

***Curriculum vitae* Dorothee Staiger**

RNA Biology and Molecular Physiology
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Education and appointments

- 2002 - pres. Full Professor, Chair of RNA Biology and Molecular Physiology,
Bielefeld University
- 2000 Habilitation at **ETH Zürich**, *Venia legendi* in Plant Biology
- 1996 - 2002 Oberassistentin (Group leader) at the Institute for Plant Sciences,
Department of Biology, ETH Zürich
- 1990 - 1996 Assistentin (Junior group leader) at the Institute for Plant Sciences,
Department of Biology, ETH Zürich
- 1989 - 1990 Postdoc at **Max-Planck-Institute for Plant Breeding Research, Köln**
- 1985 - 1989 PhD thesis at **Max-Planck-Institute for Plant Breeding Research, Köln**,
with Prof. Dr. Jeff Schell
- Fellow of the Fritz Thyssen Foundation**
- 1984 - 1985 Diploma thesis at the **Max-Planck-Institute for Biochemistry, Martinsried**,
with Prof. Dr. Dieter Oesterhelt
- 1982 – 1983 Rotations at Max-Planck-Institute for Biochemistry, Martinsried
(with Profs. Zillig, Thoenen, Oesterhelt, Saenger)
- 1981 Research stay **Department of Biochemistry, Cambridge University**,
Cambridge, UK
- 1978 - 1984 Studies of Biochemistry at **Eberhard Karls Universität Tübingen**, and of
Chemistry at **Ludwig Maximilians Universität München**

Administrative duties

- 2022 – pres. Member of the Senate of Bielefeld University
- 2018 - 2020 Dean of Faculty of Biology at Bielefeld University
- 2018 - 2020 Deputy Speaker of Deans at Bielefeld University
- 2018 University Quality control commission
- 2016 - 2018 Vice Dean of Faculty of Biology at Bielefeld University
- 2016 - 2023 Faculty of Biology Commission for Financial Affairs and Resources
- 2016 - 2020 Member of the Senate of Bielefeld University
- 2006 - 2017 President of Commission for Research and Promotion of young scientists at the Faculty of Biology
- 2004 – 2008 Member of the Senate of Bielefeld University

Professional activities

- 2021 - pres. Elected member of **DFG senate committee on Collaborative Research Centres** (SFBs); Elected member of **DFG Grants committee on Collaborative Research Centres** (SFBs)
- 2018 – pres. Deputy speaker of the GBM (German Society for Biochemistry and Molecular Biology) study group “Molecular Biology and Biochemistry of Plants”
- 2022 Co-Chair Session “Plant RNA Biology” at the “International Conference of the German Society for Plant Sciences”, Bonn
- 2012 - 2018 Member of Program committee of the DFG Priority Program SPP 1530 “Flowering time control – from models to corps”
- 1996 – 2002 Member of the committee and treasurer **Swiss Society of Plant Physiology**
- 1996 – 2002 FESPP representative
- 2017 – 2019 Member of the Committee Organization of the Conference “Molecular Biology of Plants”, Dabringhausen
- 2018 Organization of the 31. Conference “Molecular Biology of Plants” Dabringhausen

- 2009 Session Chair “Photoperiodism and Rhythms in Plants”
15th International Congress on Photobiology, Düsseldorf
- 2011 Co-organization of workshop „RNA-level gene regulation“
22nd International Conference on Arabidopsis Research, Madison, USA
- 2018 - 2019 Mentor for Mentoring Programm Hessen: ProProfessur
- 2019 – 2020 Mentor TRR 175

Editorial work

Editorial Board Genome Biology

Editorial Board Plants

Associate Editor Frontiers of Plant Genetics and Genomics

Editor Frontiers Research Topic “Recent Advances in Flowering Time Control”

Editor Frontiers Research Topic “Plant RNA Biology”

Editor Methods in Molecular Biology “Plant Circadian Networks” 2014

Editor Methods in Molecular Biology “Plant Circadian Networks” 2nd edition 2022

Editor Plant Biology Special Issue “Molecular mechanisms of plant adaptation to changing environments”

Ad hoc reviewer scientific journals

Acta Physiologica Plantarum, BBA, Biologie in unserer Zeit, Biomolecules, BMC Biology, BMC Plant Biology, Briefings in Functional Genomics, Chronobiology International, Cellular and Molecular Life Sciences, Ecology letters, EMBO reports, Euphytica, FEBS Letters, FEMS, Frontiers in Plant Science, Frontiers in Molecular Biosciences, Functional Plant Biology, Genes, Genome Biology, Genome Research, Journal of Biological Chemistry, Journal of Experimental Botany, Journal of Integrative Plant Biology, Journal of Neurochemistry, Journal of Plant Growth Regulation, Journal of Plant Physiology, JOVE, Molecular and General Genetics/Molecular and General Genomics, Molecular Plant, Nature, Nature Communications, Nature Plants, New Phytologist, Nucleic Acids Research, Photochemistry Photobiology, Physiologia Plantarum, Planta, Plant Biology, Plant Biotechnology Journal, Plant Cell, Plant Cell Environment, Plant Cell Physiology, Plant Cell Reports, Plant Journal, Plant Methods, Plant Molecular Biology, Plant Molecular Biology Reporter,

Plant Physiology, Plant Physiology Biochemistry, Plants, Plant Science, Plant Signaling Behaviour, PLoS Biology, PLoS Genetics, PLoS One, PNAS, Protoplasma, RNA Biology, Scientific Report Nature, Seminars in Cell and Developmental Biology, Trends in Plant Science, Wiley Interdisciplinary reviews

Ad hoc reviewer grant agencies

Académie Wallonie-Bruxelles, Alexander von Humboldt Foundation, ANR, Athene Young Investigator Program TU Darmstadt, BBSRC, Binational Science Foundation USA Israel, BMBF, Brussels University ARC, Czech Science Foundation, DAAD, DFG (regular proposals, collaborative research centres, research units, priority programs), EU – ERC Advanced grant, INRA, Israel Science Foundation, Just´US Program Gießen University, Leverhulme trust, Max Planck Society, National Research Foundation Singapore, Nebraska University, Netherlands Genomics Initiative, Netherlands NOW Vidi program, NSF, Poland National Science Foundation, Research Foundation – Flanders (FWO), Research Grants Council of Hong Kong, Schweizerischer Nationalfonds, South Africa National Research Foundation, Studienstiftung des Deutschen Volkes Promotionsauswahlausschuss, United Arab Emirates Universities, US Department of Agriculture, US Department of Energy, Wallenberg Foundation

Publications

Lewinski M, Brüggemann M, Köster T, Reichel M, Bergelt T, Meyer K, König J, Zarnack K, Staiger D (2024) Mapping protein-RNA binding in plants with plant individual nucleotide resolution UV crosslinking and immunoprecipitation (plant iCLIP2). *Nature protocols*, 1-52.

Agrofoglio YC, Iglesias MJ, Perez-Santángelo S, de Leone MJ, Koester T, Catalá R, Salinas J, Yanovsky MJ, Staiger D, Mateos JL (2024) Antagonistic effects of arginine methylation of LSM4 on alternative splicing during plant stress responses. *The Plant Cell*, in press

Xu F, Wang L, Li Y, Shi J, Staiger D, Chen W, Wang L, Yu F (2024) Phase Separation of GRP7 that is facilitated by FERONIA-mediated phosphorylation inhibits mRNA translation to modulate plant temperature resilience. *Molecular Plant*, in press

Staiger D (2024) Insektensterben durch „Artificial light at night“. *Biologie in unserer Zeit* 54,

Lewinski M, Steffen A, Kachariya N, Elgner M, Schmal C, Messini N, Köster T, Reichel M, Sattler M, Zarnack K, Staiger D (2023) Arabidopsis thaliana GLYCINE RICH RNA-BINDING PROTEIN 7 interaction with its iCLIP target *LHCB1.1* correlates with changes in RNA stability and circadian oscillation. *The Plant Journal*, doi: 10.1111/tpj.16601.

Gendron JM, Staiger D (2023) New Horizons in Plant Photoperiodism. *Annual Review of Plant Biology* 74, 481-509.

Mateos JM, Staiger D (2023) Toward a systems view on RNA-binding proteins and associated RNAs in plants - Guilt by association. *The Plant Cell* 35 (6), 481-509.

Laloum T, Martin G, Lewinski M, Yanez RJR, Köster T, Staiger D, Duque P (2023) An Arabidopsis SR protein relieving ABA inhibition of seedling establishment represses ABA-responsive alternative splicing. *bioRxiv*, doi: 10.1101/2023.12.19.572415.

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Agrofoglio YC, Iglesias MJ, Perez-Santangelo S, de Leone MS, Köster T, Catala R, Salinas J, Yanovsky MJ, Staiger D, Mateos JL (2023) Antagonistic effects of arginine methylation of LSM4 on alternative splicing during plant stress responses. *bioRxiv*, doi: 10.1101/2023.12.08.570794.

Johansson M, Steffen A, Lewinski M, Kobi N, Staiger D (2023) HDF1, a novel flowering time regulator identified in a mutant suppressing *sensitivity to red light reduced 1* early flowering. *Scientific Reports* 13, 1404.

Staiger D (2023) Transgenfreie Genomeditierung dank mobiler RNAs – CRISPR on the move
Biologie in unserer Zeit 53 (3), 224-225.

Zhang R, Kuo R, Coulter M, Calixto CPG, Entizne JC, Guo W, Marquez Y, Milne L, Riegler S, Matsui A, Tanaka M, Harvey S, Yubang G, Wiebner-Kroh T, Crespi M, Denby K, ben Hur A, Huq E, Jantsch MF, Jarmolowski A, Koester T, Laubinger S, Li QQ, Gu L, Seki M, Staiger D, Sunkar R, Szweykowska-Kulinska Z, Tu SL, Wachter A, Waugh R, Xiong L, Zhang XN, Reddy ASN, Barta A, Kalyna M, Brown JWS (2022)
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Staiger D (2022) Begrenzter Spielraum der Evolution – Mutationen im Genom weniger zufällig als gedacht
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Staiger D (2022) Temperaturabhängige Regulation der Blütezeit.
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Arribas-Hernández L, Rennie S, Köster T, Porcelli C, Lewinski M, Staiger D, Andersson R, Brodersen P (2021) Principles of mRNA targeting via the *Arabidopsis* m6A-binding protein ECT2.
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Staiger D (2021) Das Immunsystem der Pflanze in einem Akt.

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*joint first authors
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Steffen A, Staiger D (2017) Chromatin marks and ambient temperature-dependent flowering strike up a novel liaison.
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Foley S, Gosai SJ, Wang D, Selamoglu N, Solitti AC, Köster T, Steffen A, Lyons E, Daldal F, Garcia BA, Staiger D, Deal RB, Gregory BD (2017) A global view of RNA-protein interactions reveals novel root hair cell fate regulators
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Biologie in unserer Zeit 46, 281-282.

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Mol Genet Genomics 291, 763-773.

Simpson CG, Fuller J, Calixto CPG, McNicol J, Booth C, Brown JWS, Staiger D (2016) Monitoring Alternative Splicing Changes in Arabidopsis Circadian Clock Genes.
Methods in Molecular Biology 1398, 119-132.

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Köster T, Brown JWS, Staiger D (2014) Jenseits des Genoms – Alternatives Spleißen erhöht die Vielfalt des Transkriptoms.
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Funding

2023-2026 **DFG-ANR joint grant** with Prof. Martin Crespi, IPS2 Paris
RIBORES - Splicing Factors and riboregulators in the control of thermo-resilience in plants

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U1 snRNP and polyadenylation in plants - a novel liaison

2020-2024 **DFG** Spatiotemporal analysis of *in vivo* RNA-protein interaction

2019-2023 **DFG** Single mRNA interactome capture in Arabidopsis - RAPPing rhythms

2016-2019 **DFG CONICET joint grant** with Dr. Julieta Mateos
Global impact of arginine methylation on splicing in Arabidopsis

2015-2018 **SPP 1530** Unravelling the role of an autonomous pathway component in FTi control in Arabidopsis and barley

2014-2017 **DFG joint grant** with Prof. Ivo Grosse, Halle
Regulation of alternative splicing in *Arabidopsis thaliana* – a combined RNA-Seq and RIP-Seq approach

2012-2015 **SPP 1530** Unravelling the role of a novel autonomous pathway component in FTi control by small RNA profiling and cross-species comparison

2009-2012 **SFB 613 (D7)** Investigation of the molecular mechanism of a circadian "slave" oscillator using single-molecule fluorescence spectroscopy and imaging

2010-2012 **DFG** Functional characterisation of a gene family encoding circadian regulated glycine-rich RNA-binding proteins in *Arabidopsis thaliana* (2. Förderperiode)

2008-2011 **DFG** Mutual interactions between biological timing and innate immunity in Arabidopsis

2007-2008 **BMBF** (Fachagentur Nachwachsende Rohstoffe)
Produktion von biologisch abbaubaren Polymeren in transgenen Kartoffelknollen Phase III

2007-2009 **DFG** Functional analysis of the protein IdiC (ORF5) in *Synechococcus elongatus* PCC 7942

2005-2006 **BMBF (Fachagentur Nachwachsende Rohstoffe)**
Produktion von biologisch abbaubaren Polymeren in transgenen Kartoffelknollen Phase II

2005-2008 **SFB 613 (N5)** Untersuchung des molekularen Mechanismus eines circadianen "slave" Oszillators mittels Einzelmolekül-Fluoreszenzmikroskopie und Rasterkraftmikroskopie

2006-2008 **DFG** Functional characterisation of a gene family encoding circadian regulated glycine-rich RNA-binding proteins in *Arabidopsis thaliana* (1. Förderperiode)

2003 **HBFG** (Großgeräte für Ausbildung und Forschung): Growth rooms

2003-2006 **FOR 387** Redox-Regulation der Wechselbeziehung zwischen Photosynthese, Respiration und N-Stoffwechsel in Cyanobakterien

1999-2002 **Schweizerischer Nationalfonds**

Identification of transcripts with altered expression in transgenic plants overexpressing the RNA-binding protein *AtGRP7*, a component of the circadian system in *Arabidopsis thaliana*

1999-2002 **Swiss Federal Institute of Technology Research Commission**

A genetic screen to isolate mutants of *Arabidopsis thaliana* altered in endogenous rhythms

2002 **Functional Genomics Centre Zürich** Identification of target transcripts of RNA-binding proteins in *Arabidopsis thaliana*

1999 **Hitachi (Tokio)** Fluorescence differential display

1995-1999 **Schweizerischer Nationalfonds** Funktionelle Analyse von circadian regulierten RNA-bindenden Proteinen in *Arabidopsis thaliana*

1994-1997 **Swiss Federal Institute of Technology Research Commission**

Molecular mechanisms of a clock-regulated feedback loop based on an RNA-binding protein in *Arabidopsis*

1985-1989 **Fritz Thyssen Foundation** PhD Fellowship, Bench Fees, Travel grants