

Dr. Till Ischebeck

born: 3 February 1980 in Münster, Germany

Georg-August-University Göttingen
Albrecht-von-Haller-Institute for Plant Sciences
Department of Plant Biochemistry
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**Education**

09/2005- 10/2008	Doctoral thesis	Biology, Georg-August-University Göttingen
2000-2005	Diploma	Biochemistry, Free University Berlin

Professional Experience

Since 01/2016	Junior group leader	Department of Plant Biochemistry, Georg-August-University Göttingen
03/2013 - 12/2015	Postdoctoral Fellow	Department of Plant Biochemistry, Georg-August-University Göttingen
12/2010 - 02/2013	Postdoctoral Fellow (EMBO-fellowship)	University of Vienna, Austria
05/2012 - 08/2012	Paternal leave (3 months)	
11/2008 - 11/2010	Postdoctoral Fellow	Department of Plant Biochemistry, Georg-August-University Göttingen

Research Profile

- Pollen development and pollen tube growth
- GC-MS based metabolite profiling
- Lipid droplets
- Plant proteomics

Awards and Fellowships

2010 - 2013	EMBO Long Term Fellowship
2009	PhD award of the GZMB

Responsibility as Reviewer

Journals: Trends in Plant Science; Plant Cell; New Phytologist; Plant physiology; Plant Journal; BBA lipids, Plant Biology; Plant and Cell physiology; Frontiers in Plant Science; FEBSletters; Plant, Cell and Environment; Plant Signaling & Behavior; BMC Plant Biology; Biochimie; Journal of Apicultural research; South African journal of botany; Grasas y Aceites.

Funding agencies: National Science Centre Poland; Czech Science Foundation.

Funding

2016-2019	DFG-funded position for a Ph.D. student (DFG reference: IRTG 2172 PRoTECT)	176260 €
2015-2018	DFG-funded position for a Ph.D. student (DFG reference: IS 273/2-2)	168450 €
2015	Georg-August-University Göttingen Anschubfinanzierung	8232 €
2010-2013	EMBO Long Term Fellowship (ALTF 299-2010)	~96000 €

h-index (Web of science): 13

Publications:

2017

26. Rosenberg, J., **Ischebeck, T.**, and Commichau, F. M. (2017) Vitamin B6 metabolism in microbes and approaches for fermentative production. *Biotechnol Adv* **35**, 31-40

2016

25. Reuss, D. R., Altenbuchner, J., Mader, U., Rath, H., **Ischebeck, T.**, Sappa, P. K., Thurmer, A., Guerin, C., Nicolas, P., Steil, L., Zhu, B., Feussner, I., Klumpp, S., Daniel, R., Commichau, F. M., Volker, U., and Stulke, J. (2016) Large-scale reduction of the *Bacillus subtilis* genome: Consequences for the transcriptional network, resource allocation, and metabolism. *Genome Res in press*
24. Popko, J., Herrfurth, C., Feussner, K., **Ischebeck, T.**, Iven, T., Haslam, R., Hamilton, M., Sayanova, O., Napier, J., and Khozin-Goldberg, I. (2016) Metabolome Analysis Reveals Betaine Lipids as Major Source for Triglyceride Formation, and the Accumulation of Sedoheptulose during Nitrogen-Starvation of *Phaeodactylum tricornutum*. *PLoS one* **11**, e0164673
23. Müller, A. O., Blersch, K. F., Gippert, A. L., and **Ischebeck, T.** (2016) Tobacco pollen tubes - a fast and easy tool to study lipid droplet association of plant proteins. *Plant J in press*
22. **Ischebeck, T.** (2016) Lipids in pollen — They are different. *Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids* **1861**, 1315-1328
21. Hofvander, P., **Ischebeck, T.**, Turesson, H., Kushwaha, S. K., Feussner, I., Carlsson, A. S., and Andersson, M. (2016) Potato tuber expression of Arabidopsis WRINKLED1 increase triacylglycerol and membrane lipids while affecting central carbohydrate metabolism. *Plant Biotechnology Journal* **14**, 1883-1898
20. Heilmann, I., and **Ischebeck, T.** (2016) Male functions and malfunctions: the impact of phosphoinositides on pollen development and pollen tube growth. *Plant Reproduction*, 1-18
19. Großhennig, S., **Ischebeck, T.**, Gibhardt, J., Busse, J., Feussner, I., and Stülke, J. (2016) Hydrogen sulfide is a novel potential virulence factor of *Mycoplasma pneumoniae*: characterization of the unusual cysteine desulfurase/desulphydrase HapE. *Molecular Microbiology* **100**, 42-54

18. Eng, F., Haroth, S., Feussner, K., Meldau, D., Rekhter, D., **Ischebeck, T.**, Brodhun, F., and Feussner, I. (2016) Optimized jasmonic acid production by *Lasiodiplodia theobromae* in submerged fermentation reveals formation of valuable plant specialized metabolites. *PLoS ONE* **11**, e0167627

2015

17. Steinhorst, L., Mähns, A., **Ischebeck, T.**, Zhang, C., Zhang, X., Arendt, S., Schultke, S., Heilmann, I., and Kudla, J. (2015) Vacuolar CBL-CIPK12 Ca(2+)-sensor-kinase complexes are required for polarized pollen tube growth. *Curr Biol* **25**, 1475-1482
16. Stannek, L., Thiele, M. J., **Ischebeck, T.**, Gunka, K., Hammer, E., Volker, U., and Commichau, F. M. (2015) Evidence for synergistic control of glutamate biosynthesis by glutamate dehydrogenases and glutamate in *Bacillus subtilis*. *Environ Microbiol* **17**, 3379-3390

2014

15. **Ischebeck, T.**[#], Valledor, L., Lyon, D., Gingl, S., Nagler, M., Meijon, M., Egelhofer, V., and Weckwerth, W.[#] (2014) Comprehensive cell-specific protein analysis in early and late pollen development from diploid microsporocytes to pollen tube growth. *Mol Cell Proteomics* **13**, 295-310

Corresponding authors

14. Bellaire, A.^{*}, **Ischebeck, T.**^{*}, Staedler, Y.^{*}, Weinhaeuser, I., Mair, A., Parameswaran, S., Ito, T., Schönenberger, J., and Weckwerth, W. (2014) Metabolism and development – integration of micro computed tomography data and metabolite profiling reveals metabolic reprogramming from floral initiation to silique development. *New Phytologist* **202**, 322-335

* equal contribution

2013

13. **Ischebeck, T.**^{*}, Werner, S.^{*}, Krishnamoorthy, P., Lerche, J., Meijon, M., Stenzel, I., Löffke, C., Wiessner, T., Im, Y. J., Perera, I. Y., Iven, T., Feussner, I., Busch, W., Boss, W. F., Teichmann, T., Hause, B., Persson, S., and Heilmann, I. (2013) Phosphatidylinositol 4,5-bisphosphate influences PIN polarization by controlling clathrin-mediated membrane trafficking in *Arabidopsis*. *The Plant Cell* **25**, 4894-4911

* equal contribution

12. Chaturvedi, P., **Ischebeck, T.**, Egelhofer, V., Lichtscheidl, I., and Weckwerth, W. (2013) Cell-specific Analysis of the Tomato Pollen Proteome from Pollen Mother Cell to Mature Pollen Provides Evidence for Developmental Priming. *Journal of Proteome Research* **12**, 4892-4903

2006-2012

11. Stenzel, I., **Ischebeck, T.**, Quint, M., and Heilmann, I. (2012) Variable regions of PI4P 5-kinases direct PtdIns(4,5)P₂ towards alternative regulatory functions in tobacco pollen tubes. *Frontiers in Plant Science* **2**
10. Mähns, A.^{*}, **Ischebeck, T.**^{*}, Heilig, Y.^{*}, Stenzel, I., Hempel, F., Seiler, S., and Heilmann, I. (2012) The Essential Phosphoinositide Kinase MSS-4 Is Required for Polar Hyphal Morphogenesis, Localizing to Sites of Growth and Cell Fusion in *Neurospora crassa*. *PLoS ONE* **7**, e51454

* equal contribution

9. **Ischebeck, T.**, Stenzel, I., Hempel, F., Jin, X., Mosblech, A., and Heilmann, I. (2011) Phosphatidylinositol-4,5-bisphosphate influences Nt-Rac5-mediated cell expansion in pollen tubes of *Nicotiana tabacum*. *The Plant Journal* **65**, 453-468
 8. **Ischebeck, T.***, Vu, L. H.* , Jin, X., Stenzel, I., Löffke, C., and Heilmann, I. (2010) Functional Cooperativity of Enzymes of Phosphoinositide Conversion According to Synergistic Effects on Pectin Secretion in Tobacco Pollen Tubes. *Molecular Plant* **3**, 870-881
- * equal contribution**
7. **Ischebeck, T.**, Seiler, S., and Heilmann, I. (2010) At the poles across kingdoms: phosphoinositides and polar tip growth. *Protoplasma* **240**, 13-31
 6. Stenzel, I., **Ischebeck, T.**, König, S., Holubowska, A., Sporysz, M., Hause, B., and Heilmann, I. (2008) The Type B Phosphatidylinositol-4-Phosphate 5-Kinase 3 Is Essential for Root Hair Formation in *Arabidopsis thaliana*. *Plant Cell* **20**, 124-141
 5. Löffke, C., **Ischebeck, T.**, König, S., Freitag, S., and Heilmann, I. (2008) Alternative metabolic fates of phosphatidylinositol produced by phosphatidylinositol synthase isoforms in *Arabidopsis thaliana*. *Biochemical Journal* **413**, 115-124
 4. König, S., **Ischebeck, T.**, Lerche, J., Stenzel, I., and Heilmann, I. (2008) Salt-stress-induced association of phosphatidylinositol 4,5-bisphosphate with clathrin-coated vesicles in plants. *Biochemical Journal* **415**, 387-399
 3. **Ischebeck, T.**, Stenzel, I., and Heilmann, I. (2008) Type B Phosphatidylinositol-4-Phosphate 5-Kinases Mediate Arabidopsis and *Nicotiana tabacum* Pollen Tube Growth by Regulating Apical Pectin Secretion. *The Plant Cell* **20**, 3312-3330
 2. Pidkowich, M. S., Nguyen, H. T., Heilmann, I., **Ischebeck, T.**, and Shanklin, J. (2007) Modulating seed b-ketoacyl-acyl carrier protein synthase II level converts the composition of a temperate seed oil to that of a palm-like tropical oil. *PNAS* **104**, 4742-4747
 1. **Ischebeck, T.**, Zbierzak, A. M., Kanwischer, M., and Dormann, P. (2006) A Salvage Pathway for Phytol Metabolism in *Arabidopsis*. *J. Biol. Chem.* **281**, 2470-2477