CV Brigitte Poppenberger

General information

Date & place of birth	23.08.1973 in Vienna, Austria
Nationality	Austrian
Affiliation:	Technical University of Munich (TUM), Germany
Current position:	Professor for Biotechnology of Horticultural Crops, TUM School of Life Sciences
Institutional address	Liesel-Beckmann-Str. 1, D-85354 Freising, Germany
Email	brigitte.poppenberger@tum.de
Web	www1.ls.tum.de/bgk

Research profile

The research program of my group comprises three major areas. 1. Understanding the biological basis of plant development and stress resistance, with an emphasis on responses to temperature extremes and their effects on growth and immunity. We focus on the steroid hormones brassinosteroids (BRs) and elucidate the molecular and biochemical basis of their modes of activity using the model plant *Arabidopsis thaliana*. 2. Testing for transferability of discoveries made in models to crops with biotechnological approaches, using the chilling-sensitive fruit crop *Solanum lycopersicum* (tomato) as a system. 3. Work with orphan crops of the Asteraceae family, in particular *Helianthus annuus* (sunflower) and *Crassocephalum crepidioides* (ebolo). In both crops we use mutation breeding and tools of molecular genetics for studying BR modes of activity, but also for improving important traits.

Academic education

2003	Ph.D. (Dr. *rer. nat. tech*.): 10. November 2003; *summa cum laude*
1999- 2003	Ph.D. studies at the University for Applied Life Sciences (BOKU) in Vienna, Austria
1992-1999	Diploma studies in Agriculture (specializing in Horticulture) at the BOKU

Professional experience

Since 2011	Professor (W2) at the Technical University Munich, Germany
2007 – 2011	Group leader at the Max Perutz Laboratories, Vienna, Austria
2004 – 2006	Postdoctoral fellow in the laboratory of Dianna Bowles at the 'Center for Novel Agricultural Products' of the University of York, York, United Kingdom

Awards

2015	TUM ‘Excellence in Teaching’ award
2013	Best-of-JBC 2013; awarded for best JBC paper in the affinity group Plant Biology
2006	Hertha-Firnberg research fellowship (FWF; 11/06-09/10)
2004	Erwin Schrödinger postdoctoral fellowship (FWF; 01/04-12/05)
2003	Agrana Research Award (awarded for Ph.D. thesis)
2000	Ph.D. fellowship (DOC program; Austrian Academy of Science; 02/00-01/03)

Institutional responsibilities and scientific activities (selection)

Since 2022	Co-speaker of the Ph.D. graduate school ‘The proteomes that feed the world’
Since 2018	Alexander von Humboldt Foundation; member of the reviewer panel
Since 2016	Head of the examination board, MSc study program *Horticultural Science*
Since 2016	Review Editor, *Frontiers in Plant Science* (Plant Abiotic Stress)
Since 2014	Grant reviewer for various funding organization including: BBSRC, UK; Deutsche Forschungsgemeinschaft, Germany; National Research Foundation of Korea, Korea.
Since 2012	Member of >10 faculty appointment committees (chairing two of them)
Since 2010	*Ad hoc* referee for academic publishers (Wiley-VCH, Springer)
Since 2007	Thesis supervision of 14 Ph.D. and 35 M.Sc. students
Since 2005	*Ad hoc* referee for scientific journals including: *Curr. Biology*, *Dev.Cell*, *EMBO J., JBC*, *Mol.Cell*, *Nature Communic.*, *Plant Cell*, *Plant Physiol.,* & *Proc Natl Acad Sci USA*

Major grants (last 10 years)

1. The proteomes that feed the world. Küster, B. and Poppenberger, B. (co-speakers) et al. (12 faculty members involved); 10/22-09/09/26, Elite Netzwork of Bavaria: 3.300.000,- €; project part Poppenberger, B.: 360.000,- €
2. Studying modes of BES1 activity in heat stress responses of plants. Poppenberger, B.; 04/20-03/23; DFG, Sachbeihilfe #PO1640/6-1: 237.300,- €
3. InnoSun - Identification and characterization of new, stable High Oleic Acid resources for sunflower. Poppenberger, B.; 04/17-01/21; Federal Ministry for Food and Agriculture Germany (BEL): 249.530,- €
4. Investigating the roles of brassinosteroiden in the regulation of gibberellin homeostasis; Poppenberger, B.; 07/15-06/19; DFG, SFB924 Teilproject TP A12: 410.760,- €
5. Investigating the roles of brassinosteroiden in the regulation of gibberellin homeostasis; Poppenberger, B.; 07/14-06/17; DFG Sachbeihilfe #PO1640/4-1: 192.400,-€
6. Investigating the roles of posttranslational modifications in the regulation of CESTA action. Poppenberger, B.; 09/10-08/13; Austrian Science Fund (FWF) Einzelprojekt #P22734: 388.458,-€

Ten most important publications

My research has led to the publication of 56 papers today, several of which were published in top-tier, non-specialist journals. Current H-index: 24; Current number of citations: >4,000. In addition, 3 patents were filed with results from my work. *corresponding author

1. Albertos P, Wlk T, Griffiths J, Pimenta Lange MJ, Unterholzner SJ, Rozhon W, Lange T, Jones AM & Poppenberger B* (2022) The brassinosteroid-regulated transcription factor CESTA induces the GA2-oxidase GA2ox7. ***Plant Physiol***. 188: 2012-25
2. Albertos P, Duendar G, Schenk P, Carrera A, Cavelius P, Sieberer T, & Poppenberger B* (2022) The transcription factor BES1 interacts with HSFA1 to promote heat stress resistance of plants. ***EMBO J.***: E108664
3. Gan S, Rozhon W, Varga E, Halder J**,** Berthiller F & Poppenberger B* (2021) The acyltransferase PMAT1 malonylates brassinolide glucoside. ***J. Biol. Chem****. 296: 100424*
4. Gan S, Rozhon W**,** Varga E, Unterholzner SJ**,** Berthiller F, & Poppenberger B* (2020) The BAHD Acyltransferase BIA1 Uses Acetyl-CoA for Catabolic Inactivation of Brassinosteroids. ***Plant Physiol****.* 184: 23-26
5. Eremina M, Unterholzner S, Rozhon W, Kugler KG, Castellanos M, Ratnajaka A, Khan M, May S, Mayer KM & Poppenberger B* (2016) Brassinosteroids contribute to the control of basal and acquired freezing tolerance in plants. ***Proc. Natl. Acad. Sci. USA*** 114: E1038-E1039.
6. Unterholzner S, Rozhon W, Papacek M, Lange T, Kugler KG, Mayer KM, Sieberer T & Poppenberger B* (2015) Brassinosteroids Are Master Regulators of Gibberellin Biosynthesis in Arabidopsis. ***Plant Cell*** 27: 2261-72
7. Khan M, Rozhon W, Unterholzner SJ, Chen T, Eremina M, Wurzinger B, Bachmair A, Teige M, Sieberer T, Isono E & Poppenberger B* (2014) Interplay between phosphorylation and SUMOylation events determines CESTA protein fate in brassinosteroid signalling. ***Nature Communic***. 5: 4687
8. Khan M, Rozhon W, Bigeard J, Pflieger D, Husar S, Pitzschke A, Jonak C, Hirt H & Poppenberger B* (2013) Brassinosteroid-regulated GSK3/shaggy-like kinases phosphorylate MAP kinase kinases which control stomata development in *Arabidopsis thaliana*. ***J. Biol. Chem****.* 288: 7519-27
9. Poppenberger B*, Rozhon W, Khan M, Husar S, Adam G, Luschnig C, Fujioka S & Sieberer T (2011) CESTA a positive regulator of brassinosteroid biosynthesis*.* ***EMBO J.*** 30: 1149-61
10. Poppenberger B, Fujioka S, Sueno K, George GL, Vaistij FE, Seto H, Hiranuma S, Takastuto S, Adam G, Yoshida S & Bowles D* (2005) The UGT73C5 of *Arabidopsis thaliana* glucosylates brassinosteroids. ***Proc. Natl. Acad. Sci. USA*** 102: 15253-58

Freising, October 2022