

BIBLIOGRAPHY

- Abe M, Yoshikawa T, Nosaka M, Sakakibara H, Sato Y, Nagato Y, Itoh J.** 2010. WAVY LEAF1, an ortholog of Arabidopsis HEN1, regulates shoot development by maintaining MicroRNA and trans-acting small interfering RNA accumulation in rice. *Plant Physiol* **154**, 1335-1346.
- Achard P, Herr A, Baulcombe DC, Harberd NP.** 2004. Modulation of floral development by a gibberellin-regulated microRNA. *Development* **131**, 3357-3365.
- Adenot X, Elmayan T, Lauressergues D, Boutet S, Bouche N, Gasciolli V, Vaucheret H.** 2006. DRB4-dependent TAS3 trans-acting siRNAs control leaf morphology through AGO7. *Curr Biol* **16**, 927-932.
- Aida M, Ishida T, Fukaki H, Fujisawa H, Tasaka M.** 1997. Genes involved in organ separation in Arabidopsis: an analysis of the cup-shaped cotyledon mutant. *Plant Cell* **9**, 841-857.
- Ajtkhzhin MA, Doschanov KJ, Akhanov AU.** 1976. Informosomes as a stored form of mRNA in wheat embryos. *FEBS Letter* **66**, 124-126.
- Akira S, Shozo F.** 1997. Studies on Biosynthesis of Brassinosteroids. *Bioscience, Biotechnology, and Biochemistry* **61**, 757-762.
- Alexander L, Grierson D.** 2002. Ethylene biosynthesis and action in tomato: a model for climacteric fruit ripening. *J Exp Bot* **53**, 2039-2055.
- Allen E, Howell MD.** 2010. miRNAs in the biogenesis of trans-acting siRNAs in higher plants. *Semin Cell Dev Biol* **21**, 798-804.
- Allen E, Xie Z, Gustafson AM, Carrington JC.** 2005. microRNA-directed phasing during trans-acting siRNA biogenesis in plants. *Cell* **121**, 207-221.
- Allen E, Xie Z, Gustafson AM, Sung GH, Spatafora JW, Carrington JC.** 2004. Evolution of microRNA genes by inverted duplication of target gene sequences in *Arabidopsis thaliana*. *Nat Genet* **36**, 1282-1290.
- Alonso-Peral MM, Li J, Li Y, Allen RS, Schnippenkoetter W, Ohms S, White RG, Millar AA.** 2010. The microRNA159-regulated GAMYB-like genes inhibit growth and promote programmed cell death in *Arabidopsis*. *Plant Physiol* **154**, 757-771.
- Altmann T.** 1999. Molecular physiology of brassinosteroids revealed by the analysis of mutants. *Planta* **208**, 1-11.
- Alvarez-Buylla ER, Liljegren SJ, Pelaz S, Gold SE, Burgeff C, Ditta GS, Vergara-Silva F, Yanofsky MF.** 2000. MADS-box gene evolution beyond flowers: expression in pollen, endosperm, guard cells, roots and trichomes. *Plant Journal* **24**, 457-466.
- Andreasson E, Ellis B.** 2010. Convergence and specificity in the *Arabidopsis* MAPK nexus. *Trends Plant Sci* **15**, 106-113.
- Arteaga-Vazquez M, Caballero-Perez J, Vielle-Calzada JP.** 2006. A family of microRNAs present in plants and animals. *Plant Cell* **18**, 3355-3369.

Attucci S, Carde JP, Raymond P, Saint-Ges V, Spiteri A, Pradet A. 1991. Oxidative phosphorylation by mitochondria extracted from dry sunflower seeds. *Plant Physiol* **95**, 390-398.

Aukerman MJ, Sakai H. 2003. Regulation of Flowering Time and Floral Organ Identity by a MicroRNA and Its APETALA2-Like Target Genes. *Plant Cell* **15**, 2730-2741.

Axtell MJ. 2013a. Classification and comparison of small RNAs from plants. *Annu. Rev. Plant Biol.* **64**, 137–159..

Axtell MJ, Jan C, Rajagopalan R, Bartel DP. 2006. A two-hit trigger for siRNA biogenesis in plants. *Cell* **127**, 565-577.

Axtell MJ, Snyder JA, Bartel DP. 2007. Common functions for diverse small RNAs of land plants. *Plant Cell* **19**, 1750-1769.

Babiker AGT, Ma Y, Sugimoto Y, Inanaga S. 2000. Conditioning period, CO₂ and GR24 influence ethylene biosynthesis and germination of *Striga hermonthica*. *Physiologia Plantarum* **109**, 75-80.

Baker CC, Sieber P, Wellmer F, Meyerowitz EM. 2005. The early extra petals1 mutant uncovers a role for microRNA miR164c in regulating petal number in *Arabidopsis*. *Curr Biol* **15**, 303-315.

Barkan A, Small I. 2014. Pentatricopeptide repeat proteins in plants. *Annu Rev Plant Biol* **65**, 415-442.

Bartel DP. 2004a. MicroRNAs: Genomics, Biogenesis, Mechanism, and Function. *Cell* **116**, 281-297.

Baumberger N, Baulcombe DC. 2005. *Arabidopsis ARGONAUTE1* is an RNA Slicer that selectively recruits microRNAs and short interfering RNAs. *Proc Natl Acad Sci U S A* **102**, 11928-11933.

Bäumlein H, Miséra S, Luerßen H, Kölle K, Horstmann C, Wobus U, Müller AJ. 1994. The FUS3 gene of *Arabidopsis thaliana* is a regulator of gene expression during late embryogenesis. *The Plant Journal* **6**, 379-387.

Beaudoin N, Serizet C, Gosti F, Giraudat J. 2000. Interactions between abscisic acid and ethylene signaling cascades. *Plant Cell* **12**, 1103-1115.

Beclin C, Boutet S, Waterhouse P, Vaucheret H. 2002. A branched pathway for transgene-induced RNA silencing in plants. *Curr Biol* **12**, 684-688.

Benková E, Michniewicz M, Sauer M, Teichmann T, Seifertová D, Jürgens G, Friml J. Local, Efflux-Dependent Auxin Gradients as a Common Module for Plant Organ Formation. *Cell* **115**, 591-602.

Bentsink L, Koornneef M. 2008. Seed Dormancy and Germination. *The Arabidopsis Book / American Society of Plant Biologists* **6**, e0119.

Bewley JD. 1997. Seed Germination and Dormancy. *Plant Cell* **9**, 1055-1066.

Bewley JD, Black M. 1994. *Seeds: physiology of development and germination*. New York: Plenum Publishing Corporation.

Bewley JD, Marcus A. 1990. Gene expression in seed development and germination. *Prog Nucleic Acid Res Mol Biol* **38**, 165-193.

Bezerra IC, Michaels SD, Schomburg FM, Amasino RM. 2004. Lesions in the mRNA cap-binding gene ABA HYPERSENSITIVE 1 suppress FRIGIDA-mediated delayed flowering in Arabidopsis. *Plant J* **40**, 112-119.

Bialek K, Michalczuk L, Cohen JD. 1992. Auxin Biosynthesis during Seed Germination in *Phaseolus vulgaris*. *Plant Physiol* **100**, 509-517.

Birnboim HC, Doly J. 1979. A rapid alkaline extraction procedure for screening recombinant plasmid DNA. *Nucleic Acids Res* **7**, 1513-1523.

Bleecker AB, Kende H. 2000. Ethylene: A Gaseous Signal Molecule in Plants. *Annu Rev Cell Dev Biol* **16**, 1-18.

Bohmert K, Camus I, Bellini C, Bouchez D, Caboche M, Benning C. 1998. AGO1 defines a novel locus of Arabidopsis controlling leaf development. *Embo J* **17**, 170-180.

Botha FC, Potgieter GP, Botha AM. 1992. Respiratory metabolism and gene expression during seed germination. *Plant Growth Regulation* **11**, 211-224.

Brady SM, McCourt P. 2003. Hormone Cross-Talk in Seed Dormancy. *Journal of Plant Growth Regulation* **22**, 25-31.

Breuninger H, Rikirsch E, Hermann M, Ueda M, Laux T. 2008. Differential expression of WOX genes mediates apical-basal axis formation in the Arabidopsis embryo. *Dev Cell* **14**, 867-876.

Cao D, Hussain A, Cheng H, Peng J. 2005. Loss of function of four DELLA genes leads to light- and gibberellin-independent seed germination in Arabidopsis. *Planta* **223**, 105-113.

Carlsbecker A, Lee J-Y, Roberts CJ, Dettmer J, Lehesranta S, Zhou J, Lindgren O, Moreno-Risueno MA, Vatén A, Thitamadee S, Campilho A, Sebastian J, Bowman JL, Helariutta Y, Benfey PN. 2010. Cell signalling by microRNA165/6 directs gene dose-dependent root cell fate. *Nature* **465**, 316-321.

Cervantes E, Rodríguez A, Nicolás G. 1994. Ethylene regulates the expression of a cysteine proteinase gene during germination of chickpea (*Cicer arietinum* L.). *Plant Mol Biol* **25**, 207-215.

Chebotar GO, Chebotar SV. 2011. Gibberellin-signaling pathways in plants. *Cytology and Genetics* **45**, 259.

Chen X. 2004. A MicroRNA as a Translational Repressor of *APETALA2* in *Arabidopsis* Flower Development. *Science* **303**, 2022-2025.

Chen X. 2009. Small RNAs and their roles in plant development. *Annu Rev Cell Dev Biol* **25**, 21-44.

Chen X. 2012a. Small RNAs in development—insights from plants. *Curr. Opin. Genet. Dev.* **22**, 361-367.

Chen X, Liu J, Cheng Y, Jia D. 2002. HEN1 functions pleiotropically in Arabidopsis development and acts in C function in the flower. *Development* **129**, 1085-1094.

Chitwood DH, Guo M, Nogueira FTS, Timmermans MCP. 2007. Establishing leaf polarity: the role of small RNAs and positional signals in the shoot apex. *Development* **134**, 813.

Clough SJ, Bent AF. 1998. Floral dip: a simplified method for Agrobacterium-mediated transformation of *Arabidopsis thaliana*. *Plant J* **16**, 735-743.

Cohn MA, Butera DL. 2017. Seed Dormancy in Red Rice (*Oryza sativa*). II. Response to Cytokinins. *Weed Science* **30**, 200-205.

Colcombet J, Hirt H. 2008. *Arabidopsis MAPKs: a complex signalling network involved in multiple biological processes*. *Biochem J* **413**, 217-226.

Comai L, Harada JJ. 1990. Transcriptional activities in dry seed nuclei indicate the timing of the transition from embryogeny to germination. *Proc Natl Acad Sci U S A* **87**, 2671-2674.

Crowe JH, Crowe LM. 1992. Membrane Integrity in Anhydrobiotic Organisms: Toward a Mechanism for Stabilizing Dry Cells. Berlin, Heidelberg: Springer Berlin Heidelberg, 87-103.

Curaba J, Moritz T, Blervaque R, Parcy F, Raz V, Herzog M, Vachon G. 2004. AtGA3ox2, a key gene responsible for bioactive gibberellin biosynthesis, is regulated during embryogenesis by LEAFY COTYLEDON2 and FUSCA3 in *Arabidopsis*. *Plant Physiol* **136**, 3660-3669.

Cutler S, Ghassemian M, Bonetta D, Cooney S, McCourt P. 1996. A protein farnesyl transferase involved in abscisic acid signal transduction in *Arabidopsis*. *Science* **273**, 1239-1241.

Dai X, Zhao PX. 2011. psRNATarget: a plant small RNA target analysis server. *Nucleic Acids Research* **39**, W155–W159.

Dalmay T, Hamilton A, Rudd S, Angell S, Baulcombe DC. 2000. An RNA-dependent RNA polymerase gene in *Arabidopsis* is required for posttranscriptional gene silencing mediated by a transgene but not by a virus. *Cell* **101**, 543-553.

Das SS, Karmakar P, Nandi AK, Sanan-Mishra N. 2015a. Small RNA mediated regulation of seed germination. *Front Plant Sci* **6**, 828.

de Castro RD, van Lammeren AA, Groot SP, Bino RJ, Hilhorst HW. 2000. Cell division and subsequent radicle protrusion in tomato seeds are inhibited by osmotic stress but DNA synthesis and formation of microtubular cytoskeleton are not. *Plant Physiol* **122**, 327-336.

de Meaux J, Hu JY, Tartler U, Goebel U. 2008. Structurally different alleles of the ath-MIR824 microRNA precursor are maintained at high frequency in *Arabidopsis thaliana*. *Proc. Natl. Acad. Sci. USA* **105**, 8994–8999.

Delker C, Raschke A, Quint M. 2008. Auxin dynamics: the dazzling complexity of a small molecule's message. *Planta* **227**, 929-941.

Derek Bewley J, Black M. 1985. *Seeds : physiology of development and germination / J. Derek Bewley and Michael Black.*

Derkx MPM, Karssen CM. 1993. Effects of light and temperature on seed dormancy and gibberellin-stimulated germination in *Arabidopsis thaliana*: studies with gibberellin-deficient and -insensitive mutants. *Physiologia Plantarum* **89**, 360-368.

Dewar J, Taylor JRN, Berjak P. 2008. Changes in selected plant growth regulators during germination in sorghum. *Seed Science Research* **8**, 1-8.

Dharmasiri N, Dharmasiri S, Weijers D, Lechner E, Yamada M, Hobbie L, Ehrismann JS, Jurgens G, Estelle M. 2005. Plant development is regulated by a family of auxin receptor F box proteins. *Dev Cell* **9**, 109-119.

Dommes J, Van de Walle C. 1990. Polysome formation and incorporation of new ribosomes into polysomes during germination of the embryonic axis of maize. *Physiologia Plantarum* **79**, 289-296.

Douglas RN, Wiley D, Sarkar A, Springer N, Timmermans MC, Scanlon MJ. 2010. ragged seedling2 Encodes an ARGONAUTE7-like protein required for mediolateral expansion, but not dorsiventrality, of maize leaves. *Plant Cell* **22**, 1441-1451.

Ehrenshaft M, Brambl R. 1990. Respiration and mitochondrial biogenesis in germinating embryos of maize. *Plant Physiol* **93**, 295-304.

Emery JF, Floyd SK, Alvarez J, Eshed Y, Hawker NP, Izhaki A, Baum SF, Bowman JL. 2003. Radial Patterning of *Arabidopsis* Shoots by Class III HD-ZIP and KANADI Genes. *Current Biology* **13**, 1768-1774.

Emery RJN, Ma Q, Atkins CA. 2000. The Forms and Sources of Cytokinins in Developing White Lupine Seeds and Fruits. *Plant Physiol* **123**, 1593-1604.

Fahlgren N, Howell MD, Kasschau KD, Chapman EJ, Sullivan CM, Cumbie JS, Givan SA, Law TF, Grant SR, Dangl JL, Carrington JC. 2007. High-throughput sequencing of *Arabidopsis* microRNAs: evidence for frequent birth and death of MIRNA genes. *PLoS One* **2**, e219.

Fahlgren N, Montgomery TA, Howell MD, Allen E, Dvorak SK, Alexander AL, Carrington JC. 2006. Regulation of AUXIN RESPONSE FACTOR3 by TAS3 ta-siRNA affects developmental timing and patterning in *Arabidopsis*. *Curr Biol* **16**, 939-944.

Fang Y, Spector DL. 2007. Identification of nuclear dicing bodies containing proteins for microRNA biogenesis in living *Arabidopsis* plants. *Curr Biol* **17**, 818-823.

Ferguson BJ, Foo E, Ross JJ, Reid JB. 2011. Relationship between gibberellin, ethylene and nodulation in *Pisum sativum*. *New Phytologist* **189**, 829-842.

Finkelstein R, Reeves W, Ariizumi T, Steber C. 2008. Molecular aspects of seed dormancy. *Annu Rev Plant Biol* **59**, 387-415.

Finkelstein RR. 1994. Maternal Effects Govern Variable Dominance of Two Abscisic Acid Response Mutations in *Arabidopsis thaliana*. *Plant Physiol* **105**, 1203-1208.

Finkelstein RR, Gampala SS, Rock CD. 2002. Abscisic acid signaling in seeds and seedlings. *Plant Cell* **14 Suppl**, S15-45.

Finkelstein RR, Lynch TJ. 2000. The Arabidopsis abscisic acid response gene ABI5 encodes a basic leucine zipper transcription factor. *Plant Cell* **12**, 599-609.

Finkelstein RR, Wang ML, Lynch TJ, Rao S, Goodman HM. 1998. The Arabidopsis abscisic acid response locus ABI4 encodes an APETALA 2 domain protein. *Plant Cell* **10**, 1043-1054.

Fischer-Iglesias C, Neuhaus G. 2001. Zygotic Embryogenesis. In: Bhojwani SS, Soh W-Y, eds. *Current Trends in the Embryology of Angiosperms*. Dordrecht: Springer Netherlands, 223-247.

Footitt S, Slocombe SP, Larner V, Kurup S, Wu Y, Larson T, Graham I, Baker A, Holdsworth M. 2002. Control of germination and lipid mobilization by COMATOSE, the Arabidopsis homologue of human ALDP. *Embo J* **21**, 2912-2922.

Frey A, Audran C, Marin E, Sotta B, Marion-Poll A. 1999. Engineering seed dormancy by the modification of zeaxanthin epoxidase gene expression. *Plant Mol Biol* **39**, 1267-1274.

Friml J, Vieten A, Sauer M, Weijers D, Schwarz H, Hamann T, Offringa R, Jürgens G. 2003. Efflux-dependent auxin gradients establish the apical–basal axis of Arabidopsis. *Nature* **426**, 147.

Friml J, Wiśniewska J, Benková E, Mendgen K, Palme K. 2002. Lateral relocation of auxin efflux regulator PIN3 mediates tropism in Arabidopsis. *Nature* **415**, 806.

Fujioka Y, Utsumi M, Ohba Y, Watanabe Y. 2007. Location of a possible miRNA processing site in SmD3/SmB nuclear bodies in Arabidopsis. *Plant Cell Physiol* **48**, 1243-1253.

Galland M, Huguet R, Arc E, Cueff G, Job D, Rajjou L. 2014. Dynamic proteomics emphasizes the importance of selective mRNA translation and protein turnover during Arabidopsis seed germination. *Mol Cell Proteomics* **13**, 252-268.

Gallardo K, Job C, Groot SP, Puype M, Demol H, Vandekerckhove J, Job D. 2002. Importance of methionine biosynthesis for Arabidopsis seed germination and seedling growth. *Physiol Plant* **116**, 238-247.

Gazzarrini S, Tsuchiya Y, Lumba S, Okamoto M, McCourt P. 2004. The transcription factor FUSCA3 controls developmental timing in Arabidopsis through the hormones gibberellin and abscisic acid. *Dev Cell* **7**, 373-385.

Ghassemian M, Nambara E, Cutler S, Kawaide H, Kamiya Y, McCourt P. 2000. Regulation of abscisic acid signaling by the ethylene response pathway in Arabidopsis. *Plant Cell* **12**, 1117-1126.

Goldberg RB, de Paiva G, Yadegari R. 1994. Plant embryogenesis: zygote to seed. *Science* **266**, 605-614.

Gonzalez-Guzman M, Abia D, Salinas J, Serrano R, Rodriguez PL. 2004. Two new alleles of the abscisic aldehyde oxidase 3 gene reveal its role in abscisic acid biosynthesis in seeds. *Plant Physiol* **135**, 325-333.

Gregory BD, O'Malley RC, Lister R, Urich MA, Tonti-Filippini J, Chen H, Millar AH, Ecker JR. 2008. A link between RNA metabolism and silencing affecting Arabidopsis development. *Dev Cell* **14**, 854-866.

Guan LM, Scandalios JG. 2002. Catalase gene expression in response to auxin-mediated developmental signals. *Physiol Plant* **114**, 288-295.

Guo HS, Xie Q, Fei JF, Chua NH. 2005. MicroRNA directs mRNA cleavage of the transcription factor NAC1 to downregulate auxin signals for arabidopsis lateral root development. *Plant Cell* **17**, 1376-1386.

Hackenberg M, Shi BJ, Gustafson P, Langridge P. 2013. Characterization of phosphorus-regulated miR399 and miR827 and their isomirs in barley under phosphorus-sufficient and phosphorus-deficient conditions *BMC Plant Biology* **13**, 1471-2229.

Hammett JR, Katterman FR. 1975. Storage and metabolism of poly(adenylic acid)-mRNA in germinating cotton seeds. *Biochemistry* **14**, 4375-4379.

Han B, Wayne Hughes D, Galau GA, Derek Bewley J, Kermode AR. 1997. Changes in late-embryogenesis-abundant (LEA) messenger RNAs and dehydrins during maturation and premature drying of *Ricinus communis* L. seeds. *Planta* **201**, 27-35.

Han C, He D, Li M, Yang P. 2014. In-depth proteomic analysis of rice embryo reveals its important roles in seed germination. *Plant Cell Physiol* **55**, 1826-1847.

Han J, Lee Y, Yeom KH, Kim YK, Jin H, Kim VN. 2004. The Drosha-DGCR8 complex in primary microRNA processing. *Genes Dev* **18**, 3016-3027.

Harada JJ. 1997. Seed Maturation and Control of Germination. In: Larkins BA, Vasil IK, eds. *Cellular and Molecular Biology of Plant Seed Development*. Dordrecht: Springer Netherlands, 545-592.

Hays DB, Yeung EC, Pharis RP. 2002. The role of gibberellins in embryo axis development. *J Exp Bot* **53**, 1747-1751.

He D, Wang Q, Wang K, Yang P. 2015. Genome-Wide Dissection of the MicroRNA Expression Profile in Rice Embryo during Early Stages of Seed Germination. *PLoS One* **10**, e0145424.

He Y, Gan S. 2004. A novel zinc-finger protein with a proline-rich domain mediates ABA-regulated seed dormancy in Arabidopsis. *Plant Mol Biol* **54**, 1-9.

Hedden P, Thomas SG. 2012. Gibberellin biosynthesis and its regulation. *Biochem J* **444**, 11-25.

Hilhorst HWM. 2008. A critical update on seed dormancy. I. Primary dormancy. *Seed Science Research* **5**, 61-73.

Hilhorst HWM, Karssen CM. 1992. Seed dormancy and germination: the role of abscisic acid and gibberellins and the importance of hormone mutants. *Plant Growth Regulation* **11**, 225-238.

Hiraguri A, Itoh R, Kondo N, Nomura Y, Aizawa D, Murai Y, Koiwa H, Seki M, Shinozaki K, Fukuhara T. 2005. Specific interactions between Dicer-like proteins and HYL1/DRB-family dsRNA-binding proteins in Arabidopsis thaliana. *Plant Mol Biol* **57**, 173-188.

Holdsworth M, Kurup S, McKibbin R. Molecular and genetic mechanisms regulating the transition from embryo development to germination. *Trends in Plant Science* **4**, 275-280.

Holdsworth MJ, Finch-Savage WE, Grappin P, Job D. 2008. Post-genomics dissection of seed dormancy and germination. *Trends Plant Sci* **13**, 7-13.

Holsters M, de Waele D, Depicker A, Messens E, van Montagu M, Schell J. 1978. Transfection and transformation of Agrobacterium tumefaciens. *Mol Gen Genet* **163**, 181-187.

Howell MD, Fahlgren N, Chapman EJ, Cumbie JS, Sullivan CM, Givan SA, Kasschau KD, Carrington JC. 2007. Genome-wide analysis of the RNA-DEPENDENT RNA POLYMERASE6/DICER-LIKE4 pathway in Arabidopsis reveals dependency on miRNA- and tasiRNA-directed targeting. *Plant Cell* **19**, 926-942.

Hu J, Jin J, Qian Q, Huang K, Ding Y. 2016. Small RNA and degradome profiling reveals miRNA regulation in the seed germination of ancient eudicot *Nelumbo nucifera*. *BMC Genomics* **17**, 684.

Huang D, Koh C, Feurtado JA, Tsang EW, Cutler AJ. 2013. MicroRNAs and their putative targets in *Brassica napus* seed maturation. *BMC Genomics* **14**, 140.

Huettel B, Kanno T, Daxinger L, Bucher E, van der Winden J, Matzke AJ, Matzke M. 2007. RNA-directed DNA methylation mediated by DRD1 and Pol IVb: a versatile pathway for transcriptional gene silencing in plants. *Biochim Biophys Acta* **1769**, 358-374.

Hutvagner G, Simard MJ. 2008. Argonaute proteins: key players in RNA silencing. *Nat Rev Mol Cell Biol* **9**, 22-32.

Itoh J, Sato Y, Nagato Y, Matsuoka M. 2006. Formation, maintenance and function of the shoot apical meristem in rice. *Plant Mol Biol* **60**, 827-842.

Jack T. 2004. Molecular and Genetic Mechanisms of Floral Control. *Plant Cell* **16**, S1-S17.

Jefferson RA, Kavanagh TA, Bevan MW. 1987. GUS fusions: beta-glucuronidase as a sensitive and versatile gene fusion marker in higher plants. *Embo j* **6**, 3901-3907.

Jiang L, R. Kermode A. 1994. *Role of desiccation in the termination of expression of genes for storage proteins.*

Jones-Held S, VanDoren M, Lockwood T. 1996. Brassinolide application to *Lepidium sativum* seeds and the effects on seedling growth. *Journal of Plant Growth Regulation* **15**, 63.

Jones-Rhoades MW, Bartel DP. 2004. Computational identification of plant microRNAs and their targets, including a stress-induced miRNA. *Mol Cell* **14**, 787-799.

Jones-Rhoades MW, Bartel DP, Bartel B. 2006. MicroRNAs and their regulatory roles in plants. *Annu Rev Plant Biol* **57**, 19-53.

Jones HD, Kurup S, Peters NC, Holdsworth MJ. 2000. Identification and analysis of proteins that interact with the *Avena fatua* homologue of the maize transcription factor VIVIPAROUS 1. *Plant J* **21**, 133-142.

Jönsson H, Heisler MG, Shapiro BE, Meyerowitz EM, Mjolsness E. 2006. An auxin-driven polarized transport model for phyllotaxis. *Proceedings of the National Academy of Sciences* **103**, 1633-1638.

Juarez MT, Kui JS, Thomas J, Heller BA, Timmermans MC. 2004a. microRNA-mediated repression of rolled leaf1 specifies maize leaf polarity. *Nature* **428**, 84-88.

Jung HJ, Kang H. 2007. Expression and functional analyses of microRNA417 in *Arabidopsis thaliana* under stress conditions. *Plant Physiol Biochem* **45**, 805-811.

Kaur H, Petla BP, Kamble NU, Singh A, Rao V, Salvi P, Ghosh S, Majee M. 2015a. Differentially expressed seed aging responsive heat shock protein OsHSP18.2 implicates in seed vigor, longevity and improves germination and seedling establishment under abiotic stress. *Front Plant Sci* **6**, 713.

Khraiwesh B, Zhu JK, Zhu J. 2012. Role of miRNAs and siRNAs in biotic and abiotic stress responses of plants. *Biochim Biophys Acta* **1819**, 137-148.

Kim JY, Kwak KJ, Jung HJ, Lee HJ, Kang H. 2010a. MicroRNA402 affects seed germination of *Arabidopsis thaliana* under stress conditions via targeting DEMETER-LIKE Protein3 mRNA. *Plant Cell Physiol* **51**, 1079-1083.

Kim JY, Lee HJ, Jung HJ, Maruyama K, Suzuki N, Kang H. 2010b. Overexpression of microRNA395c or 395e affects differently the seed germination of *Arabidopsis thaliana* under stress conditions. *Planta* **232**, 1447-1454.

Kinoshita T, Cano-Delgado A, Seto H, Hiranuma S, Fujioka S, Yoshida S, Chory J. 2005. Binding of brassinosteroids to the extracellular domain of plant receptor kinase BRI1. *Nature* **433**, 167-171.

Koornneef M. 1994. *Arabidopsis genetics*. In: Meyerowitz EM, Somerville CR, eds. *Arabidopsis*: Cold Spring Harbor Laboratory Press, 89-120.

Koornneef M, Bentsink L, Hilhorst H. 2002. Seed dormancy and germination. *Curr Opin Plant Biol* **5**, 33-36.

Kroj T, Savino G, Valon C, Giraudat J, Parcy F. 2003. Regulation of storage protein gene expression in *Arabidopsis*. *Development* **130**, 6065-6073.

Kucera B, Cohn MA, Leubner-Metzger G. 2007. Plant hormone interactions during seed dormancy release and germination. *Seed Science Research* **15**, 281-307.

Kumakura N, Takeda A, Fujioka Y, Motose H, Takano R, Watanabe Y. 2009. SGS3 and RDR6 interact and colocalize in cytoplasmic SGS3/RDR6-bodies. *FEBS Lett* **583**, 1261-1266.

Kuo HF, Chiou TJ. 2011. The Role of MicroRNAs in Phosphorus Deficiency Signaling. *Plant Physiology* **156**.

Kurihara Y, Takashi Y, Watanabe Y. 2006. The interaction between DCL1 and HYL1 is important for efficient and precise processing of pri-miRNA in plant microRNA biogenesis. *Rna* **12**, 206-212.

Kushiro T, Okamoto M, Nakabayashi K, Yamagishi K, Kitamura S, Asami T, Hirai N, Koshiba T, Kamiya Y, Nambara E. 2004. The *Arabidopsis* cytochrome P450 CYP707A encodes ABA 8'-hydroxylases: key enzymes in ABA catabolism. *Embo j* **23**, 1647-1656.

Kutter C, Schob H, Stadler M, Meins F, Jr., Si-Ammour A. 2007. MicroRNA-mediated regulation of stomatal development in *Arabidopsis*. *Plant Cell* **19**, 2417-2429.

Kwon M, Choe S. 2005. Brassinosteroid biosynthesis and dwarf mutants. *Journal of Plant Biology* **48**, 1.

Lalonde L, Bewley JD. 1986. Patterns of protein synthesis during the germination of pea axes, and the effects of an interrupting desiccation period. *Planta* **167**, 504-510.

Lane BG. 1991. Cellular desiccation and hydration: developmentally regulated proteins, and the maturation and germination of seed embryos. *Fasebj* **5**, 2893-2901.

Lashbrook CC, Tieman DM, Klee HJ. 1998. Differential regulation of the tomato ETR gene family throughout plant development. *Plant J* **15**, 243-252.

Laubinger S, Sachsenberg T, Zeller G, Busch W, Lohmann JU, Ratsch G, Weigel D. 2008a. Dual roles of the nuclear cap-binding complex and SERRATE in pre-mRNA splicing and microRNA processing in *Arabidopsis thaliana*. *Proc Natl Acad Sci U S A* **105**, 8795-8800.

Laufs P, Peaucelle A, Morin H, Traas J. 2004. MicroRNA regulation of the CUC genes is required for boundary size control in *Arabidopsis* meristems. *Development* **131**, 4311-4322.

Le BH, Wagmaister JA, Kawashima T, Bui AQ, Harada JJ, Goldberg RB. 2007. Using genomics to study legume seed development. *Plant Physiol* **144**, 562-574.

Leubner-Metzger G. 2001. Brassinosteroids and gibberellins promote tobacco seed germination by distinct pathways. *Planta* **213**, 758-763.

Leubner-Metzger G. 2007. Functions and regulation of β -1,3-glucanases during seed germination, dormancy release and after-ripening. *Seed Science Research* **13**, 17-34.

Li B, Foley ME. 1997. Genetic and molecular control of seed dormancy. *Trends in Plant Science* **2**, 384-389.

Li D, Wang L, Liu X, Cui D, Chen T, Zhang H, Jiang C, Xu C, Li P, Li S, Zhao L, Chen H. 2013. Deep sequencing of maize small RNAs reveals a diverse set of microRNA in dry and imbibed seeds. *PLoS One* **8**, e55107.

Li H, Xu L, Wang H, Yuan Z, Cao X, Yang Z, Zhang D, Xu Y, Huang H. 2005a. The Putative RNA-Dependent RNA Polymerase *RDR6* Acts Synergistically with *ASYMMETRIC LEAVES1* and *2* to Repress *BREVIPEDICELLUS* and MicroRNA165/166 in *Arabidopsis* Leaf Development. *Plant Cell* **17**, 2157-2171.

Li J, Yang Z, Yu B, Liu J, Chen X. 2005b. Methylation protects miRNAs and siRNAs from a 3'-end uridylation activity in *Arabidopsis*. *Curr Biol* **15**, 1501-1507.

Li WX, Oono Y, Zhu J, He XJ, Wu JM, Iida K, Lu XY, Cui X, Jin H, Zhu JK. 2008. The *Arabidopsis* NFYA5 transcription factor is regulated transcriptionally and posttranscriptionally to promote drought resistance. *The Plant Cell*, 2238-2251.

Lichtenthaler HK. 1999. THE 1-DEOXY-D-XYLULOSE-5-PHOSPHATE PATHWAY OF ISOPRENOID BIOSYNTHESIS IN PLANTS. *Annual Review of Plant Physiology and Plant Molecular Biology* **50**, 47-65.

Lindgren LO, Stalberg KG, Hoglund AS. 2003. Seed-specific overexpression of an endogenous Arabidopsis phytoene synthase gene results in delayed germination and increased levels of carotenoids, chlorophyll, and abscisic acid. *Plant Physiol* **132**, 779-785.

Liu PP, Montgomery TA, Fahlgren N, Kasschau KD, Nonogaki H, Carrington JC. 2007. Repression of AUXIN RESPONSE FACTOR10 by microRNA160 is critical for seed germination and post-germination stages. *Plant J* **52**, 133-146.

Lobbes D, Rallapalli G, Schmidt DD, Martin C, Clarke J. 2006. SERRATE: a new player on the plant microRNA scene. *EMBO reports* **7**, 1052-1058.

Locascio A, Roig-Villanova I, Bernardi J, Varotto S. 2014. Current perspectives on the hormonal control of seed development in Arabidopsis and maize: a focus on auxin. *Front Plant Sci* **5**, 412.

López-Bucio JS, Dubrovsky JG, Raya-González J, Ugartechea-Chirino Y, López-Bucio J, de Luna-

Valdez LA, Ramos-Vega M, León P, Guevara-García AA. 2014. Arabidopsis thaliana mitogen-activated protein kinase 6 is involved in seed formation and modulation of primary and lateral root development. *J Exp Bot* **65**, 169-183.

Lotan T, Ohto M, Yee KM, West MA, Lo R, Kwong RW, Yamagishi K, Fischer RL, Goldberg RB, Harada JJ. 1998. Arabidopsis LEAFY COTYLEDON1 is sufficient to induce embryo development in vegetative cells. *Cell* **93**, 1195-1205.

Lu C, Fedoroff N. 2000. A Mutation in the Arabidopsis *HYL1* Gene Encoding a dsRNA Binding Protein Affects Responses to Abscisic Acid, Auxin, and Cytokinin. *Plant Cell* **12**, 2351-2365.

Lynn K, Fernandez A, Aida M, Sedbrook J, Tasaka M, Masson P, Barton MK. 1999. The PINHEAD/ZWILLE gene acts pleiotropically in Arabidopsis development and has overlapping functions with the ARGONAUTE1 gene. *Development* **126**, 469-481.

Mallory AC, Bartel DP, Bartel B. 2005. MicroRNA-directed regulation of Arabidopsis AUXIN RESPONSE FACTOR17 is essential for proper development and modulates expression of early auxin response genes. *Plant Cell* **17**, 1360-1375.

Mallory AC, Dugas DV, Bartel DP, Bartel B. 2004. MicroRNA regulation of NAC-domain targets is required for proper formation and separation of adjacent embryonic, vegetative, and floral organs. *Curr Biol* **14**, 1035-1046.

Mallory AC, Elmayan T, Vaucheret H. 2008. MicroRNA maturation and action--the expanding roles of ARGONAUTES. *Curr Opin Plant Biol* **11**, 560-566.

Mallory AC, Vaucheret H. 2006. Functions of microRNAs and related small RNAs in plants. *Nature Genetics* **38**, S31.

Marin E, Jouannet V, Herz A, Lokerse AS, Weijers D, Vaucheret H. 2010a. miR390, Arabidopsis TAS3 tasiRNAs, and their AUXIN RESPONSE FACTOR targets define an autoregulatory network quantitatively regulating lateral root growth. *Plant Cell* **22**, 1104-1117.

Martin R, Martinez Andujar C, Nonogaki H. 2012. *Role of miRNAs in Seed Development.*

- Martin RC, Liu PP, Goloviznina NA, Nonogaki H.** 2010. microRNA, seeds, and Darwin?: diverse function of miRNA in seed biology and plant responses to stress. *J Exp Bot* **61**, 2229-2234.
- Matilla AJ.** 2007. Ethylene in seed formation and germination. *Seed Science Research* **10**, 111-126.
- Matsui A, Mizunashi K, Tanaka M, Kaminuma E, Nguyen AH, Nakajima M, Kim JM, Nguyen DV, Toyoda T, Seki M.** 2014. tasiRNA-ARF pathway moderates floral architecture in Arabidopsis plants subjected to drought stress. *Biomed Res Int* **2014**, 303451.
- Mayer U, Ruiz RAT, Berleth T, Miséra S, Jürgens G.** 1991. Mutations affecting body organization in the Arabidopsis embryo. *Nature* **353**, 402.
- McCarty DR.** 1995. Genetic Control and Integration of Maturation and Germination Pathways in Seed Development. *Annual Review of Plant Physiology and Plant Molecular Biology* **46**, 71-93.
- McQueen-Mason SJ, Cosgrove DJ.** 1995. Expansin mode of action on cell walls. Analysis of wall hydrolysis, stress relaxation, and binding. *Plant Physiol* **107**, 87-100.
- Meinke DW, Cherry JM, Dean C, Rounsley SD, Koornneef M.** 1998. Arabidopsis thaliana: a model plant for genome analysis. *Science* **282**, 662, 679-682.
- Meinke DW, Franzmann LH, Nickle TC, Yeung EC.** 1994. Leafy Cotyledon Mutants of Arabidopsis. *Plant Cell* **6**, 1049-1064.
- Millar AA, Gubler F.** 2005. The Arabidopsis GAMYB-like genes, MYB33 and MYB65, are microRNA-regulated genes that redundantly facilitate anther development. *Plant Cell* **17**, 705-721.
- Miyashima S, Koi S, Hashimoto T, Nakajima K.** 2011. Non-cell-autonomous microRNA165 acts in a dose-dependent manner to regulate multiple differentiation status in the Arabidopsis root. *Development* **138**, 2303-2313.
- Mok DW, Mok MC.** 2001. CYTOKININ METABOLISM AND ACTION. *Annu Rev Plant Physiol Plant Mol Biol* **52**, 89-118.
- Moldovan D, Spriggs A, Yang J, Pogson BJ, Dennis ES, Wilson IW.** 2010. Hypoxia-responsive microRNAs and trans-acting small interfering RNAs in Arabidopsis. *J Exp Bot* **61**, 165-177.
- Montgomery TA, Howell MD, Cuperus JT, Li D, Hansen JE, Alexander AL, Chapman EJ, Fahlgren N, Allen E, Carrington JC.** 2008. Specificity of ARGONAUTE7-miR390 interaction and dual functionality in TAS3 trans-acting siRNA formation. *Cell* **133**, 128-141.
- Morohashi Y.** 1986. Patterns of mitochondrial development in reserve tissues of germinated seeds: A survey. *Physiologia Plantarum* **66**, 653-658.
- Morohashi Y, Bewley JD.** 1980. Development of Mitochondrial Activities in Pea Cotyledons: INFLUENCE OF DESICCATION DURING AND FOLLOWING GERMINATION OF THE AXIS. *Plant Physiol* **66**, 637-640.
- Morohashi Y, Shimokoriyama M.** 1972. Physiological Studies on Germination of Phaseolus mungo Seeds: II. GLUCOSE AND ORGANIC-ACID METABOLISMS IN THE EARLY PHASES OF GERMINATION. *J Exp Bot* **23**, 54-61.

Mourrain P, Beclin C, Elmayan T, Feuerbach F, Godon C, Morel JB, Jouette D, Lacombe AM, Nikic S, Picault N, Remoue K, Sanial M, Vo TA, Vaucheret H. 2000. Arabidopsis SGS2 and SGS3 genes are required for posttranscriptional gene silencing and natural virus resistance. *Cell* **101**, 533-542.

Mu J, Tan H, Hong S, Liang Y, Zuo J. 2013. Arabidopsis transcription factor genes NF-YA1, 5, 6, and 9 play redundant roles in male gametogenesis, embryogenesis, and seed development. *Mol Plant* **6**, 188-201.

Muangsan N, Beclin C, Vaucheret H, Robertson D. 2004. Geminivirus VIGS of endogenous genes requires SGS2/SDE1 and SGS3 and defines a new branch in the genetic pathway for silencing in plants. *Plant J* **38**, 1004-1014.

Mullen RT, King JE, Gifford DJ. 1996. Changes in mRNA populations during loblolly pine (*Pinus taeda*) seed stratification, germination and post-germinative growth. *Physiologia Plantarum* **97**, 545-553.

Murashige T, Skoog F. 1962. A Revised Medium for Rapid Growth and Bio Assays with Tobacco Tissue Cultures. *Physiologia Plantarum* **15**, 473-497.

Nagasaki H, Itoh J, Hayashi K, Hibara K, Satoh-Nagasawa N, Nosaka M, Mukouhata M, Ashikari M, Kitano H, Matsuoka M, Nagato Y, Sato Y. 2007. The small interfering RNA production pathway is required for shoot meristem initiation in rice. *Proc Natl Acad Sci U S A* **104**, 14867-14871.

Nambara E, Marion-Poll A. 2003. ABA action and interactions in seeds. *Trends Plant Sci* **8**, 213-217.

Nambara E, Marion-Poll A. 2005. Abscisic acid biosynthesis and catabolism. *Annu Rev Plant Biol* **56**, 165-185.

Naya L, Khan GA, Sorin C, Hartmann C, Crespi M, Lelandais-Briere C. 2010. Cleavage of a non-conserved target by a specific miR156 isoform in root apexes of *Medicago truncatula*. *Plant Signal Behav* **5**, 328-331.

Neff MM, Neff JD, Chory J, Pepper AE. 1998. dCAPS, a simple technique for the genetic analysis of single nucleotide polymorphisms: experimental applications in *Arabidopsis thaliana* genetics. *Plant J* **14**, 387-392.

Newman JD, Chappell J. 1999. Isoprenoid biosynthesis in plants: carbon partitioning within the cytoplasmic pathway. *Crit Rev Biochem Mol Biol* **34**, 95-106.

Nicol, xc, S G, Aldasoro JJ. 1979. Activity of the Pentose Phosphate Pathway and Changes in Nicotinamide Nucleotide Content during Germination of Seeds of *Cicer arietinum* L. *J Exp Bot* **30**, 1163-1170.

Nikovics K, Blein T, Peaucelle A, Ishida T, Morin H, Aida M, Laufs P. 2006. The balance between the MIR164A and CUC2 genes controls leaf margin serration in *Arabidopsis*. *Plant Cell* **18**, 2929-2945.

Nogueira FT, Madi S, Chitwood DH, Juarez MT, Timmermans MC. 2007. Two small regulatory RNAs establish opposing fates of a developmental axis. *Genes Dev* **21**, 750-755.

Nogueira FT, Sarkar AK, Chitwood DH, Timmermans MC. 2006. Organ polarity in plants is specified through the opposing activity of two distinct small regulatory RNAs. *Cold Spring Harb Symp Quant Biol* **71**, 157-164.

Nogueira FTS, Chitwood DH, Madi S, Ohtsu K, Schnable PS, Scanlon MJ, Timmermans MCP. 2009. Regulation of Small RNA Accumulation in the Maize Shoot Apex. *PLOS Genetics* **5**, e1000320.

Ogawa M, Hanada A, Yamauchi Y, Kuwahara A, Kamiya Y, Yamaguchi S. 2003. Gibberellin biosynthesis and response during Arabidopsis seed germination. *Plant Cell* **15**, 1591-1604.

Osakabe Y, Maruyama K, Seki M, Satou M, Shinozaki K, Yamaguchi-Shinozaki K. 2005. Leucine-rich repeat receptor-like kinase1 is a key membrane-bound regulator of abscisic acid early signaling in Arabidopsis. *Plant Cell* **17**, 1105-1119.

Palatnik JF, Allen E, Wu X, Schommer C, Schwab R, Carrington JC, Weigel D. 2003. Control of leaf morphogenesis by microRNAs. *Nature* **425**, 257-263.

Park MY, Wu G, Gonzalez-Sulser A, Vaucheret H, Poethig RS. 2005. Nuclear processing and export of microRNAs in Arabidopsis. *Proc Natl Acad Sci U S A* **102**, 3691-3696.

Park S, Harada JJ. 2008. Arabidopsis embryogenesis. *Methods Mol Biol* **427**, 3-16.

Park W, Li J, Song R, Messing J, Chen X. 2002. CARPEL FACTORY, a Dicer homolog, and HEN1, a novel protein, act in microRNA metabolism in Arabidopsis thaliana. *Curr Biol* **12**, 1484-1495.

Pearson G, Robinson F, Beers Gibson T, Xu BE, Karandikar M, Berman K, Cobb MH. 2001. Mitogen-activated protein (MAP) kinase pathways: regulation and physiological functions. *Endocr Rev* **22**, 153-183.

Peng J, Harberd NP. 2002. The role of GA-mediated signalling in the control of seed germination. *Curr Opin Plant Biol* **5**, 376-381.

Peragine A, Yoshikawa M, Wu G, Albrecht HL, Poethig RS. 2004. SGS3 and SGS2/SDE1/RDR6 are required for juvenile development and the production of trans-acting siRNAs in Arabidopsis. *Genes Dev* **18**, 2368-2379.

Pfaffl MW. 2001. A new mathematical model for relative quantification in real-time RT-PCR. *Nucleic Acids Res* **29**, e45.

Poethig RS, Peragine A, Yoshikawa M, Hunter C, Willmann M, Wu G. 2006a. The function of RNAi in plant development. *Cold Spring Harb Symp Quant Biol* **71**, 165-170.

Pontier D, Picart C, Roudier F, Garcia D, Lahmy S, Azevedo J, Alart E, Laudie M, Karlowski WM, Cooke R, Colot V, Voinnet O, Lagrange T. 2012. NERD, a plant-specific GW protein, defines an additional RNAi-dependent chromatin-based pathway in Arabidopsis. *Mol Cell* **48**, 121-132.

Puga-Hermida MI, Gallardo M, Rodríguez-Gacío MdC, Matilla AJ. 2003. The heterogeneity of turnip-tops (*Brassica rapa*) seeds inside the siliques affects germination, the activity of the final step of the ethylene pathway, and abscisic acid and polyamine content. *Functional Plant Biology* **30**, 767-775.

Qi Y, Denli AM, Hannon GJ. 2005. Biochemical specialization within Arabidopsis RNA silencing pathways. *Mol Cell* **19**, 421-428.

Rai V, Sanagala R, Sinilal B, Yadav S, Sarkar AK, Dantu PK, Jain A. 2015. Iron Availability Affects Phosphate Deficiency-Mediated Responses, and Evidence of Cross-Talk with Auxin and Zinc in Arabidopsis. *Plant Cell Physiol* **56**, 1107-1123.

Rajagopalan R, Vaucheret H, Trejo J, Bartel DP. 2006. A diverse and evolutionarily fluid set of microRNAs in Arabidopsis thaliana. *Genes Dev* **20**, 3407-3425.

Ramaih S, Guedira M, Paulsen GM. 2003. Relationship of indoleacetic acid and tryptophan to dormancy and preharvest sprouting of wheat. *Functional Plant Biology* **30**, 939-945.

Razem FA, Luo M, Liu JH, Abrams SR, Hill RD. 2004. Purification and characterization of a barley aleurone abscisic acid-binding protein. *J Biol Chem* **279**, 9922-9929.

Reinhardt D, Pesce E-R, Stieger P, Mandel T, Baltensperger K, Bennett M, Traas J, Friml J, Kuhlemeier C. 2003. Regulation of phyllotaxis by polar auxin transport. *Nature* **426**, 255.

Reinhart BJ, Weinstein EG, Rhoades MW, Bartel B, Bartel DP. 2002. MicroRNAs in plants. *Genes Dev* **16**, 1616-1626.

Reiser L, Fischer RL. 1993. The Ovule and the Embryo Sac. *Plant Cell* **5**, 1291-1301.

Ren C, Zhu X, Zhang P, Gong Q. 2016. Arabidopsis COP1-interacting protein 1 is a positive regulator of ABA response *Biochemical and Biophysical Research Communications* **477** 847-853.

Reyes JL, Chua NH. 2007. ABA induction of miR159 controls transcript levels of two MYB factors during Arabidopsis seed germination. *Plant J* **49**, 592-606.

Rhoades MW, Reinhart BJ, Lim LP, Burge CB, Bartel B, Bartel DP. 2002. Prediction of plant microRNA targets. *Cell* **110**, 513-520.

Richards DE, King KE, Ait-Ali T, Harberd NP. 2001. HOW GIBBERELLIN REGULATES PLANT GROWTH AND DEVELOPMENT: A Molecular Genetic Analysis of Gibberellin Signaling. *Annu Rev Plant Physiol Plant Mol Biol* **52**, 67-88.

Rodriguez MC, Petersen M, Mundy J. 2010a. Mitogen-activated protein kinase signaling in plants. *Annu Rev Plant Biol* **61**, 621-649.

Rodriguez RE, Mecchia MA, Debernardi JM, Schommer C, Weigel D, Palatnik JF. 2010b. Control of cell proliferation in Arabidopsis thaliana by microRNA miR396. *Development* **137**, 103-112.

Rohde A, Kurup S, Holdsworth M. 2000. ABI3 emerges from the seed. *Trends Plant Sci* **5**, 418-419.

Rousselin P, Kraepiel Y, Maldiney R, Miginiac E, Caboche M. 1992. Characterization of three hormone mutants of Nicotiana plumbaginifolia: evidence for a common ABA deficiency. *Theor Appl Genet* **85**, 213-221.

Rubio-Somoza I, Weigel D. 2011. MicroRNA networks and developmental plasticity in plants. *Trends in Plant Science* **16**, 258-264.

Saini HS, Consolacion ED, Bassi PK, Spencer MS. 1989. Control processes in the induction and relief of thermoinhibition of lettuce seed germination : actions of phytochrome and endogenous ethylene. *Plant Physiol* **90**, 311-315.

Salon C, Raymond P, Pradet A. 1988. Quantification of carbon fluxes through the tricarboxylic acid cycle in early germinating lettuce embryos. *J Biol Chem* **263**, 12278-12287.

Sambrook J, Fritsch EF, Maniatis T. 1989. *Molecular cloning: a laboratory manual*. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press.

Sanan-Mishra N, Mukherjee SK. 2007. A peep into the plant miRNA world. . *Open Plant Journal* **1**, 1-9.

Sanan-Mishra N, Varanasi SP, Mukherjee SK. 2013. Micro-regulators of auxin action. *Plant Cell Rep* **32**, 733-740.

Sandoval JA, Huang ZH, Garrett DC, Gage DA, Chapman KD. 1995. N-acylphosphatidylethanolamine in dry and imbibing cottonseeds. Amounts, molecular species, and enzymatic synthesis. *Plant Physiol* **109**, 269-275.

Schmidt J, Altmann T, Adam G. 1997. Brassinosteroids from seeds of *Arabidopsis thaliana*. *Phytochemistry* **45**, 1325-1327.

Schommer C, Palatnik JF, Aggarwal P, Chételat A, Cubas P, Farmer EE, Nath U, Weigel D. 2008. Control of Jasmonate Biosynthesis and Senescence by miR319 Targets. *PLOS Biology* **6**, e230.

Schwab R, Palatnik JF, Riester M, Schommer C, Schmid M, Weigel D. 2005. Specific effects of microRNAs on the plant transcriptome. *Dev Cell* **8**, 517-527.

Schwartz SH, Zeevaart JAD. 2010. Abscisic Acid Biosynthesis and Metabolism. In: Davies PJ, ed. *Plant Hormones: Biosynthesis, Signal Transduction, Action!* Dordrecht: Springer Netherlands, 137-155.

Schwechheimer C, Bevan M. The regulation of transcription factor activity in plants. *Trends in Plant Science* **3**, 378-383.

Sessions A, Weigel D, Yanofsky MF. 1999. The *Arabidopsis thaliana* MERISTEM LAYER 1 promoter specifies epidermal expression in meristems and young primordia. *Plant J* **20**, 259-263.

Shukla LI, Chinnusamy V, Sunkar R. 2008. The role of microRNAs and other endogenous small RNAs in plant stress responses. *Biochim Biophys Acta* **1779**, 743-748.

Sieber P, Wellmer F, Gheyselinck J, Riechmann JL, Meyerowitz EM. 2007. Redundancy and specialization among plant microRNAs: role of the MIR164 family in developmental robustness. *Development* **134**, 1051-1060.

Singh DP, Jermakow AM, Swain SM. 2002. Gibberellins are required for seed development and pollen tube growth in *Arabidopsis*. *Plant Cell* **14**, 3133-3147.

Singh G, Kumar S, Singh P. 2003. A Quick Method to Isolate RNA From Wheat and Other Carbohydrate-Rich Seeds. . *Plant Mol. Bio. Rep.* **21**, 93a-93f.

Singh N, Srivastava S, Sharma A. 2015. Identification and analysis of miRNAs and their targets in ginger using bioinformatics approach *Gene*, 570-576.

Song L, Han MH, Lesicka J, Fedoroff N. 2007. Arabidopsis primary microRNA processing proteins HYL1 and DCL1 define a nuclear body distinct from the Cajal body. *Proc Natl Acad Sci U S A* **104**, 5437-5442.

Sorin C, M. D, Christ A, Blein T, Ma L, Briere CL, Njo MF, Beckman T, Crespi M, Hartmann C. 2014. A miR169 isoform regulates specific NF-YA targets and root architecture in Arabidopsis. *New Phytologist* **202**, 1197–1211

Srivastava S, Srivastava AK, Suprasanna P, S.F. DS, . 2012. Identification and profiling of arsenic stress-induced microRNAs in Brassica juncea. *Journal of Experimental Botany* **Vol. 64** 303–315.

Steber CM, Cooney SE, McCourt P. 1998. Isolation of the GA-response mutant sly1 as a suppressor of ABI1-1 in Arabidopsis thaliana. *Genetics* **149**, 509-521.

Steber CM, McCourt P. 2001. A role for brassinosteroids in germination in Arabidopsis. *Plant Physiol* **125**, 763-769.

Stone SL, Braybrook SA, Paula SL, Kwong LW, Meuser J, Pelletier J, Hsieh TF, Fischer RL, Goldberg RB, Harada JJ. 2008. Arabidopsis LEAFY COTYLEDON2 induces maturation traits and auxin activity: Implications for somatic embryogenesis. *Proc Natl Acad Sci U S A* **105**, 3151-3156.

Strader LC, Ritchie S, Soule JD, McGinnis KM, Steber CM. 2004. Recessive-interfering mutations in the gibberellin signaling gene SLEEPY1 are rescued by overexpression of its homologue, SNEEZY. *Proc Natl Acad Sci U S A* **101**, 12771-12776.

Sunkar R, Chinnusamy V, Zhu J, Zhu JK. 2007. Small RNAs as big players in plant abiotic stress responses and nutrient deprivation. *Trends Plant Sci* **12**, 301-309.

Swarup R, Péret B. 2012. AUX/LAX family of auxin influx carriers—an overview. *Front Plant Sci* **3**.

Szekeres M. 2003. Brassinosteroid and systemin: two hormones perceived by the same receptor. *Trends Plant Sci* **8**, 102-104.

Takeuchi Y, Omigawa Y, Ogasawara M, Yoneyama K, Konnai M, Worsham AD. 1995. Effects of brassinosteroids on conditioning and germination of clover broomrape (*Orobanche minor*) seeds. *Plant Growth Regulation* **16**, 153-160.

Thompson AJ, Jackson AC, Symonds RC, Mulholland BJ, Dadswell AR, Blake PS, Burbidge A, Taylor IB. 2000. Ectopic expression of a tomato 9-cis-epoxycarotenoid dioxygenase gene causes over-production of abscisic acid. *Plant J* **23**, 363-374.

Timmermans MC, Schultes NP, Jankovsky JP, Nelson T. 1998. Leafbladeless1 is required for dorsoventrality of lateral organs in maize. *Development* **125**, 2813-2823.

Toole EH, Hendricks SB, Borthwick HA, Toole VK. 1956. Physiology of Seed Germination. *Annual Review of Plant Physiology* **7**, 299-324.

Trewavas AJ. 1987. Timing and memory processes in seed embryo dormancy – a conceptual paradigm for plant development questions. *BioEssays* **6**, 87-92.

Ueda M, Zhang Z, Laux T. 2011. Transcriptional Activation of Arabidopsis Axis Patterning Genes WOX8/9 Links Zygote Polarity to Embryo Development. *Dev Cell* **20**, 264-270.

Van Hengel AJ, Roberts K. 2003. AtAGP30, an arabinogalactan-protein in the cell walls of the primary root, plays a role in root regeneration and seed germination. *The Plant Journal* **36**, 256-270.

Vanneste S, Friml J. 2012. Deconstructing auxin sensing. *Nature Chemical Biology* **8**, 415.

Varkonyi-Gasic E, Wu R, Wood M, Walton EF, Hellens RP. 2007. Protocol: a highly sensitive RT-PCR method for detection and quantification of microRNAs. *Plant Methods* **3**, 12.

Vaucheret H. 2006. Post-transcriptional small RNA pathways in plants: mechanisms and regulations. *Genes Dev* **20**, 759-771.

Vaucheret H, Mallory AC, Bartel DP. 2006.AGO1 homeostasis entails coexpression of MIR168 and AGO1 and preferential stabilization of miR168 by AGO1. *Mol Cell* **22**, 129-136.

Vaucheret H, Vazquez F, Crete P, Bartel DP. 2004. The action of ARGONAUTE1 in the miRNA pathway and its regulation by the miRNA pathway are crucial for plant development. *Genes Dev* **18**, 1187-1197.

Vazquez F, Vaucheret H, Rajagopalan R, Lepers C, Gasciolli V, Mallory AC, Hilbert JL, Bartel DP, Crete P. 2004. Endogenous trans-acting siRNAs regulate the accumulation of Arabidopsis mRNAs. *Mol Cell* **16**, 69-79.

Verma P, Majee M. 2013. Seed Germination and Viability Test in Tetrazolium (TZ) Assay. *Bio-protocol* **Vol 3**.

Vleeshouwers LM, Bouwmeester HJ, Karssen CM. 1995. Redefining Seed Dormancy: An Attempt to Integrate Physiology and Ecology. *Journal of Ecology* **83**, 1031-1037.

Walz A, Park S, Slovin JP, Ludwig-Muller J, Momonoki YS, Cohen JD. 2002. A gene encoding a protein modified by the phytohormone indoleacetic acid. *Proc Natl Acad Sci U S A* **99**, 1718-1723.

Wang F, Perry SE. 2013. Identification of direct targets of FUSCA3, a key regulator of Arabidopsis seed development. *Plant Physiol* **161**, 1251-1264.

Wang H, Ngwenyama N, Liu Y, Walker JC, Zhang S. 2007. Stomatal development and patterning are regulated by environmentally responsive mitogen-activated protein kinases in Arabidopsis. *Plant Cell* **19**, 63-73.

Wang JW, Wang LJ, Mao YB, Cai WJ, Xue HW, Chen XY. 2005. Control of root cap formation by MicroRNA-targeted auxin response factors in Arabidopsis. *Plant Cell* **17**, 2204-2216.

Wang L, Liu H, Li D, Chen H. 2011. Identification and characterization of maize microRNAs involved in the very early stage of seed germination *BMC Genomics*.

Wang S, Hagen G, Guilfoyle TJ. 2013. ARF-Aux/IAA interactions through domain III/IV are not strictly required for auxin-responsive gene expression. *Plant Signaling & Behavior* **8**, e24526.

Wasternack C, Forner S, Strnad M, Hause B. 2013. Jasmonates in flower and seed development. *Biochimie* **95**, 79-85.

Weitbrecht K, Muller K, Leubner-Metzger G. 2011. First off the mark: early seed germination. *J Exp Bot* **62**, 3289-3309.

West M, Harada JJ. 1993. Embryogenesis in Higher Plants: An Overview. *Plant Cell* **5**, 1361-1369.

Wharton MJ. 1955. The use of tetrazolium test for determining the viability of seeds of the genus Brassica. *Proc Int Seed Test Assoc* **20**, 81-88.

White CN, Proebsting WM, Hedden P, Rivin CJ. 2000. Gibberellins and seed development in maize. I. Evidence that gibberellin/abscisic acid balance governs germination versus maturation pathways. *Plant Physiol* **122**, 1081-1088.

Willmann MR, Mehalick AJ, Packer RL, Jenik PD. 2011. MicroRNAs regulate the timing of embryo maturation in Arabidopsis. *Plant Physiol* **155**, 1871-1884.

Wobus U, Weber H. 1999. Seed maturation: genetic programmes and control signals. *Curr Opin Plant Biol* **2**, 33-38.

Wojcikowska B, Jaskola K, Gasiorek P, Meus M, Nowak K, Gaj MD. 2013. LEAFY COTYLEDON2 (LEC2) promotes embryogenic induction in somatic tissues of Arabidopsis, via YUCCA-mediated auxin biosynthesis. *Planta* **238**, 425-440.

Wu G, Park MY, Conway SR, Wang JW, Weigel D, Poethig RS. 2009. The sequential action of miR156 and miR172 regulates developmental timing in Arabidopsis. *Cell* **138**, 750-759.

Wu G, Poethig RS. 2006. Temporal regulation of shoot development in *Arabidopsis thaliana* by miR156 and its target SPL3. *Development* **133**, 3539-3547.

Wu H-J, Wang Z-M, Wang M, Wang X-J. 2013. Widespread Long Noncoding RNAs as Endogenous Target Mimics for MicroRNAs in Plants. *Plant Physiol* **161**, 1875.

Xie M, Yu B. 2015. siRNA-directed DNA Methylation in Plants. *Curr Genomics* **16**, 23-31.

Xiong L, Gong Z, Rock CD, Subramanian S, Guo Y, Xu W, Galbraith D, Zhu JK. 2001. Modulation of abscisic acid signal transduction and biosynthesis by an Sm-like protein in Arabidopsis. *Dev Cell* **1**, 771-781.

Xiong L, Zhu JK. 2003. Regulation of abscisic acid biosynthesis. *Plant Physiol* **133**, 29-36.

Xu M, Hu T, Zhao J, Park MY, Earley KW, Wu G, Yang L, Poethig RS. 2016. Developmental Functions of miR156-Regulated SQUAMOSA PROMOTER BINDING PROTEIN-LIKE (SPL) Genes in *Arabidopsis thaliana*. *PLoS Genet* **12**, e1006263.

Xu MY, Zhang L, Li WW, Hu XL, Wang MB, Fan YL, Zhang CY, Wang L. 2013. Stress-induced early flowering is mediated by miR169 in *Arabidopsis thaliana*. *Journal of Experimental Botany*.

Yamaguchi A, Wu MF, Yang L, Wu G, Poethig RS, Wagner D. 2009. The microRNA-regulated SBP-Box transcription factor SPL3 is a direct upstream activator of LEAFY, FRUITFULL, and APETALA1. *Dev Cell* **17**, 268-278.

Yamaguchi S. 2008. Gibberellin metabolism and its regulation. *Annu Rev Plant Biol* **59**, 225-251.

Yamaguchi S, Kamiya Y, Sun T. 2001. Distinct cell-specific expression patterns of early and late gibberellin biosynthetic genes during *Arabidopsis* seed germination. *Plant J* **28**, 443-453.

Yamauchi Y, Ogawa M, Kuwahara A, Hanada A, Kamiya Y, Yamaguchi S. 2004. Activation of gibberellin biosynthesis and response pathways by low temperature during imbibition of *Arabidopsis thaliana* seeds. *Plant Cell* **16**, 367-378.

Yan J, Cai X, Luo J, Sato S, Jiang Q, Yang J, Cao X, Hu X, Tabata S, Gresshoff PM, Luo D. 2010. The REDUCED LEAFLET genes encode key components of the trans-acting small interfering RNA pathway and regulate compound leaf and flower development in *Lotus japonicus*. *Plant Physiol* **152**, 797-807.

Yan J, Zhao C, Zhou J, Yang Y, Wang P, Zhu X, Tang G, Bressan RA, Zhu J-K. 2016. The miR165/166 Mediated Regulatory Module Plays Critical Roles in ABA Homeostasis and Response in *Arabidopsis thaliana*. *PLOS Genetics* **12**, e1006416.

Yang L, Liu Z, Lu F, Dong A, Huang H. 2006. SERRATE is a novel nuclear regulator in primary microRNA processing in *Arabidopsis*. *Plant J* **47**, 841-850.

Yant L, Mathieu J, Dinh TT, Ott F, Lanz C, Wollmann H, Chen X, Schmid M. 2010. Orchestration of the floral transition and floral development in *Arabidopsis* by the bifunctional transcription factor APETALA2. *Plant Cell* **22**, 2156-2170.

Yu B, Yang Z, Li J, Minakhina S, Yang M, Padgett RW, Steward R, Chen X. 2005. Methylation as a crucial step in plant microRNA biogenesis. *Science* **307**, 932-935.

Zhai L, Xu L, Wang Y, Zhu X, Feng H, Li C, Luo X, Everlyne MM, Liu L. 2016. Transcriptional identification and characterization of differentially expressed genes associated with embryogenesis in radish (*Raphanus sativus* L.). *Scientific Reports* **6**, 21652.

Zhang J, Zhang S, Han S, Li X, Tong Z, Qi L. 2013. Deciphering small noncoding RNAs during the transition from dormant embryo to germinated embryo in Larches (*Larix leptolepis*). *PLoS One* **8**, e81452.

Zhang JF, Yuan LJ, Shao Y, Du W, Yan DW, Lu YT. 2008. The disturbance of small RNA pathways enhanced abscisic acid response and multiple stress responses in *Arabidopsis*. *Plant Cell Environ* **31**, 562-574.

Zhang T, Liu Y, Yang T, Zhang L, Xu S, Xue L, An L. 2006. Diverse signals converge at MAPK cascades in plant. *Plant Physiol Biochem* **44**, 274-283.

Zhao B, Li J. 2012. Regulation of Brassinosteroid Biosynthesis and InactivationF. *Journal of Integrative Plant Biology* **54**, 746-759.

Zhao L, Kim Y, Dinh TT, Chen X. 2007. miR172 regulates stem cell fate and defines the inner boundary of APETALA3 and PISTILLATA expression domain in Arabidopsis floral meristems. *Plant J* **51**, 840-849.

Zhao M, Ding H, Zhu JK, Zhang F, Li WX. 2011. Involvement of miR169 in the nitrogen-starvation responses in Arabidopsis. *New Phytol* **190**, 906-915.

Zhao Y. 2010. Auxin biosynthesis and its role in plant development. *Annu Rev Plant Biol* **61**, 49-64.

Zhou GK, Kubo M, Zhong R, Demura T, Ye ZH. 2007. Overexpression of miR165 affects apical meristem formation, organ polarity establishment and vascular development in Arabidopsis. *Plant Cell Physiol* **48**, 391-404.

Zhu T, Moschou PN, Alvarez JM, Sohlberg JJ, von Arnold S. 2016. WUSCHEL-RELATED HOMEOBOX 2 is important for protoderm and suspensor development in the gymnosperm Norway spruce. *BMC Plant Biology* **16**, 19.