

CURRICULUM VITAE

June M. Kwak

1. PERSONAL INFORMATION

a. Appointment and Professional address

Professor

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b. Education

Ph. D.	1997	Department of Life Sciences, POSTECH, Korea
M. S.	1993	Department of Life Sciences, POSTECH, Korea
B. S.	1987	Department of Biochemistry, Yonsei University, Korea

c. Professional Experience

01/2014 – present:	Professor/Associate Professor with Tenure Department of New Biology, DGIST, Republic of Korea
01/2014 – 11/2017:	Group Leader Center for Plant Aging Research, Institute for Basic Science Republic of Korea
07/2016 – 02/2018:	Adjunct Professor Department of Plant Science and Landscape Architecture University of Maryland, College Park, MD, USA
09/2016 – present:	Adjunct Professor College of Life Science, Shanxi Normal University, China
01/2014 – 02/2016:	Adjunct Professor Department of Cell Biology and Molecular Genetics University of Maryland, College Park, MD, USA
07/2010 – present:	Affiliate Associate Professor Department of Plant Science and Landscape Architecture University of Maryland, College Park, MD, USA
06/2010 – 05/2013:	Adjunct Associate Professor Department of Plant Molecular Systems Biotechnology Kyung Hee University, Republic of Korea
08/2003 – 01/2014:	Associate Professor with Tenure/Assistant Professor Department of Cell Biology and Molecular Genetics University of Maryland, College Park, MD, USA
07/2002 – 08/2003:	Senior Research Associate Division of Biological Sciences, University of California, San Diego, USA
05/1997 – 06/2002:	Postdoctoral Fellow of Human Frontier Science Program & Korea Research Foundation Division of Biological Sciences, University of California, San Diego, USA
12/1988 – 02/1991:	Research Fellow Center for Pharmaceutical Research, Dae Woong Pharmaceutical Inc., Korea

d. Honors and Awards

100 Excellent achievements in National Science and Technology
Minister of Science, Technology, and Communication

11/2019

Scientist of the Month, Minister of Science, Technology, and Communication	06/2019
Person of Year 2018, DGIST President	02/2019
Top 5 discoveries of year 2018 in Life Science, BRIC	12/2018
Shanxi one hundred-Talents Award, Shanxi Province Governor	04/2018
International Scholar, Kyung Hee University	06/2010 – 05/2013
Honorary Scientist, Rural Development Administration, Korea	01/2008 – 12/2010
Most cited paper award, J. Plant Biol.	10/2012
General Research Board, University of Maryland	06/2004
Travel award, 22 nd Symposium in Plant Biology, CA, UC BioSTAR	01/2003
Travel award, 13 th Int'l Congress on Arabidopsis Research, Spain, NSF	06/2002
Travel award, 10 th Int'l Congress on Arabidopsis Research, Australia, NSF	07/1999
Human Frontier Science Program Postdoctoral Fellowship	06/1998 – 05/2000
Korea Research Foundation Postdoctoral Fellowship	06/1997 – 05/1998
Predocotrinal Fellowship, Seoam Scholarship Foundation	09/1995 – 02/1997
Predocotrinal Fellowship, Korea Sanhak Foundation	09/1994 – 08/1995
Predocotrinal Fellowship, Plant Molecular Biology and Biotechnology Center	09/1993 – 08/1994

e. Editorships, Editorial Boards, and Reviewing Activities for Journals

(i) Editorial Board member	Plant Communications	05/2019 – present
Editorial Board member	aBIOTECH	10/2019 – present
Editorial Board member	J. Plant Biology	09/2007 – present
Editorial Board member	Frontiers in Plant Science	04/2011 – 11/2016
Editorial Board member	Current Cellular Biochemistry	12/2011 – 12/2018
(ii) Ad hoc reviewer		
EMBO Journal	FEBS Letters	Proc. Nat'l. Acad. Sci. USA
Plant Cell	Plant Physiology	Planta
Plant Cell & Environment	Plant Cell Physiology	BMC Plant Biology
Science	Plant Journal	J. Exp. Botany
PLoS One	New Phytologists	Molecular Cell

2. RESEARCH, SCHOLARLY & CREATIVE ACTIVITIES

a. Publications

(Researcher ID: G-8332-2011)

(ORCID ID, 0000-0001-6948-5155)

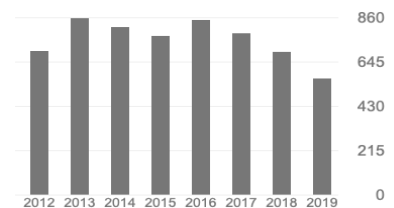
†Denotes corresponding author when not last author.

*Denotes equal contributor.

(11,012 citations; h-index 41—Google Scholar, 10/2019)

(4,491 citations; h-index 34 since 2014)

	All	Since 2014
Citations	11012	4491
h-index	41	34
i10-index	59	49



1. MH Kim, J Jeon, S Lee, JH Lee, L Gao, B-H Lee, JM Park, YJ Kim, JM Kwak (2019) Proteasome subunit RPT2a modulates RNA quality control and promotes post-transcriptional gene silencing in Arabidopsis. *Nature Plants*, *In press*.
2. C Ju, D Kong, Y Lee, G Ge, Y Song, J Liu and JM Kwak (2019) Methionine synthase 1 provides methionine for activating AtGLR3.5 Ca²⁺ channel and regulation of seed germination in Arabidopsis., *J. Exp. Botany*, *In press*.
3. Y Lee, TH Yoon, J Lee, SY Jeon, JH Lee, MK Lee, H Chen, J Yun, SY Oh, X Wen, HK Cho, H Mang, and JM Kwak (2018) A lignin molecular brace controls precision processing of cell wall critical for surface integrity in Arabidopsis. *Cell*, 173: 1468-1480. (**Cover article**)
4. C Dai, Y Lee, IC Lee, HG Nam, and JM Kwak (2018) Calmodulin 1 regulates senescence and ABA response in Arabidopsis. *Frontiers Plant Sci.*, doi 10.3389/fpls.2018.00803
5. Y Lee and JM Kwak (2018) Cellular coordination controlling organ separation an surface

- integrity in plants. **BMB Reports** 51: 317-318.
6. JC Koo, IC Lee, C Dai, Y Lee, HK Cho, K Verma, Y Kim, IH Lee, SH Choi, SJ Park, B-K Phee, HG Nam and JM Kwak (2017) Protein trio, RPK1–CaM4–RbohF, mediates transient superoxide production to trigger age-dependent cell death in *Arabidopsis*. **Cell Reports** 21: 3373-3380.
 7. AAR Webb, K Kuchitsu, JM Kwak, Z-M Pei and H Iida (2017) Sensors make sense of signaling. **Plant Cell Physiol.** 58:1121-1125.
 8. MAR Khokon, MA Salam, F Jammes, W Ye, MA Hossain, E Okuma, Y Nakamura, IC More, JM Kwak and Y. Murata (2017) MPK9 and MPK12 function in SA-induced stomatal closure in *Arabidopsis thaliana*. **Biosci. Biotech. Biochem.** 81: 1394-1400.
 9. D Kong, H-C Hu, E Okuma, Y Lee, HS Lee, S Munemasa, D Cho, L Pedoeim, B Rodriguez, C. Zhu, W Im, Y Murata, Z-M Pei, JM Kwak (2016) L-Met activates *Arabidopsis* GLR Ca²⁺ channels upstream of ROS and regulates stomatal movement. **Cell Reports** 17: 2553-2561.
 10. YJ Kim, R Wang, L Gao, D Li, C Xu, H Mang, J Jeon, X Chen, X Zhong, JM Kwak, B Mo, L Xiao, X Chen (2016) POWERDRESS and HDA9 interact and promote histone H3 deacetylation at specific genomic sites in *Arabidopsis*. **Proc. Nat'l. Acad. Sci. USA** 113: 14858-14863.
 11. Y Lee, YJ Kim, M-H Kim, JM Kwak (2016) MAPK cascades in guard cell signal transduction. **Front. Plant Sci.** 7: 80. Doi: 10.3389/fpls.2016.00080
 12. M Zhu, G Monroe, Y Suhail, F Villiers, J Mullen, D Pater, F Hauser, BW Jeon, JS Bader, JM Kwak, JI Schroeder, JK McKay, SM Assmann (2016). Molecular and systems approaches towards drought-tolerant canola crops. **New Phytol.** 210: 1169 - 1189.
 13. Y Shang, C Dai, MM Lee, JM Kwak, K-H Nam (2015) BRI1-Associated Receptor Kinase 1 regulates guard cell ABA signaling mediated by Open Stomata 1 in *Arabidopsis*. **Mol. Plant.** 9: 447-460.
 14. D Kong, C. Ju, A. Parihar, S Kim, D Cho, JM Kwak (2015) *Arabidopsis* glutamate receptor homolog AtGLR3.5 modulates cytosolic Ca²⁺ level to counteract effect of ABA in germination. **Plant Physiol.** 167: 1630-1642.
 15. M Khokon, S Mohammad, F Jammes, W Ye, H Mohammad, M Uraji, Y Nakamura, I Mori, JM Kwak, Y Murata (2015) Two guard cell MAPKs, MPK9 and MPK12, function in methyl jasmonate-induced stomatal closure in *Arabidopsis thaliana*. **Plant Biol.** 17: 946-952.
 16. JH Hwang, DH Seo, BG Kang, JM Kwak and WT Kim (2015) Suppression of *Arabidopsis* AtPUB30 resulted in increased tolerance to salt stress during germination. **Plant Cell Rep.** 34: 277-289.
 17. F Villiers, O Bastien and JM Kwak (2014) R. S. WebTool, a web server for random sampling-based significance evaluation of pairwise distances. **Nucleic Acids Res.** 42 (W1): W198-W204.
 18. F Jammes, N Leonhardt, A Wasilewska, H Bousserouel, D Tran, A-A Véry, J-P Renou, A Vavasseur, JM Kwak, H Sentenac, F Bouteau and J Leung (2014) Acetylated 1,3-diaminopropane antagonizes abscisic acid-mediated stomatal closing in *Arabidopsis*. **Plant J.** 79: 322-333.
 19. L Zhang, DP Foreman, PA Grant, B Shrestha, SA Moody, F Villiers, JM Kwak and A Vertes (2014) In situ metabolic analysis of single plant cells by capillary microsampling and electrospray ionization mass spectrometry with ion mobility separation. **Analyst** 139: 5079-5085.
 20. AM Jones, S Lalonde, CH Ho, M Xu, CH You, R Wang, Y Xuan, MI Sardi, S A Parsa, E Smith-Valle, G Pilot, R Pratelli, G Grossmann, BR Acharya, H-C Hu, F Villiers, K Takeda, SM Assmann, J Chen, JM Kwak, JI Schroeder, R Albert, SY Rhee and WB Frommer (2014) Border control – the membrane-based interaction of *Arabidopsis*. **Science** 344: 711-716.
 21. C Zhang, Q Xie, R Anderson, G Ng, N Seitz, CR McClung, JM McDowell, D Kong, JM Kwak and H Lu (2013) Crosstalk between the circadian clock and innate immunity in *Arabidopsis*. **PLoS Pathogen** 9: e1003370. doi:10.1371/journal.ppat.1003370
 22. JW Chung, D Shin, JM Kwak and J Seog (2013) Direct force measurement of single

- DNA:peptide interactions using atomic force microscopy. **J. Mol. Recog.** 26: 268-275.
23. †F. Villiers and JM Kwak (2013) Rapid apoplastic pH measurement of *Arabidopsis* leaves using a fluorescent dye. **Plant Sig. & Behav.** 8: e22587141-143.
 24. M Salam, F Jammes, M Hossain, W Ye, Y Nakamura, I Mori, JM Kwak and Y Murata (2013) Two guard cell-preferential MAPKs, MPK9 and MPK12, regulate YEL signaling in *Arabidopsis* guard cells. **Plant Biol.** 15: 436-442.
 25. *D Cho, *F Villiers, L Kroniewicz, S Lee, Y Seo, K Hirschi, N Leonhardt and JM Kwak (2012) Vacuolar CAX1 and CAX3 influence auxin transport in guard cells via regulation of apoplastic pH. **Plant Physiol.** 160: 1293-1302.
 26. DH Seo, MY Ryu, F Jammes, JH Hwang, M Turek, JM Kwak and WT Kim (2012) Roles of four *Arabidopsis* U-box E3 ubiquitin ligases in negative regulation of ABA-mediated drought stress response. **Plant Physiol.** 160: 556-568.
 27. M Salam, F Jammes, M Hossain, W Ye, Y Nakamura, I Mori, JM Kwak and Y Murata (2012) MAP Kinases, MPK9 and MPK12, regulate chitosan-induced stomatal closure. **Biosci. Biotech. Biochem.** 76: 1785-1787.
 28. F Villiers and JM Kwak (2012) Comparative genomics and molecular characterization of the maize PIN transporter family. **Front. Plant Sci.** 3:43. Doi: 10.3389/fpls.2012.00043
 29. F Jammes, X Yang, S Xiao and JM Kwak (2011) Two *Arabidopsis* guard cell-preferential MAPK genes, *MPK9* and *MPK12*, function in biotic stress response. **Plant Sig & Behavior** 6: 1875-1878.
 30. F Jammes, H-C Hu, R Bouten, F Villiers and JM Kwak (2011) Plant calcium-permeable channels. **FEBS J.** 278: 4262-4276.
 31. SM Huh, EK Noh, K Baem, B Jeon, H-C Hu, JM Kwak and O Park (2010) *Arabidopsis* annexins AnnAt1 and AnnAt4 interact with each other and function as negative regulators in drought and salt stress responses. **Plant Cell Physiol.** 51: 1499-1514.
 32. S Lalonde, A Sero, G Pilot, R Pratelli, MI Sardi, SA Parsa, D-Y Kim, BR Acharya, E Stein, H-C Hu, F Villiers, K Takeda, YS Han, Y Yang, J Chen, W Chiang, N Kato, D Loqué, SM Assmann, JM Kwak, SY Rhee, JI Schroeder and WB Frommer (2010) A membrane protein/ signaling protein interaction network for *Arabidopsis* version AMPv2. **Front. Physio.** 1: 24. doi: 10.3389/fphys.2010.00024
 33. F Jammes, CJ Song, D Shin, S Munemasa, K Takeda, D Gu, D Cho, S Lee, R Giordo, S Sritubtim, N Leonhardt, EB Ellis, Y Murata and JM Kwak (2009) Two MAP kinases, *MPK9* and *MPK12*, are preferentially expressed in guard cells and positively regulate ROS-mediated ABA signaling. **Proc. Nat'l. Acad. Sci. USA** 106: 20520-20525.
 34. C Sirichandra, D Gu, H-C Hu, M Davanture, S Lee, M Djaoui, B Valot, M Zivy, J Leung S Merlot and JM Kwak (2009) Phosphorylation of the *Arabidopsis* AtrbohF NADPH oxidase by OST1 protein kinase. **FEBS Lett.** 583: 2982-2986.
(Among top 3 most cited research papers published in the journal in the past 10 years.)
 35. D Cho, D Shin, B Jeon and JM Kwak (2009) ROS-mediated ABA signaling. **J. Plant Biol.** 52: 102-113.
 36. D Cho, SA Kim, Y Murata, S Lee, S-K Jae, HG Nam and JM Kwak (2009). Deregulated expression of a plant glutamate receptor homolog impairs long-term Ca²⁺-programmed stomatal closure. **Plant J.** 58: 437-449.
 37. †JM Kwak, P Mäser and †JI Schroeder, (2008) The Clickable Guard Cell, Version II: Interactive model of guard cell signal transduction mechanisms and pathways. In *The Arabidopsis Book*. Chang, C., Graham, I., Last, R., Leyser, O., McClung, M. and Weinig, C. eds., American Society of Plant Biologists. <http://labs.biology.ucsd.edu/schroeder/clickablegc.html>
(highlighted at *Science Signaling*, http://stke.sciencemag.org/cgi/ul/sigtransUI:CAT_5)
 38. SK Cho, MY Ryu, C Song, JM Kwak and WT Kim (2008) *Arabidopsis* PUB22 and PUB23 are homologous U-Box E3 ubiquitin ligase that play combinatory roles in the response to drought stress. **Plant Cell** 20: 1899-1914.
 39. B Jeon, J-U Hwang, Y Fu, G Li, F Bao, D Cho, JM Kwak, Z Yang and Y Lee (2008). The

- Arabidopsis small GTP binding protein ROP2 is activated by light in guard cells and inhibits light-induced stomatal opening. *Plant Cell* 20: 75-87.
40. Y Lee, Y-W Kim, B Jeon, K-Y Park, SJ Suh, J Seo, J., JM Kwak, E Martinoia, I Hwang and Y Lee (2007) Phosphatidylinositol 4,5 bis-phosphate is important for stomatal opening. *Plant J.* 52: 803-816.
 41. S Padmanaban, JM Ward, JM Kwak, X Li and H Sze (2007) Participation of an endomembrane cation/H⁺ exchanger AtCHX20 in osmoregulation of guard cells. *Plant Physiol.* 144: 82-93.
 42. KH Lee, HL Piao, H-Y Kim, SM Choi, F Jiang, W Hartung, I Hwang, JM Kwak, I-J Lee and I Hwang (2006). Activation of glucosidase via stress-induced polymerization rapidly increases active pools of abscisic acid. *Cell* 126: 1109-1120.
 43. †JM Kwak, V Ngyuen and JI Schroeder (2006) The role of reactive oxygen species in hormonal responses. *Plant Physiol.* 141: 323-329.
 44. IC Mori, Y Murata, Y Yang, S Munemasa, Y-F Wang, S Andreoli, H Tiriatic, J Alonso, JF Harper, JR Ecker, JM Kwak and JI Schroeder (2006). Calcium-dependent protein kinases function in S-type anion- and Ca²⁺ permeable-channel regulation in Arabidopsis guard cells. *PLoS Biol.* 4: e327 doi:10.1371/journal.pbio.0040327
 45. D Suhita, AS Raghavendra, JM Kwak and A Vavasseur (2004) Cytoplasmic pH alkalization precedes ROS production during methyl jasmonate- and abscisic acid-induced stomatal closure. *Plant Physiol.* 134: 1536-1545.
 46. *N Leonhardt, *JM Kwak D Waner, G Leonhardt and JI Schroeder (2004) Genomic scale expression analyses of Arabidopsis guard cells and isolation of a recessive ABA hypersensitive PP2C mutant. *Plant Cell* 16: 596-615.
 47. †JM Kwak, IC Mori, N Leonhardt, Z-M Pei, M-A Torres, J Dangl, R Bloom, S Bodde, JDG Jones and JI Schroeder (2003) NADPH oxidase *AtrbohD* and *AtrbohF* genes function in ROS-dependent ABA signaling in Arabidopsis. *EMBO J.* 22: 2623-2633.
 48. JH Jun, CS Kim, D Cho, JM Kwak, CM Ha, YS Park, BH Cho, DA Patton and HG Nam (2002) Random antisense cDNA mutagenesis as an efficient functional genomic approach in higher plants. *Planta* 214: 668-674.
 49. V Hugouvieux, Y Murata, J Young, JM Kwak, D Mackesy and JI Schroeder (2002) Localization, ion channel regulation, and genetic interactions during abscisic acid signaling of the nuclear mRNA cap-binding protein, ABH1. *Plant Physiol.* 130: 1276-1287.
 50. *J-Y Jung, Y-W *Kim, *JM Kwak, J-U Hwang, J Young, JI Schroeder, I Hwang and Y Lee (2002) Phosphatidylinositol 3- and 4-phosphate are required for normal stomatal movements. *Plant Cell* 14: 2399-2412.
 51. JM Kwak, J Moon, Y Murata, K Kuchitsu, N Leonhardt, A DeLong and JI Schroeder (2002) Disruption of a guard cell-expressed protein phosphatase 2A regulatory subunit, *RCN1*, confers abscisic acid insensitivity in Arabidopsis. *Plant Cell* 14: 2849-2861.
 52. V Hugouvieux, JM Kwak and JI Schroeder (2001) An mRNA cap binding protein, ABH1, modulates early abscisic acid signal transduction in Arabidopsis. *Cell* 106: 477-487.
 53. JM Kwak, Y Murata, VM Baizabal-Aguirre, J Merrill, M Wang, A Kemper, SD Hawke G Tallman and JI Schroeder (2001) Dominant negative guard cell K⁺ channel mutants reduce stomatal opening in Arabidopsis. *Plant Physiol.* 127: 473-485.
 54. JI Schroeder, JM Kwak and GJ Allen (2001) Guard cell abscisic acid signaling and engineering drought hardiness in plants. *Nature* 410: 327-330.
 55. JI Schroeder, GJ Allen, V Hougouvieux, JM Kwak and D. Waner (2001) Guard cell signal transduction. *Annu. Rev. Plant Biol.* 52: 627-658.
 56. B Lacombe, D Becker, R Hedrich, R DeSalle, M Hollmann, JM Kwak, JI Schroeder, N Le Novère, HG Nam, EP Spalding, M Tester, FJ Turano, J Chiu and G Coruzzi (2001) The identity of plant glutamate receptors. *Science* 292: 1486-1487.
 57. SA Kim, JM Kwak, S-K Jae, MH Wang and HG Nam (2001) Overexpression of the *AtGluR2* gene encoding an Arabidopsis homolog of mammalian glutamate receptors impairs calcium

- utilization and sensitivity to ionic stress in transgenic plants. *Plant Cell Physiol.* 42: 74-84.
58. GJ Allen, JM Kwak, SP Chu, J Lipios, RY Tsien, JF Harper and JI Schroeder (1999) Cameleon calcium indicator reports cytoplasmic calcium dynamics in *Arabidopsis* guard cells. *Plant J.* 19: 735-747.
 59. E Kim, JM Kwak, N Uozumi and JI Schroeder (1998) *AtKUP1*: an *Arabidopsis* gene encoding high-affinity potassium transport activity. *Plant Cell* 10: 51-62.
 60. YS Kim, K Nosaka, D Downs, JM Kwak, D Park, IK Chung and HG Nam (1998) A *Brassica* cDNA encoding a bifunctional hydroxymethylpyrimidine phosphate kinase/thiamine phosphate pyrophosphorylase involved in thiamine biosynthesis. *Plant Mol. Biol.* 37: 955-966.
 61. SW Hong, JH Jeon, JM Kwak and HG Nam (1997) Identification of a receptor-like protein kinase gene rapidly induced by ABA and dehydration and high salt treatment in *Arabidopsis thaliana*. *Plant Physiol.* 113: 1203-1212.
 62. S Lee, S Suh, S Kim, RC Crain, JM Kwak, HG Nam and Y Lee (1997) Systemic elevation of phosphatidic acid and lysophospholipid levels in wounded plants. *Plant J.* 12: 547-556.
 63. JM Kwak, SA Kim, SK Lee, S-A Oh, C-H Byoun, JK Han and HG Nam (1997) Insulin-induced maturation of *Xenopus* oocytes is inhibited by microinjection of a *Brassica napus* cDNA clone with high similarity to a mammalian receptor for activated protein kinase C. *Planta* 201: 245-251.
 64. JM Kwak, SA Kim, SW Hong and HG Nam (1997) Evaluation of 515 expressed sequence tags obtained from guard cells of *Brassica campestris*. *Planta* 202: 9-17.
 65. PO Lim, JS Ryu, HJ Lee, U Lee, YS Park, JM Kwak, JK Choi and HG Nam (1997) Resistance to tobamoviruses in transgenic plants expressing the coat protein gene of pepper mild mottle virus. *Mol. Cells* 7: 313-319.
 66. SA Oh, JM Kwak, IC Kwun and HG Nam (1996) Rapid and transient induction of calmodulin-encoding gene(s) of *Brassica napus* by a touch stimulus. *Plant Cell Rep.* 15: 586-590.
 67. JM Kwak, SW Hong, SA Kim and HG Nam (1996) Identification of *Brassica napus* cDNA clone encoding a peptide highly related to the smallest and common subunit ABC10 β of RNA polymerases of *Saccharomyces cerevisiae*. *Mol. Cells* 6: 726-730.
 68. JM Kwak, SA Kim, YS Park, MS Soh, YJ Kim, IC Kwun and HG Nam (1996) Characterization of 475 expressed sequence tags generated from root cDNA clones of *Brassica napus* by single-pass sequencing. *Mol. Cells* 6: 563-570.
 69. YS Park, O Song, SW Hong, JM Kwak, MJ Cho and HG Nam (1995) Frequent in-frame length variations are found in the diverged simple repeat sequences of the protein-coding regions of two putative protein kinase genes of *Brassica napus*. *Plant Mol. Biol.* 27: 829-833.
 70. YS Park, O Song, JM Kwak, SW Hong, HH Lee and HG Nam (1994) Functional complementation of a yeast vesicular transport mutation *ypt1-1* by a *Brassica napus* cDNA clone encoding a small GTP-binding protein. *Plant Mol. Biol.* 26: 1725-1735.
 71. JM Kwak and HG Nam (1994) Generation of expressed sequence tags of *Brassica napus* by single-run partial sequencing of random cDNA clones. In *Automated DNA Sequencing and Analysis*. Adams, M. D., Fields, C. and Venter, J. C. eds., Academic Press, London, pp 120-122.
 72. CS Kim, JM Kwak, HG Nam, KC Kim and BH Cho (1994) Isolation and characterization of two cDNA clones that are rapidly induced during the wound response of *Arabidopsis thaliana*. *Plant Cell Rep.* 13: 340-343.
 73. YS Park, SW Hong, S-A Oh, JM Kwak, HH Lee and Nam, H. G. (1993) Two putative protein kinases from *Arabidopsis thaliana* contain highly acidic domains. *Plant Mol. Biol.*, 22, 614-624.
 74. *YS Park, *JM Kwak, OY Kwon, YS Kim, DS Lee, MJ Cho, HH Lee and HG Nam (1993) Generation of expressed sequence tags of random root cDNA clones of *Brassica napus* by single run partial sequencing. *Plant Physiol.* 103: 359-370.

Manuscripts submitted/under review

1. J Zhu, J-H Park, S. Lee, JH Lee, D Hwang, JM Kwak[†], YJ Kim[†] (2019) Regulation of stomatal development by stomatal lineage miRNAs. *PNAS*, *Under review*.
2. S Lee, M-H Kim, J-H Lee, J Jeon, JM Kwak[†] and Y-J Kim (2019) Glycosyltransferase RSE1 negatively regulates leaf senescence by modulating salicylic acid signaling in Arabidopsis. *Front. Plant Sci.*, *Under revision*.

c. Talks and Seminars Presented

i. Invited Talks at National and International Meetings

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|--|---------|
| 37. Annual meeting of Korean Society of Biochemistry and Molecular Biology | 06/2019 |
| 36. Bomoun Symposium, Korea | 11/2018 |
| 35. Annual Meeting of Korean Society of Plant Biologists, Korea | 11/2018 |
| 34. World Life Science Conference, Beijing, China | 10/2018 |
| 33. Systems Biology College Symposium, Yonsei University, Korea | 10/2018 |
| 32. International Plant Molecular Biology Congress, Montpellier, France | 08/2018 |
| 31. International Botanical Congress, Shenzhen, China | 07/2017 |
| 30. Annual Meeting of Japanese Society of Plant Biologists, Japan | 03/2016 |
| 29. Annual Meeting of Korean Society of Plant Biologists, Korea | 11/2015 |
| 28. Int'l Conference of Korean Society of Molecular & Cellular Biology, Korea | 09/2015 |
| 27. IBS-Royal Society Conference, London, UK | 09/2015 |
| 26. IBS-Royal Society Conference, Seoul, Korea | 10/2014 |
| 25. Annual Meeting, Korean Society of Plant Biology | 10/2012 |
| 24. PGRP Awardee Meeting, Arlington, VA | 09/2012 |
| 23. US-Korea Conference 2012, Los Angeles, CA | 08/2012 |
| 22. Plant Calcium Signaling Symposium, Münster, Germany | 08/2010 |
| 21. 6 th International Conference on Nitric Oxide, Kyoto, Japan | 06/2010 |
| 20. 27 th Annual Meeting on Plant Protein Phosphorylation, MO | 05/2010 |
| 19. Annual Meeting of Japanese Society of Plant Physiologists, Japan | 03/2010 |
| 18. 3 rd Pan American Plant Membrane Biology Workshop, Mexico | 01/2010 |
| 17. 9 th International Plant Molecular Biology Congress, St. Louis, MO | 10/2009 |
| 16. Annual Meeting of American Society of Plant Biologists, HI | 07/2009 |
| 15. USDA Awardee Meeting: Genes to Products, MD. | 05/2009 |
| 14. Keystone Symposium: Plant Hormones and Signaling, CO | 02/2008 |
| 13. Annual Meeting of American Society of Plant Biologists, IL | 07/2007 |
| 12. 14 th International Workshop Plant Membrane Biology, Spain | 06/2007 |
| 11. Pan American Plant Membrane Biology Workshop, TX | 05/2006 |
| 10. 6 th Annual Arabidopsis Minisymposium, College Park, MD | 04/2005 |
| 9. Crop Functional Genomics Meeting, Korea | 04/2004 |
| 8. 21 st Annual Meeting of Mid Atlantic Plant Molecular Biology Society, MD | 08/2004 |
| 7. Annual Meeting of American Society of Plant Biologists, HI | 07/2003 |
| 6. 13 th International Conference on Arabidopsis Research, Spain | 06/2002 |
| 5. 21 st Annual Missouri Symposium: Protein De/Phosphorylation, MI | 05/2003 |
| 4. Workshop on Optimization of Water Use by Plants, Spain | 03/2003 |
| 3. 22 nd Symposium in Plant Biology: Frontiers of Plant Cell Biology, CA | 01/2003 |
| 2. 12 th International Workshop on Plant Membrane Biology, WI | 08/2001 |
| 1. 10 th International Conference on Arabidopsis Research, Australia | 07/1999 |