

## Research Publications

June 2018

- **D. Reinhardt**, A. Wiemken, and T. Boller (1991). Induction of ethylene biosynthesis in compatible and incompatible interactions of soybean roots with *Phytophthora megasperma* f. sp. *glycinea* and its relation to phytoalexin accumulation. **J. Plant Physiol.** 138, 394-399.
- P. Spanu, **D. Reinhardt**, and T. Boller (1991). Analysis and cloning of the ethylene-forming enzyme from tomato by functional expression of its mRNA in *Xenopus laevis* oocytes. **EMBO J.** 10, 2007-2013.
- S. C. Peck, **D. Reinhardt**, D. C. Olson, T. Boller, and H. Kende (1992). Localization of the ethylene-forming enzyme from tomatoes, 1-aminocyclopropane-1-carboxylate oxidase, in transgenic yeast. **J. Plant Physiol.** 140, 681-686.
- **D. Reinhardt**, H. Kende, and T. Boller (1994). Subcellular localization of 1-aminocyclopropane-1-carboxylate oxidase in tomato cells. **Planta** 195, 142-146.
- **D. Reinhardt**, F. Wittwer, T. Mandel, and C. Kuhlemeier (1998). Localized upregulation of a new expansin gene predicts the site of leaf formation in the tomato meristem. **Plant Cell** 10, 1427-1438.
- **D. Reinhardt**, T. Mandel, and C. Kuhlemeier (2000). Auxin regulates the initiation and radial position of plant lateral organs. **Plant Cell** 12, 507-518.
- P. A. Stieger, **D. Reinhardt** and C. Kuhlemeier (2002). The auxin influx carrier is essential for correct leaf positioning. **Plant J.** 32, 509-517.
- M. Klein, L. Perfus-Barbeoch, A. Frelet, N. Gaedeke, **D. Reinhardt**, B. Mueller-Roeber, E. Martinoia and C. Forestier (2003). The plant multidrug resistance ABC transporter AtMRP5 is involved in guard cell hormonal signalling and water use. **Plant J.** 33, 119-129.
- H. Hellmann, L. Hobbie, A. Chapman, S. Dharmasiri, N. Dharmasiri, C. del Pozo, **D. Reinhardt** and M. Estelle. (2003) *Arabidopsis* AXR6 encodes CUL1 implicating SCF ubiquitin ligases in auxin regulation of embryogenesis, **EMBO J.** 22, 3314-3325.
- **D. Reinhardt**, M. Frenz, T. Mandel and C. Kuhlemeier. (2003) Microsurgical and laser ablation analysis of interactions between the zones and layers of the tomato shoot apical meristem. **Development**, 130: 4073-4083.
- **D. Reinhardt**, E. Pesce, P. Stieger, T. Mandel, K. Baltensperger, M. Bennett, J. Traas, J. Friml and C. Kuhlemeier. (2003) Regulation of phyllotaxis by polar auxin transport. **Nature**, 426, 255-260.
- **D. Reinhardt**, M. Frenz and C. Kuhlemeier (2005). Microsurgical and laser ablation analysis of leaf positioning and dorsoventral patterning in tomato. **Development** 132, 15-26.
- R. S. Smith, S. Guyomarc'h, T. Mandel, **D. Reinhardt**, C. Kuhlemeier and P. Prusinkiewicz (2006). A plausible model of phyllotaxis. **PNAS** 103, 1301-1306.
- D.M.R. Sekhara Reddy, M. Schorderet, U. Feller and **D. Reinhardt**. (2007). A petunia mutant affected in intracellular accommodation and morphogenesis of arbuscular mycorrhizal fungi. **Plant J.** 51, 739-750.
- S. Wegmüller, S. Svistoonoff, **D. Reinhardt**, J. Stuurman, N. Amrhein, and M. Bucher (2008). A transgenic dTph1 insertional mutagenesis system for forward genetics in mycorrhizal phosphorus transport of *Petunia*. **Plants J.** 54, 1115-1127.
- S. Streb, T. Delatte, M. Umhang, S. Eicke, M. Schorderet, **D. Reinhardt**, and S.C. Zeeman (2008). Starch granule biosynthesis in *Arabidopsis* is abolished by removal of all debranching enzymes, but is restored by subsequent removal of an endoamylase. **Plant Cell** 20, 3448-3466.

- T.A. Colquhoun, B.C.J. Schimmel, J.Y. Kim, **D. Reinhardt**, K. Cline, and D.G. Clark. (2010). A petunia chorismate mutase specialized for the production of floral volatiles. **Plants J.** 61, 145-155.
- N. Feddermann, R.R. Duvvuru Muni, T. Zeier, J. Stuurman, F. Ercolin, M. Schorderet, **D. Reinhardt**. (2010). The *PAM1* gene of petunia, required for intracellular accommodation and morphogenesis of arbuscular mycorrhizal fungi, encodes a homologue of VAPYRIN. **Plant J.** 64, 470-481.
- F. Breuillin, J. Schramm, M. Hajirezaei, A. Ahkami, P Favre, U Druège, B. Hause, M. Bucher, T. Kretschmar, E Bossolini, C. Kuhlemeier, E. Martinoia, P. Franken, U. Scholz and **D. Reinhardt** (2010). Phosphate systemically inhibits development of arbuscular mycorrhiza in *Petunia hybrida* and represses genes involved in mycorrhizal functioning. **Plant J.**, 64, 1002-1017.
- E. Bossolini, U. Klahre, A. Brandenburg, **D. Reinhardt**, C. Kuhlemeier (2010) High resolution linkage maps of the model organism *Petunia* reveal substantial synteny decay with the related genome of tomato. **Genome** 54, 327-340.
- N. Feddermann and **D. Reinhardt** (2011) Conserved residues in the ankyrin domain of VAPYRIN indicate potential protein-protein interaction surfaces. **Plant Signaling & Behavior**, 6, 680-684.
- T. Kretschmar, W. Kohlen, J. Sasse, L. Borghi, M. Schlegel, J.B. Bachelier, **D. Reinhardt**, R. Bours, H.J. Bouwmeester, E. Martinoia. (2012). A petunia ABC protein controls strigolactone-dependent symbiotic signaling and branching. **Nature** 483, 341-344.
- D. Kierzkowski, N. Nakayama, A.-L. Routier-Kierzkowski, A. Weber, E. Bayer, M. Schorderet, **D. Reinhardt**, C. Kuhlemeier, R. Smith (2012). Hyperelastic domains regulate growth and organogenesis in the plant shoot apical meristem. **Science** 335, 1096-1099.
- E. Nouri, F. Breuillin-Sessoms, U. Feller, **D. Reinhardt** (2014). Phosphorus and nitrogen regulate arbuscular mycorrhiza in *Petunia hybrida*. **PLoS One** 9 (3), e90841.
- H. Ahkami, U. Scholz, B. Steruernagel, M. Strickert, K.-T. Haensch, U. Druège, **D. Reinhardt**, E. Nouri, N. von Wirén, P. Franken, M. R. Hajirezaei (2014). Comprehensive transcriptome analysis unravels the existence of crucial genes regulating primary metabolism during adventitious root formation in *Petunia hybrida*. **PLoS One** 9 (6), e100997.
- P. Favre, L. Bapaume, E. Bossolini, M. Delorenzi, L. Falquet, **D. Reinhardt** (2014). A novel bioinformatics pipeline to discover genes related to arbuscular mycorrhizal symbiosis based on their evolutionary conservation pattern among higher plants. **BMC Plant Biol.** 14, 333.
- Y. Deb, D. Marti, M. Frenz, C. Kuhlemeier, **D. Reinhardt** (2015). Phyllotaxis involves auxin drainage through leaf primordia. **Development** 142, 1992-2001.
- Feller, P. Favre, A. Janka, S. Zeeman, J.-P. Gabriel, and **D. Reinhardt**. (2015). Mathematical modelling of the dynamics of shoot-root interactions and resource partitioning in plant growth. **PLoS One** 10, e0127905.
- M. K. Rich, M. Schorderet, L. Bapaume, L. Falquet, P. Morel, M. Vandenbussche, **D. Reinhardt**. (2015). The *Petunia* GRAS transcription factor ATA/RAM1 regulates symbiotic gene expression and fungal morphogenesis in arbuscular mycorrhiza. **Plant Phys.** 168, 788-797.
- Bombarely, M. Moser, A. Amrad, L. Bapaume, C. S. Barry, M. Bliëk, M. R. Boersma, L. Borghi, R. Bruggmann, M. Bucher, N. D'Agostino, U. Druège, N. Dudareva, M. Egea-Cortines, M. Delledonne, N. Fernandez-Pozo, P. Franken, L. Grandont, J.S. Heslop-Harrison, J. Hintzsche, M. Johns, R. Koes, X. Lv, E. Lyons, D. Malla, E. Martinoia, N. S. Mattson, P. Morel, L. A. Mueller, J. Muhlemann, E. Nouri, V. Passeri, M. Pezzotti, Q. Qi, **D. Reinhardt**, M. Rich, *et al.* (2016). Insight into the evolution of the *Solanaceae* from the parental genomes of *Petunia hybrida*. **Nature Plants**, 2, 16074-16082.

- M. Rich, P.-E. Courty, C. Roux, **D. Reinhardt**. (2017) Role of the GRAS transcription factor ATA/RAM1 in the transcriptional reprogramming of arbuscular mycorrhiza in *Petunia hybrida*. **BMC Genomics** 18, 589.
- S. Robinson, M. Huflejt, P. Barbier de Reuille, S. A. Braybrook, M. Schorderet, **D. Reinhardt**, C. Kuhlemeier (2017) An automated confocal micro-extensometer enables *in vivo* quantification of mechanical properties with cellular resolution. **Plant Cell** 29, 2959-2973.
- M. Schorderet, R. R. Duvvuru Muni, A. Fiebig, and D. Reinhardt (2018). Deregulation of MADS-box transcription factor genes in a mutant defective in the *WUSCHEL-LIKE HOMEODOMAIN* gene *EVERGREEN* of *Petunia hybrida*. **Plant Signaling & Behavior**, in press.

## Invited reviews and book chapters

- C. Kuhlemeier and **D. Reinhardt** (2001). Auxin and phyllotaxis. **Trends in Plant Sciences** 6, 187-189.
- **D. Reinhardt** and C. Kuhlemeier (2001). Phyllotaxis in higher plants. In: Meristematic Tissues in Plant Growth and Development. (M. McManus and B. Veit., eds), Sheffield Academic Press, 172-212.
- **D. Reinhardt** and C. Kuhlemeier (2002). Plant Architecture. **EMBO reports** 3, 846-851.
- **D. Reinhardt**. Vascular patterning: More than just auxin? (2003) **Current Biology**, 13, R485-R497.
- **D. Reinhardt** (2005). Regulation of Phyllotaxis. **Int. J. Dev. Biol.** 49, 539-546.
- **D. Reinhardt** (2005). Phyllotaxis – A new chapter in an old tale about beauty and magic numbers. **Curr Opin. Plant Biol.** 8, 487-493.
- **D. Reinhardt**. (2007) Programming good relations - Development of the arbuscular mycorrhizal symbiosis. **Curr Opin. Plant Biol.** 10, 98-105.
- D.M.R. Sekhara Reddy, S. Wegmüller, F. Breuillin, S. Svistoonoff, M. Bucher and **D. Reinhardt** (2009). Development and function of the arbuscular mycorrhizal symbiosis in *Petunia*; *In Petunia*, T. Gerats & J. Strommer (eds.), 2nd edition (Berlin: Springer-Verlag), 131-156.
- F. Ercolin and **D. Reinhardt** (2011). Successful joint ventures of plants: arbuscular mycorrhiza and beyond. **Trends in Plant Science** 16, 356-362.
- L. Bapaume and **D. Reinhardt** (2012). How membranes shape plant symbioses: Signaling and transport in nodulation and arbuscular mycorrhiza. **Frontiers in Plant Science**, 3, 223, 1-29.
- M. Rich, M. Schorderet and **D. Reinhardt** (2014). The role of the cell wall compartment in symbiotic interactions of plants. **Frontiers in Plant Science** 5, 238.
- E. Nouri and D. Reinhardt (2015). Flowers and mycorrhizal roots - closer than we think? **Trends in Plant Science** 20, 344-350..
- M. K. Rich, E. Nouri, P.-E. Courty, and D. Reinhardt (2017). Diet of arbuscular mycorrhizal fungi - Bread and butter? **Trends in Plant Science** 22, 652-660.
- N. Dursun & D. Reinhardt (2017). The symbiosis of *Medicago truncatula* with arbuscular mycorrhizal fungi. The Model Legume *Medicago truncatula* (F. Debruijn, Ed.), Wiley, in press.
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