

Curriculum Vitae



Jeong-Dong Lee

Associate Professor

School of Applied Biosciences, Kyungpook National University

Daegu 41566, Republic of Korea

Phone: +82-53-950-5709, Fax:+ 82-53-958-6880

E-mail: jdlee@knu.ac.kr

EDUCATION

Ph.D. Kyungpook Nat'l Univ., Daegu, Republic of Korea Feb. 2002 Major in Plant Breeding

Thesis: Development of Small Seed-size Soybean Variety by Interspecific Cross between *Glycine max* and *G. soja*

M.S. Kyungpook Nat'l Univ., Daegu, Republic of Korea Feb. 1998

Thesis: Evaluation of Indigenous Seed-Coat Color as a Genetic Source for Development of High Quality Vegetable Soybeans.

B.S. Kyungpook Nat'l Univ., Daegu, Republic of Korea Feb. 1996 Agronomy

EMPLOYMENT

Associate Professor; Kyungpook National University (10/01/2013 to present)

Assistant Professor; Kyungpook National University (09/01/2009 to 09/30/2013)

Research Scientist; University of Missouri-Columbia (07/01/07 to 08/31/2009)

Post Doctoral Fellow; University of Missouri-Delta Center (02/01/05 - 06/30/07)

Senior Soybean Researcher; Soyventure Co., Daegu, Korea (02/01/04 – 01/17/05)

Research Associate; Institute of Agricultural Science and Technology, Kyungpook National University, Daegu, Korea (3/17/03 – 1/13/04)

PROFESSIONAL SOCIETIES

Currently serve as Managing Editor of the journal "Plant Breeding and Biotechnology"

Member of the Korean Society of Crop Science

Member of the Korean Society of Breeding

Member of the Crop Science Society of America

RESEARCH FIELD

- 1) Development of soybean varieties for application in various industry
- 2) Breeding soybean resistance to abiotic and biotic stresses
- 3) Improving genetic potential of soybean by mapping, combining QTLs or genes, and genome data analysis
- 4) Collection soybean germplasm and evaluation for variety improvement

PUBLICATIONS since 2010

- Patil G, T Do, TD Vuong, B Valliyodan, **JD Lee**, J Chaudhary, JG Shannon, HT Nguyen. 2016. Genomic-assisted haplotype analysis and the development of high-throughput SNP markers for salinity tolerance in soybean. *Scientific Report*. 6:19199
- Park J, JH Kim, P Krishnamurthy, C Tsukamoto, JT Song, G Chung, JG Shannon, and **JD Lee**. 2016. Characterization of a New Allele of the Saponin-Synthesizing Gene Sg-1 in Soybean. *Crop Science*. 56:385-391.
- Asekova S, SI Han, HJ Choi, SJ Park, DH Shin, CH Kwon, JG Shannon, **JD Lee**, 2016. Determination of forage quality by near-infrared reflectance spectroscopy in soybean. *Turkish Journal of Agriculture and Forestry*. 40:45-52.
- Chae JH, BK Ha, G Chung, JE Park, E Park, JM Ko, JG Shannon, JT Song, **JD Lee**. 2015. Identification of Environmentally Stable Wild Soybean Genotypes with High Alpha-Linolenic Acid Concentration. *Crop Science*. 55:1629-1636.
- Kim M, JT Song, KD Bilyeu, **JD Lee**. 2015. A new low linolenic acid allele of GmFAD3A gene in soybean PE1690. *Molecular Breeding*. 35:155.
- Kang SM, R Radhakrishnan, YH You, AL Khan, KE Lee, **JD Lee**, IJ Lee. 2015. *Enterobacter asburiae* KE17 association regulates physiological changes and mitigates the toxic effects of heavy metals in soybean. *Plant Biology*. 17:1013-1022.
- Park GT, J Sundaramoorthy, JB Park, **JD Lee**, KS Choi, JH Kim, HS Seo, SK Park, JT Song. 2015. Diversity of the W1 gene encoding flavonoid 3',5'-hydroxylase in white- and purple-flowered soybeans. *Plant Genetic Resources: Characterization and Utilization*. 13:213-218.
- Park GT, J Sundaramoorthy, **JD Lee**, JH Kim, HS Seo, JT Song. 2015. Elucidation of Molecular Identity of the W3 Locus and Its Implication in Determination of Flower Colors in Soybean. *PloS One*. DOI:10.1371/journal.pone.0142643.
- Kim YH, SJ Hwang, M Waqas, A Khan, JH Lee, **JD Lee**, HT. Nguyen, IJ Lee. 2015. Comparative analysis of endogenous hormones level in two soybean (*Glycine max* L.) lines differing in waterlogging tolerance. *Frontiers in Plant Science*. 6:714.

- Sundaramoorthy J, GT Park, **JD Lee**, JH Kim, HS Seo, JT Song. 2015. Genetic and molecular regulation of flower pigmentation in soybean. *J. Korean Society for Applied Biological Chemistry*. 58:555-562.
- Lee JS, M Yoo, JK Jung, KD Bilyeu, **JD Lee**, S Kang. 2015. Detection of novel QTLs for foxglove aphid resistance in soybean. *Theor. Appl. Genet.* 128:1481-1488.
- Krishnamurthy P, **JD Lee**, BK Ha, JH Chae, JT Song, C Tsukamoto, RJ Singh, G Chung. 2015. Genetic characterization of group A acetylsaponin-deficient mutants from wild soybean (*Glycine soja* Sieb. and Zucc.). *Plant Breeding*. 134:316-321.
- Kim HJ, BK Ha, KS Ha, JH Chae, JH Park, MS Kim, S Asekova, JG Shannon, CK Son, **JD Lee**. 2015. Comparison of a high oleic acid soybean line to cultivated cultivars for seed yield, protein and oil concentrations. *Euphytica*. 201:285-292.
- Valliyodan B, TT Van Toai, JD Alves, PFP Goulart, **JD Lee**, FB Fritschi, MA Rahman, R Islam, JG Shannon, HT Nguyen. 2014. Expression of root-related transcription factors associated with flooding tolerance of soybean (*Glycine max*). *International Journal of Molecular Science*. 15:17622-17643.
- Krishnamurthy P, C Tsukamoto, Y Takahashi, Y Hongo, RJ Singh, **JD Lee**, G Chung. 2014. Comparison of saponin composition and content in wild soybean (*Glycine soja* Sieb. and Zucc.) before and after germination, *Bioscience, Biotechnology, and Biochemistry*. 78:1988-1996.
- Asekova S, JG Shannon, **JD Lee**. 2014. The current status of forage soybean. *Plant Breed. Biotech.* 2:334-341.
- Dhakar KH, KH Jung, JH Chae, JG Shannon, **JD Lee**. 2014. Variation of unsaturated fatty acids in soybean sprout of high oleic acid accessions. *Food Chemistry* 164:70-73.
- La TC, SM Pathan, T Vuong, **JD Lee**, AM Scaboo, JR Smith, AM Gillen, J Gillman, MR Eilersieck, HT Nguyen, JG Shannon. 2014. Effect of high-oleic acid soybean on seed oil, protein concentration, and yield. *Crop Sci.* 54:2054-2062.
- Krishnamurthy P, C Tsukamoto, RJ Singh, **JD Lee**, HS Kim, SH Yang, G. Chung. 2014. The Sg-6 saponins, new components in wild soybean (*Glycine soja* Sieb. and Zucc.): polymorphism, geographical distribution and inheritance. *Euphytica* 198:413-424.
- Krishnamurthy P, JM Lee, C Tsukamoto, Y Takahashi, RJ Singh, **JD Lee**, G Chung. 2014. Evaluation of genetic structure of Korean wild soybean (*Glycine soja*) based on saponin allele polymorphism. *Genet. Resour. Crop Evol.* 61:1121-1130.
- Dhakar KH, MG Choung, YS Hwang, FB Fritschi, JG Shannon, **JD Lee**. 2014. Selection for soybeans with high and environmentally stable lutein concentrations. *Plant Genetic Resources: Characterization and Utilization* 12:S12-S16.
- Ha BK, HJ Kim, V Velusamy, TD Vuong, HT Nguyen, JG Shannon, **JD Lee**. 2014.

- Identification of quantitative trait loci controlling linolenic acid concentration in PI483463(*Glycine soja*). *Theor. Appl. Genet.* 127:1501-1512.
- Pathan SM, **JD Lee**, DA Sleper, FB Fritschi, RE Sharp, TE Carter Jr, RL Nelson, CA King, WT Schapaugh, MR Ellersieck, HT. Nguyen, JG Shannon. 2014. Two soybean plant introductions display slow leaf wilting and reduced yield loss under drought. *J. Agro. Crop. Sci.* 200:231-236.
- Lee EJ, HJ. Choi, DH. Shin, CH Kwon, JG Shannon, **JD Lee**. 2014. Evaluation of forage yield and quality for the accessions derived from inter-specific cross between wild and cultivated soybeans. *Korean J. Breed. Sci.* 46:66-77.
- Lee EJ, HJ Choi, DH. Shin, CH Kwon, JG Shannon, **JD Lee**. 2014. Evaluation of forage yield and quality in wild soybeans (*Glycine soja* Sieb. and Zucc). *Plant Breed. Biotech.* 2:78-86.
- Askeova S. JH Chae, BK Ha, KH Dhakal, G Chung, JG Shannon, **JD Lee**. 2014. Stability of elevated α -linolenic acid derived from wild soybean across environment. *Euphytica* 195:409-418
- Han SI, JH Chae, K Bilyeu, JG. Shannon, **JD Lee**. 2014. Non-destructive determination of high oleic acid content in single soybean seeds by near infrared reflectance spectroscopy. *J Am Oil Chem Soc* 91:229-234
- Lee J, YS Hwang, **JD Lee**, WS Chang, MG. Choung. 2013. Metabolic alterations of lutein, β -carotene and chlorophyll a during germination of two soybean sprout varieties. *Food Chemistry* 141:3177-3182
- Ha BK, TD Vuong, V Velusamy, HT Nguyen, JG Shannon, **JD Lee**. 2013. Genetic mapping of quantitative trait loci conditioning salt tolerance in wild soybean PI 483463. *Euphytica* 193:79-88.
- Pathan SM, T Vuong, K Clark, **JD Lee**, JG Shannon, CA Roberts, MR. Ellersieck, JW Burton, PB Cregan, DL Hyten, HT Nguyen, DA Sleper. 2013. Genetic mapping and confirmation of quantitative trait loci (QTL) for seed protein and oil contents and seed weight in soybean. *Crop Sci.* 53:765-774
- Dhakal KH, **JD Lee**, YS Jeong, HS Kim, JG Shannon, YH Hwang. 2013. Stability of linolenic acid in seed oil of soybean accessions with elevated linolenic acid concentration. *J. Food Agriculture & Environment.* 11(1):80-85
- Panneerselvam K., RJ Singh, C Tsukamoto, JH Park, **JD Lee**, G. Chung. 2013. Kunitz trypsin inhibitor polymorphism in the Korean wild soybean. *Plant Breeding* 131:311-316
- Panneerselvam K, C Tsukamoto, N Honda, A Kikuchi, **JD Lee**, SH Yang, G Chung. 2013. Saponin polymorphism in the Korean wild soybean (*Glycine soja* Sieb. and Zucc.).

Plant Breeding. 132:121-126.

- Lee JD**, KD Bilyeu, VR Pantalone, AM Gillen, YS So, JG Shannon. 2012. Environmental Stability of Oleic Acid Concentration in Seed Oil for Soybean Lines with FAD2-1A and FAD2-1B Mutant Genes. *Crop Sci.* 52:1290-1297.
- Kim MJ, JK Kim, HJ Kim, JH Pak, JH Lee, DH Kim, HK Choi, HW Jung, **JD Lee**, YS Chung, SH Ha. 2012. Genetic modification of the soybean to enhance the b-carotene content through seed-specific expression. *PLOS one.* 7:e484287.
- Krishnamurthy P, C Tsukamoto, SH Yang, **JD Lee**, G Chung. 2012. An improved method to resolve plant saponins and sugars by TLC. *Chromatographia.* 75:1445-1449
- Nguyen VT, TD Vuong, T VanToai, **JD Lee**, X Wu, MAR Mian, AE Dorrance, JG Shannon, HT Nguyen. 2012. Mapping of Quantitative Trait Loci Associated with Resistance to *Phytophthora sojae* and Flooding Tolerance in Soybean. *Crop Sci.* 52:2481-2493.
- VanToai TT, **JD Lee**, PFP Goulart, JG Shannon, JD Alves, HT Nguyen, O Yu, M Rahman, R. Islam. 2012. Soybean (*Glycine max* L. Merr.) seed composition response to soil flooding stress. *J. Food Agri. Chem.* 10:795-804.
- Gutierrez-Gonzalez JJ, TD Vuong, R Zhong, O Yu, **JD Lee**, G Shannon, M Ellersieck, HT Nguyen, DA Sleper. 2011. Major locus and other novel additive and epistatic loci involved in modulation of isoflavone concentration in soybean seeds. *TAG.* 123:1375-1385.
- Gillman JD, A Tetlow, **JD Lee**, JG Shannon, K Bilyeu. 2011. Loss-of-function mutations affecting a specific *Glycine max* R2R3 MYB transcription factor result in brown hilum and brown seed coats. *BMC Plant Biology.* 11:155.
- Pham AT, **JD Lee**, JG Shannon, KD Bilyeu. 2011. A novel FAD2-1 A allele in a soybean plant introduction offers an alternate means to produce soybean seed oil with 85% oleic acid content. *TAG.* 123:793-802.
- Lenis JM, M Ellersieck, DG Blevins, DA Sleper, HT Nguyen, D Dunn, **JD Lee**, JG Shannon. 2011. Differences in Ion Accumulation and Salt Tolerance among *Glycine* Accessions. *J. Agron. Crop Sci.* 197:302-310.
- Lee JD**, TD Vuong, H Moon, JK Yu, RL Nelson, HT Nguyen, JG Shannon. 2011. Genetic diversity and population structure of Korean and Chinese soybean [*Glycine max* (L.) Merr.] accessions. *Crop Sci.* 51:1080-1088.
- Shannon JG., RL Nelson, **JD Lee**, JA Wrather. 2010. Registration of LG04-6863 Soybean Germplasm Line with Diverse Pedigree. *J of Plant Registrations.* 4:70-72.
- Pham AT, **JD Lee**, JG Shannon, KD Bilyeu. 2010. Mutant alleles of FAD2-1A and FAD2-1B combine to produce soybeans with the high oleic acid seed oil trait. *BMC Plant Biology.* 10:195. **(co-senior author)**

- Lee JD**, JG Shannon, TD Vuong, H Moon, HT Nguyen, C Tsukamoto, G.Chung. 2010. Genetic diversity in wild soybean (*Glycine soja* Sieb. and Zucc.) accessions from southern islands of Korean peninsula. *Plant Breeding*. 129:257-263.
- Lenis J, J Gillman, **JD Lee**, JG. Shannon, K Bilyeu. 2010. Soybean seed lipoxygenase genes: molecular characterization and development of molecular marker assays. *TAG*. 120:1139-1149
- Gutierrez-Gonzalez JJ, X Wu, JD Gillman, **JD Lee**, R Zhong, O Yu, G Shannon, M Ellersieck, HT Nguyen, DA Sleper. 2010. Intricate environment-modulated genetic networks control isoflavone accumulation in soybean seeds. *BMC Plant Biology*. 10:105
- Lee JD**, JG Shannon, MG Choung. 2010. Selection for protein content in soybean from single F2 seed by near infrared reflectance spectroscopy. *Euphytica*. 172:117-123.
- Gutierrez-Gonzalez JJ, X Wu, J Zhang, **JD Lee**, M Ellersieck, JG Shannon, O Yu, HT Nguyen, DA Sleper. 2009. Genetic control of soybean seed isoflavone content: importance of statistical model and epistasis in complex traits. *Theor Appl Genet* 119: 1069-1083.