Curriculum Vitae

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EDUCATION

Ph.D. Plant Molecular and Cellular Biology, University of Florida, Gainesville, FL, 1997
M.S. Plant Molecular and Cellular Biology, University of Florida, Gainesville, FL, 1992
B.Ag. Horticultural Sciences, Korea University, Seoul, Korea, 1990

PROFESSIONAL EXPERIENCE

2015-present **Professor** (Plant and Soil Sciences, University of Delaware, Newark, DE)
2012-2014 **Chair/President** (Mid Atlantic Section of American Society of Plant Biologists)
2011-present **Joint Faculty** (Biological Sciences, University of Delaware, DE)
2010-present **Review Editor** (Frontiers in Plant Physiology)
2010-present **Program Faculty** (Graduate Program in Bioinformatics & Computational Biology)
2010-2015 **Editorial Board Committee Member** (Biochemical Journal)
2009-2015 **Associate Professor** (Plant and Soil Sciences, University of Delaware, Newark, DE)
2007-present **Editorial Board Committee Member** (Journal of Plant Biology)
2007-present **Affiliated Faculty** (Chem.-Biol. Interface Graduate Program, University of Delaware)
2004-2010 **Affiliated Faculty** (NSF-IGERT, University of Delaware, DE)
2003-2009 **Assistant Professor** (Plant and Soil Sciences, University of Delaware, Newark, DE)
1998-2003 **Katherine Esau Postdoctoral Fellow** (Plant Biol., University of California, Davis, CA)
1992-1997 **Graduate Research Assistant** (Ph.D, Botany, University of Florida, Gainesville, FL)
1990-1992 **Graduate Research Assistant** (M.S., Hort. Sci, University of Florida, Gainesville, FL)

PUBLICATIONS, last five years

https://scholar.google.com/citations?user=yCG9SjQAAAAJ&hl=en

******Corresponding author; ‡Postdoctoral and Graduate & undergraduate student mentees of **Lee.**

1. Lee, J.-Y.** and M. Frank (2018). Plasmodesmata in Phloem: Different gateways for different cargoes (a review article invited by the Current Opinion in Plant Biology). Revision submitted, Feb 2018.
2. Sager, R. and **Lee, J.-Y.**** (2018). A snapshot of plasmodesmata for cell biologists (a review article invited by the Journal of Cell Science). Revision submitted, Feb 2018.
3. Ross-Elliott, T.J., Jensen, K.H., Haaning, K.S., Wager, B.M., Knoblauch, J., Howell, A., Monteith, A.G. **Lee, J.-Y.,** Sager, R., Paultre, D., Otero-Perez, S., Yan, D., Bourdon, M., Helariutta, Y., Knoblauch, M. **, Oparka, K.J. (2017). Phloem unloading in Arabidopsis roots is convective and regulated by the phloem-pole pericycle, *eLife,* https://doi.org/10.7554/eLife.24125.002 **[Journal Impact factor: 7.9]**
4. Ross KE, Huang H, Ren J, Arighi CN, Li G, Tudor CO, Lv M, **Lee J-Y**, Chen SC, Vijay-Shanker K, Wu CH. (2017). iPTMnet: Integrative Bioinformatics for Studying PTM Networks. *Methods Mol Biol.* **1558**:333-353.
5. Lim, G.-H. Shine, M.B., de Lorenzo, L., Yu, K., Cui, W. ‡, Navarre, D., Hunt, A.G., **Lee, J.-Y.,** Kachroo, A.**, and Kachroo, P.** (2016). Plasmodesmata localizing proteins regulate transport and signaling during systemic immunity. *Cell Host & Microbe.* **19**:541–549. **[Journal Impact factor: 12.3]**
6. Cui, W. , and **Lee, J.-Y.**** (2016). Arabidopsis callose synthases Cals1/8 regulate plasmodesmal permeability during stress. *Nature Plants* **2**:1603 doi:10.1038/nplants. 2016.34. **[Journal Impact factor: 10.3]**

7. Ding R., Arighi, C. N., **Lee, J.-Y.,** Wu,C. H., Vijay-Shanker, K. (2015). pGenN, a Gene Normalization Tool for Plant Genes and Proteins in Scientific Literature. PLoS One 10:e0135305.
8. **Lee, J.-Y. **** (2015). Plasmodesmata: a signaling hub at the cellular boundary. *Curr. Opin. Plant Biol.* **27:**133-140. **[Journal Impact factor: 7.9]**
9. Sager, R. and **Lee, J.-Y.**** (2014). Plasmodesmata in integrative cell signaling. *J. Exp. Bot.* **65:**6337-6358. **[Journal Impact factor: 5.8]**
10. Cui, W., Wang, X. and **Lee, J.-Y.**** (2014). Drop-ANd-See: a simple, real-time, and non-invasive technique for assaying plasmodesmal permeability. *Methods Mol. Biol.* **1217:**149-56.
11. Modla, S., Caplan,J., Czymmek, K., **Lee, J.-Y.**** (2014). PD Localization of fluorescently-tagged protein by correlative light and electron microscopy. *Methods Mol. Biol.* **1217:**121-33.
12. **Lee, J.-Y.** (2014). New and old roles of plasmodesmata in immunity and parallels to tunneling nanotubes. *Plant Sci.* **221:**13-20.
13. Wang, X., Sager, R., Cui, W., R., Zhang,C., Lu, H, and **Lee, J.-Y.**** (2013). Salicylic acid regulates cell-to-cell communication during innate immune responses in Arabidopsis. *Plant Cell,* **25:**2315-2329.
14. Zhou, J., Wang, X., **Lee, J.-Y.** and Lee, J.-Y.****** (2013). Cell-to-cell movement of two interacting AT hook factors in the root vascular tissue patterning. *Plant Cell,* **25:**187-201.
15. Sager, R. and **Lee, J.-Y.**** (2012). To close or not to close: Plasmodesmata in defense. *Plant Signal. & Behavior.* **3:**431-436.
16. **Lee, J.-Y.**,** Wang, X., Cui, W., Sager, R., Modla, S., Czymmek, K., Zybaliov, B., van Wijk, K., Zhang,C., Lu, H, and Lakshmanan, V. (2011). A Plasmodesmata-Localized Protein Mediates Crosstalk between Cell-to-Cell Communication and Innate Immunity in Arabidopsis. *Plant Cell* **23:**3353-3373.
17. **Lee, J.-Y.**** and Lu, H. (2011). Plasmodesmata: the battleground against Intruders. *Trends Plant Sci.* **16:**201-210.

INVITED TALKS AND SEMINARS, last five years

1. Communication, communication, communication. Feb 16, 2017, DBI Symposium, University of Delaware, Newark, DE.
2. Plants under stress: Close or not to close plasmodesmata? Sep 28, 2017, Graduate Seminar, Department of Biochemistry, University of Missouri, Columbia, MO.
3. Plants under stress: Close or not to close plasmodesmata? Sep 27, 2017, Danforth Center, St. Louis, MO.
4. Plasmodesmata and stress signaling. Jul 10-14, 2017, International Conference of Plasmodesmata, Berlin, Germany. (I was an invited speaker).
5. Plants under stress: Close or not to close plasmodesmata? Mar 1, 2017, Chemistry and Biochemistry Interface Graduate Training Program, University of Delaware, Newark, DE.
6. Close or not to close?-Plasmodesmata during biotic and abiotic stress. Nov 10-11, 2016. Korean Genetics Society, Jeju, Korea. (I was an invited speaker—declined due to an emergency).
7. Plasmodesmata and plant stress. Sep 21, 2016, Plant Biology, Walkman's Institute, Rutgers University, New Brunswick, NJ.
8. Plasmodesmata under stress. Jun 6-10, 2016, International Plant Membrane Workshop, Annapolis, MD. (I was an invited speaker for short talk).
9. Plasmodesmata under stress. Seminar, Apr 30, 2015. Department of Biology, McMaster University, Canada.
10. "Stress, and plants will close their doors". Apr 18, 2015. MAS-ASPB Spring Meeting, Swarthmore College, Swarthmore, PA. (I was an invited speaker).
11. Role of plasmodesmata in innate immune signaling. EMBO workshop on intercellular communication in plant development and disease. Aug 24-29, 2014, Le Bischenberg, France. (I was an invited speaker).
12. Plasmodesmata in Agricultural Perspective. Seminar, Aug 13, 2014, Herbal Crop Research Division, Department of Herbal Crop Research, National Institute of Horticultural & Herbal Science, Eumseong, Chungbuk, Korea.
13. Plasmodesmata in integrated cell signaling. Seminar, Aug 12, 2014, Department of Vegetable Crops, National Institute of Horticultural & Herbal Science, Suwon-si, Gyunggi-do, Korea.
14. The role of Plasmodesmata for the Life of Plants. Seminar, Jul 03, 2014, Daegu Gyeongbuk Institute of Science and Technology, Daegu-si, Gyeongbuk, Korea.

15. Plasmodesmata in integrated cell signaling. Seminar, Jul 1, 2014, Namhae Experimental Station, National Institute of Horticultural & Herbal Science, Namhae, Gyungnam, Korea.
16. Plasmodesmata & Phloem: Short & Long Distance Communication in Plants. Seminar, Jun 26, 2014, National Institute of Horticultural & Herbal Science, Tahp-dong, Suwon-si, Gyunggi-do, Korea.
17. Plasmodesmata in Agricultural Perspective. Seminar, Jun 20, 2014, Department of Fruit Trees, Agricultural Research Center for Climate Change, Jeju, Korea.
18. Plasmodesmata in integrated cell signaling. Seminar, Jun 18, 2014, Kyung Hee University, Yongin, Gyunggi-do, Korea.
19. Plasmodesmata in integrated cell signaling. Seminar, Jun 11, 2014, Seoul National University, Gwanak-gu, Seoul, Korea.
20. Molecular & Genetic Framework for PD Control during Biotic & Abiotic Stresses, & Root Branching. Seminar, Jun 02, 2014, Korea University, Anam-dong, Seoul, Korea.
21. Molecular & Genetic Framework for PD Control during Biotic & Abiotic Stresses, & Root Branching. Seminar, May 30, 2014, Myungji University, Yongin, Gyunggi-do, Korea.
22. Life without motility: communication makes it happy and sound. The 9th Annual KWiSE Greater DC Conference, Apr 19, 2014, University of Maryland, College Park, MD (I was a keynote speaker).
23. The Role of Plasmodesmata in Lateral Root Emergence. Seminar, Oct 30, 2013. Department of Plant Science and Landscape Architecture, University of Maryland, College Park, MD.
24. The role of plasmodesmata in innate immunity. Seminar, Oct 21, 2013. Department of Plant Pathology, University of Kentucky, Lexington, KY.
25. To close or not to close?: regulation of plasmodesmata for integrative cell signaling. Seminar, Oct 10, 3013. Department of Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI.
26. Plasmodesmata, gateways for root development to plant defense. Seminar, Jun 21, 2013. DuPont Experimental Station, Wilmington, DE.
27. Role of plasmodesmata in integrative cell signaling. Third International Conference on Plant Vascular Biology, July 26-30, 2013, Rantapuisto Conference Hotel, Helsinki, Finland. (I was an invited speaker).
28. Role of Plasmodesmata in Plant Biology and Beyond. Seminar, Oct 31, 2012. Global Warming Center of Office of Korea Rural Development, Jeju, Korea.
29. The role of plasmodesmata in innate immunity. 10th International Congress on Plant Molecular Biology. Oct 26-31, 2012. Jeju, Korea. (I was invited as a symposium speaker).
30. Role of plasmodesmata in defense signaling. 29th Mid-Atlantic Plant Molecular Biology Society Conference. Aug 16-17, 2012. Laurel, MD. (I was an invited speaker).
31. Role of Plasmodesmata in Innate Immunity and Plant Biology. Seminar, Aug 6, 2012. RIKEN, Yokohama, Japan.
32. Role of Plasmodesmata in Innate Immunity and Plant Biology. Seminar, Jul 26, 2012. Seoul National University, Seoul, Korea.
33. Role of Plasmodesmata in Innate Immunity and Plant Biology. Seminar, Jul 25, 2012. Kyung Hee University, Suwon, Korea.
34. Role of Plasmodesmata in Innate Immunity and Plant Biology. Seminar, Jul 23, 2012. Sungkyunkwan University, Suwon, Korea.
35. Role of Plasmodesmata in Innate Immunity. Seminar, Jan 19, 2012. Fraunhofer–CMB, Newark, DE.
36. iPTMnet, a new integrative cyberstructure for mining plant PTM networks. Plant Phosphorylation Workshop, Sep 30-Oct 2, 2011. Granlibakken resort, Lake Tahoe, CA. (I was an invited speaker).
37. Role of cell-to-cell communication in plant innate immunity. Plant Biology Seminar, Sep 15, 2011. University of Pennsylvania, Philadelphia, PA.
38. Role of plasmodesmata in intra- and inter-kingdom signaling. DOE Radiochemistry and Radionuclide Imaging Instrumentation Program Investigators' Workshop. Apr, 4-6, 2011. Bethesda, MD. (I was an invited speaker).

PATENT

- Manipulation of plasmodesmal connectivity by inducible/cell or tissue type-specific expression to improve plant yield and fitness. *Pending.*