a Monothiol Glutaredoxin, AtGRXS17, Improves the Maize Yield Under Combined Heat and Drought Stress. 2021 World Congress SIVB, June/2021.
 42. G. Lin, Y. Liu, T.M. Temang*, J. Zheng, M. Zhao, H. Le, C. He, J. Fu, M-J. Cho, **S.H. Park**, H. Wei, F.F. White, Y. Liu, G. Wang, and S. Liu (2020) Genetic and Genomic Resources for Maize Transformation. Plant & Animal Genome Conference XXVIII, January/2020. San Diego, CA
 41. Z. Peng, Y. Hu*, J. Zhang, J.C. Huguet-Tapia, A.K. Block, **S.H. Park**, S. Sapkota, Z. Liu, S. Liu, and F.F. White (2020) *Xanthomonas translucens* Commandeers the Host Rate-Limiting Step in ABA Biosynthesis for Disease Susceptibility. Plant & Animal Genome Conference XXVIII, January/2020. San Diego, CA
 40. G. Lin, Y. Liu, T.M. Temang*, J. Zheng, H. Le, C. He, J. Fu, M-J. Cho, **S.H. Park**, H. Wei, F.F. White, Y. Liu, G. Wang, and S. Liu (2019) Genetic and Genomic Resources for Maize Transformation. Plant Biology 2019, August/2019. San Jose, CA
 39. T.M. Temang*, S.A. Sprague*, T. Kakeshpour*, T. Steiner*, S. Liu, F.F. White, and **S.H. Park** (2019) Ectopic expression of a heterologous glutaredoxin enhances tolerance to multiple abiotic stressors and grain yield in field grown maize. 2019 World Congress SIVB, June/2019. Tampa, FL
 38. C. He, J. Zheng, Y. Du, **S.H. Park**, F.F. White, G. Wang, and S. Liu (2019) Time-series analysis of maize transcriptomes under drought stress. Annual Maize Genetics Conference – Maize GDB, March/2019. Saint Louis, MO
 37. T.M. Temang*, S.A. Sprague*, T. Kakeshpour*, T. Steiner*, S. Liu, F.F. White, and **S.H. Park** (2019) Ectopic expression of a heterologous glutaredoxin enhances tolerance to multiple abiotic stressors and grain yield in field grown maize. Annual Maize Genetics Conference – Maize GDB, March/2019. Saint Louis, MO
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U.S. Patent No.: 11,066,677 “PLANTS WITH ENHANCED TOLERANCE TO MULTIPLE ABIOTIC STRESSES” Grant Date: July 20, 2021

SCIENTIFIC ORGANIZATION MEMBERSHIP

- Society for In Vitro Biology, 1993-2012
- American Society of Plant Biologists, 1995-present

PROFESSIONAL SERVICE

- Academic Editor of PLOS ONE (2011-2016)
- Panel Member, NSF (2013)
- Plant Genetic Materials Release Committee (2015-present)
- Graduate faculty of Interdepartmental Genetics Program
- Faculty scientist of the Johnson Center for Basic Cancer Research
- Reviewer of peer-reviewed journals:

Plant Physiology, J Plant Growth Regulation, Plant Cell Reports, J Plant Physiology, Trends in Plant Science, Plant Molecular Biology, The Journal of Horticultural Science and Biotechnology, Plant Cell, Tissue and Organ Culture, Crop Science, The Journal of the American Society for Horticultural Science, PLoS ONE, HortScience, Planta, Environmental and Experimental Botany, Plant Science, Scientific Reports, BMC Plant Biology, Horticulture Research, BMC Genomics, Plant Biotechnology Journal, Functional & Integrative Genomics, Antioxidants, Journal of Experimental Botany, Theoretical and Applied Genetics, etc.