

Prof. Dr. Dietmar Quandt (W2)

Nees-Institut für Biodiversität der
Pflanzen (NEES)
Universität Bonn
53123 Bonn, Germany

Phone +49 (0)228-733315
quandt@uni-bonn.de
<http://www.nees.uni-bonn.de>

*24.04.1972, German, male

Researcher ID F-1821-2010
[orcid](https://orcid.org/0000-0003-4304-6028): 0000-0003-4304-6028



Academic training

10/1993-09/1995 Biology, University of Bonn (Vordiplom)
10/1995-09/1996 Biology, University of St Andrews (Scotland) (Junior Honours, Prof. Dr. David M. Paterson)
10/1996-10/1999 Biology, University of Bonn & FU Berlin (Diplom, Prof. Dr. Jan-Peter Frahm)

Scientific degrees

1999-2002 PhD, Botanisches Institut, University of Bonn (summa cum laude, Prof. Dr. Jan-Peter Frahm)
12/2006 Habilitation, Institute of Botany, TU Dresden (Prof. Dr. Christoph Neinhuis)

Professional career

07/2003-08/2003 Postdoctoral Research Associate (BIOD-IBERIA), Real Jardin Botanico Madrid (Spain) (Dr. Jesús Muñoz)
09/2003-03/2004 Postdoctoral Research Associate (DAAD), Virginia Tec (USA) (Prof. Dr. K. W. Hilu)
04/2004-06/2008 Head of the “Phylogenetics and Phylogenomics Laboratory” at the Institute of Botany, TU Dresden (Prof. Dr. Christoph Neinhuis)
07/2008 Professor for Plant Phylogenetics and Evolution, University of Bonn, Germany
Head of the Herbarium BONN,
Executive Director (biennially)

Others

Editorial board

- Editorial Board of Plant and Fungal Systematics
- Editorial Board of Turkish Journal of Biodiversity

Awards/Memberships

- PostDoc-Fellowship, German Academic Exchange Service (DAAD)
- Hattori prize by the “International Association of Bryologists” (IAB) awarded for the best bryological publication in the years 2007-2008.
- Council member and past president of the International Association of Bryologists (IAB, www.bryology.org) past Editor-in-Chief of Bryophyte Diversity and Evolution (www.bryodiv.org)
- Six SYNTHESYS Awards (European Commission)

Experience abroad (selected)

2010-2013 Accelerated Biodiversity Assessment (ABA) (cloud forests in Ecuador) (DFG LE 1826/4)
2013 Genetic consequences of habitat fragmentation and population size in native plants from the Southern Atacama Desert (FONDECYT project at the CEAZA in Chile; Lead-PI Dr. Stoll)
2014 *3transects*: Unraveling the mechanisms determining the diversity of tropical plant communities (Ecuador, Uganda, Dominican Republic, Papua New Guinea) (DFG DQ 153/8)
2019-2021 BIO-GEEC: German-Ecuadorian biodiversity consortium (Ecuador) (DAAD/GIZ)
2015-2024 Earth – Evolution at the Dry Limit (Chile, Namibia, South Africa) (DFG CRC 1211)

Expertise

- Single molecule real time (SMRT, PacBio) sequencing & analyses
- Evolution of land plants & character evolution
- Biodiversity assessments & DNA-barcoding
- Microstructural evolution & secondary structures of RNA/DNA
- DNA sequence alignments, phylo- & population genetics
- Molecular evolution: introns, genes & genomes
- Interactive science

Graduate Advisory experience

12 PhD students plus miscellaneous Diplom-, MSc- and BSc projects

Current funding (since 2004 > 3.5 Mio €)

- **Earth – Evolution at the Dry Limit (CRC 1211, Co-Speaker)**
 - B01: Biogeographic history of plant communities (PI)
 - B07: Desert transcriptomics: assessing the genetic basis of adaptation to aridity in desert dwellers (Co-PI)
 - IRTG: Integrated research training group (Co-PI)
- **MesiCrust:** Mechanisms of soil erosion under forest – the role of biological soil crusts. (Co-PI, DFG; PI: S. Seitz, Tübingen)
- **DBAC:** DNA-Barcode Analyser for CITES species (Speaker, BfN, Co-PIs: M Nöthen UKB Bonn, B Hüttel MPIPZ)
- **BIO-GEEC:** (German-Ecuadorian Biodiversity Consortium): Establishing barcoding pipelines for biological systems of public and economic relevance (Stage 1). (Speaker, DAAD/GIZ, Co-PIs L Podsiadlowski (ZfMK), K Müller (IEB Münster), MC Segovia Salcedo (ESPE), MC Peñuela-Mora (IKIAM), D Harms (CeNak), S Zarate Baca (UTN));
- **FRAME:** Farmer Resilience and Melon Crop Diversity in southern Africa. (PI, SASSCAL BMBF; joint application with G Maggs-Kölling (GBB, NAM), T Hedderson (UCT, RSA), E Marais (GBB, NAM), D Chuba (UNZA, ZAM), E Kwembeya (UNAM, NAM)). Outstanding final contract!

Publications (selected)

- Dunai TJ, Melles N, Quandt D, Knief C, Amelung W. 2020. Whitepaper: Earth – Evolution at the dry limit. *Global and Planetary Change – Special issue CRC1211 – 193*: 103275
10.1016/j.gloplacha.2020.103275
- Li FW, Nishiyama T, Waller M, Frangedakis E, Keller J, Li Z, Fernandez-Pozo N, Barker MS, Bennett T, Blázquez MA, Cheng S, Cuming AC, de Vries J, de Vries S, Delaux PM, Diop IS, Harrison J, Hauser D, Hernández-García J, Kirbis A, Meeks JC, Monte I, Mutte SK, Neubauer A, Quandt D, Robison T, Shimamura M, Rensing SA, Villarreal JC, Weijers D, Wicke S, Wong GKS, Sakakibara K, Szövényi P. (2020). *Anthoceros* genomes illuminate the origin of land plants and the unique biology of hornworts. *Nature Plants* 10.1038/s41477-020-0618-2
- Maul K, Krug M, Nickrent DL, Müller KF, Quandt D, Wicke S. (2019). Morphology, geographic distribution, and host preferences are poor predictors of phylogenetic relatedness in the mistletoe genus *Viscum* L. *Molecular Phylogenetics and Evolution* 131: 106-115
- Lutzoni F, Nowak MD, Alfaro ME, Reeb V, Miadlikowska J, Krug M, Arnold EA, Lewis L, Swofford D, Hibbett D, Hilu KW, James TY, Quandt D, Magallón S. (2018). Contemporaneous radiations of fungi and plants linked to symbiosis. *Nature communications* 9: 5451.
- Noben S, Kessler M, Quandt D, Weigand A, Wicke S, Krug M, Lehnert M. (2018). Biogeography of the Gondwanan tree fern family Dicksoniaceae — A tale of vicariance, dispersal and extinction. *Journal of Biogeography* doi: 10.1111/jbi.13056
- Wicke S, Müller KF, de Pamphilis CW, Quandt D, Bellot S, Schneeweiss GM. (2016). Mechanistic model of evolutionary rate variation en route to a nonphotosynthetic lifestyle in plants. *PNAS* 113: 9045-9050
- Geiger MF, Astrin J, Borsch T, Grobe P, Hand R, Hausmann A, Hohberg K, Krogmann L, Lutz M, Monje C, Morinière J, Müller K, Pietsch S, Quandt D, Rulik B, Scholler M, Traunspurger W, Haszprunar G, Wägele W. (2016). How to tackle the species inventory for an industrialized nation – lessons from the first phase of the German Barcode of Life initiative GBOL (2012-2015). *Genome* 59: 661-670
- Magallon S, Hilu K, Quandt D. (2015). Land plant evolutionary timeline: gene effects are secondary to fossil constraints in relaxed clock estimation of age and substitution rates. *American Journal of Botany* 100: 556-573.
- Huttunen S, Olsson S, Buchbender V, Enroth J, Hedenäs L, Quandt D. (2012). Phylogeny-based comparative methods question the adaptive nature of sporophytic specialisations (in mosses). *PlosOne* 7: e48268 .
- Wicke S, Costa A, Muñoz J, Quandt D. (2011). Restless 5S: The re-arrangement(s) of nuclear ribosomal DNA in land plants. *Molecular Phylogenetics and Evolution* 61: 321-332.
- Wicke S, Schneeweiss GM, Müller KF, dePamphilis CW, Quandt D. (2011). Evolution of the plastid chromosome in land plants: gene content, gene order, gene function. *Plant Molecular Biology* 76: 273-297.
- Borsch T, Quandt D. (2009). Mutational dynamics and phylogenetic utility of non-coding plastid DNA. *Plant Systematics and Evolution – Special Issue on non-coding DNA evolution*. 282: 169-199.
- Qiu YL, Li L, Wang B, Chen Z, Knoop V, Groth-Malonek M, Dombrowska O, Lee J, Kent L, Rest J, Estabrook GF, Hendry TA, Taylor DW, Testa CM, Ambros M, Crandall-Stotler B, Duff JR, Stech M, Frey W, Quandt D, Davis CC. (2006). The deepest divergences in land plants Inferred from phylogenomic evidence. *PNAS* 103: 15511-15516.