

Wolfgang Busch – Curriculum Vitae

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Professional Career

- 2011-present Group Leader, Gregor Mendel Institute of Molecular Plant Biology, Austrian Academy of Sciences, Vienna, Austria
- 2008-2010 Postdoctoral Associate, Duke University, Durham, USA, IGSP Center for Systems Biology, Laboratory of Dr. Philip Benfey
- 2004-2008 Ph.D. student, Max Planck Institute for Developmental Biology, Tübingen, Germany, Department of Dr. Detlef Weigel; Advisor: Dr. Jan Lohmann
- 2003-2004 Diploma (MSc equivalent) in Biology, Eberhard-Karls-Universität Tübingen, Germany; Advisor: Dr. Friedrich Schöffl
- 2001-2002 Research Semester, University of California, Department of Biology, San Diego, USA; Advisor: Dr. Milton Saier

Education:

- 2008 Ph.D., Biology, *summa cum laude*, University of Tübingen, Germany
- 2004 Diploma, Biology, University of Tübingen, Germany

Representative Publications

1. Slovak R, Goschl C, Su X, Shimotani K, Shiina T, **Busch W** (2014) A Scalable Open-Source Pipeline for Large-Scale Root Phenotyping of Arabidopsis. Plant Cell 26: 2390-2403
2. Meijon M, Satbhai SB, Tsuchimatsu T, **Busch W** (2014) Genome-Wide Association Study Using Cellular Traits Identifies a New Regulator of Root Development in Arabidopsis. Nature Genetics 46: 77-81
3. **Busch W**, Moore BT, Martsberger B, Mace DL, Twigg RW, Jung J, Pruteanu-Malinici I, Kennedy SJ, Fricke GK, Clark RL, Ohler U, Benfey PN (2012) A Microfluidic Device and Computational Platform for High-Throughput Live Imaging of Gene Expression. Nature Methods 9: 1101-1106
4. Iyer-Pascuzzi AS, Jackson T, Cui H, Petricka JJ, **Busch W**, Tsukagoshi H, Benfey PN (2011) Cell Identity Regulators Link Development and Stress Responses in the Arabidopsis Root. Developmental Cell 21: 770-782
5. Tsukagoshi H, **Busch W**, Benfey PN (2010) Transcriptional Regulation of ROS Controls Transition from Proliferation to Differentiation in the Root. Cell 143: 606-616
6. Sozzani R, Cui H, Moreno-Risueno MA, **Busch W**, Van Norman JM, Vernoux T, Brady SM, Dewitte W, Murray JA, Benfey PN (2010) Spatiotemporal Regulation of Cell-Cycle Genes by SHORTROOT Links Patterning and Growth. Nature 466: 128-132
7. Long TA, Tsukagoshi H, **Busch W**, Lahner B, Salt DE, Benfey PN (2010) The bHLH Transcription Factor POPEYE Regulates Response to Iron Deficiency in Arabidopsis Roots. Plant Cell 22: 2219-2236
8. **Busch W**, Miotk A, Ariel FD, Zhao Z, Forner J, Daum G, Suzuki T, Schuster C, Schultheiss SJ, Leibfried A, Haubeiss S, Ha N, Chan RL, Lohmann JU (2010) Transcriptional Control of a Plant Stem Cell Niche. Developmental Cell 18: 849-861
9. Fulton L, Batoux M, Vaddepalli P, Yadav RK, **Busch W**, Andersen SU, Jeong S, Lohmann JU, Schneitz K (2009) DETORQUEO, QUIRKY, and ZERZAUST Represent Novel Components Involved in Organ Development Mediated by the Receptor-Like Kinase STRUBBELIG in Arabidopsis thaliana. PLoS Genet 5: e1000355
10. Andersen SU, Buechel S, Zhao Z, Ljung K, Novak O, **Busch W**, Schuster C, Lohmann JU (2008) Requirement of B2-type Cyclin-Dependent Kinases for Meristem Integrity in Arabidopsis thaliana. Plant Cell 20: 88-100
11. Levesque MP, Vernoux T, **Busch W**, Cui H, Wang JY, Blilou I, Hassan H, Nakajima K, Matsumoto N, Lohmann JU, Scheres B, Benfey PN (2006) Whole-Genome Analysis of the SHORT-ROOT Developmental Pathway in Arabidopsis. PLoS Biology 4: e143
12. Wigge PA, Kim MC, Jaeger KE, **Busch W**, Schmid M, Lohmann JU, Weigel D (2005) Integration of Spatial and Temporal Information During Floral Induction in Arabidopsis. Science 309: 1056-1059
13. Leibfried A, To JP, **Busch W**, Stehling S, Kehle A, Demar M, Kieber JJ, Lohmann JU (2005) WUSCHEL Controls Meristem Function by Direct Regulation of Cytokinin-Inducible Response Regulators. Nature 438: 1172-1175
14. **Busch W**, Wunderlich M, Schoffl F (2005) Identification of Novel Heat Shock Factor-Dependent Genes and Biochemical Pathways in Arabidopsis thaliana. Plant J 41: 1-14

