Leonard Blaschek

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Svante Arrhenius väg 20A
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Education

PhD, Plant Physiology — 2017–2022 (expected)

Stockholms Universitet, Sweden
Project: Functional and Genetic Analysis of Laccase Isoforms during Lignification
Supervisor: Dr. Edouard Pesquet
Co-Supervisors: Prof. Vincent Bulone, Prof. Jonas Gunnarsson

Licentiate, Plant Physiology — 2017–2020

Stockholms Universitet, Sweden
Project: Cellular Lignin Distribution Patterns and their Physiological Relevance
Supervisor: Dr. Edouard Pesquet
Co-Supervisors: Prof. Vincent Bulone, Prof. Jonas Gunnarsson
Examination Committee: Dr. András Gorzsás, Dr. Annelie Carlsbecker, Prof. Ulla Westermark

Master of Science, Genetic and Molecular Plant Biology — 2015–2017

Uppsala Universitet, Sweden
Thesis: Distinct Roles of Laccase Isoforms During Lignification in *A. thaliana*
Supervisor: Dr. Edouard Pesquet

Bachelor of Science, Biology — 2013–2015

Ernst-Moritz-Arndt-Universität Greifswald, Germany
Thesis: Plasma Membrane–Bound Proteases in the Roots of *H. vulgare*
Supervisor: Prof. Christine Stöhr

Publications

2021

Blaschek L, Pesquet E (2021). Phenoloxidases in Plants—How Structural Diversity Enables Functional Specificity. *Front. Plant Sci.* 12, 2183. 10.3389/fpls.2021.754601

2020

Yamamoto M, **Blaschek L**, Subbotina E, Kajita S, Pesquet E (2020). Importance of Lignin Coniferaldehyde Residues for Plant Properties and Sustainable Uses. *ChemSusChem* 13, 4400–4408. 10.1002/cssc.202001242

Blaschek L†, Nuoendagula†, Bacsik Z, Kajita S, Pesquet E (2020). Determining the Genetic Regulation and Coordination of Lignification in Stem Tissues of *Arabidopsis* Using Semiquantitative Raman Microspectroscopy. *ACS Sustain. Chem. Eng.* 8, 4900–4909. 10.1021/acssuschemeng.0c00194

Blaschek L, Champagne A, Dimotakis C, Nuoendagula, Decou R, Hishiyama S, Kratzer S, Kajita S, Pesquet E (2020). Cellular and Genetic Regulation of Coniferaldehyde Incorporation in Lignin of Herbaceous and Woody Plants Using Quantitative Wiesner Staining. *Front. Plant Sci.* 11, 109. 10.3389/fpls.2020.00109

NOT YET PEER-REVIEWED

Ménard D†, **Blaschek L**†, Kriechbaum K, Lee CC, Zhu C, Nuoendagula, Bacsik Z, Bergström L, Mathew A, Kajita S, Pesquet E (2021). Specific and dynamic lignification at the cell-type level controls plant physiology and adaptability. *bioRxiv.* 10.1101/2021.06.12.447240

†: contributed equally

Presentations

Blaschek L (2021, selected talk). Laccase paralogs non-redundantly direct lignification. *ASPB Plant Biology 2021,* Online.

Blaschek L (2021, selected talk). Specific and dynamic lignification at the cell-type level controls plant physiology and adaptability. *SEB 2021 Annual Conference,* Online. — link to recording

Blaschek L (2021, selected talk). Laccase paralogs non-redundantly direct lignification. *SEB 2021 Annual Conference,* Online.

Blaschek L (2021, selected talk). Laccase paralogs non-redundantly direct lignification. *7th International Conference on Plant Cell Wall Biology,* Online. — link to recording

Blaschek L (2019, selected talk). The structural importance of lignin in xylem vessels. *3rd Stockholm Cell Wall Meeting*, Stockholm University, Stockholm.

Blaschek L (2019, selected talk). Spatial distribution of coniferaldehyde lignin. *28th Congress of the Scandinavian Plant Physiology Society*, Umeå.

Blaschek L (2018, selected talk). Determining the spatial distribution of aldehyde units in lignin. *2nd Stockholm Cell Wall Meeting*, KTH Royal Institute of Technology, Stockholm.

Grants, scholarships & awards

Blaschek L (2021). Best student presentation award at the 7th International Conference on Plant Cell Wall Biology.

Blaschek L (2019). Travel grant of the Department of Ecology, Environment and Plant Sciences, Stockholm University to attend the 28th Congress of the Scandinavian Plant Physiology Society.

Blaschek L, Pesquet E (2018). Kungliga Vetenskapsakademien Scholarship BS2018–0061 for the sequencing of the *Zinnia violacea* genome.

Expertise

Wet lab

Cell suspension cultures, cloning, enzyme activity assays, histology, plant growth, transformation & crossing (*Arabidopsis, Populus, Zinnia*), quantitative bright field, fluorescence and vibrational microscopy

Dry lab

Automated image analysis (python, ImageJ), data analysis and plotting (R, bash), molecular bioinformatics and phylogenetics, reproducible reporting (markdown, git), text processing (Office, LaTeX)

Courses & Workshops

Piecewise Structural Equation Modelling (2019). *Stockholm University*

Advanced Imaging of Cells *in vitro* and *in vivo* (2018). *Stockholm University*

Optical Clearing and Expansion Microscopy (2018). *SciLifeLab, Stockholm*

Advances in Enzyme Regulation (2018). *Swedish University of Agricultural Sciences, Uppsala*

Teaching

Molecular plant–microbe interactions (MSc level). 2017–2020. Project design and supervision. *Stockholm University*

Green biotechnology (MSc level). 2018–2021. Project design and supervision. *Stockholm University*

Service

Member of the departmental equality group, *Stockholm University* 2019–2021

Course representative in the department for evolutionary biology, *Uppsala University* 2015

Student representative in the board of the botanical institute, *Universität Greifswald* 2014–2015