Curriculum Vitae Jun.-Prof. Dr. Daniela Yildiz née Dreymueller

Personal Data

Title	Jun.-Prof. Dr. rer. nat.
First name	Daniela
Name	Yildiz née Dreymueller
Current position	W1 with W2 tenure track (tenure evaluation December 2024)
Current institution(s)/site(s), country	Saarland University Institute for Experimental and Clinical Pharmacology and Toxicology, Preclinial Center for Molecular Signaling (PZMS), Center for Human and Molecular Biology (ZHMB) Campus Homburg, Deutschland
Identifiers/ORCID	0000-0002-9702-8581

Qualifications and Career

Stages	**Periods and Details**
Degree programme	Study of Biology, 10/2000-08/2005, RWTH Aachen, Deutschland
Doctorate	Dr. rer. nat. in Molecular Biology, 2005 – 2009, supervisor: Univ.-Prof. Wilhelm Jahnen-Dechent, Helmholtz-Institute for Biomedical Technologies, RWTH Aachen, Germany 2006-2008: DFG Research Training Group (GK1035) Biointerface, RWTH Aachen, Germany 2005-2009: PhD student program IZKF BioMAT, RWTH Aachen, Germany
Stages of academic/professional career	Since 08/2018, Professor (W1) of Molecular Pharmacology, Saarland University, Germany; positive interim evaluation April 2021. 01/2019, Habilitation; *Venia legendi* for pharmacology and toxicology, supervisors: Prof. Dr. Andreas Ludwig/Prof. Dr. Stefan Uhlig. 2009 – 2018, Postdoctoral fellow and group leader, Institute of Pharmacology and Toxicology, RWTH Aachen University, Germany, supervisors Prof. Dr. Andreas Ludwig/Prof. Dr. Stefan Uhlig.

Supplementary Career Information

02/2017 - 04/2018: maternity leave and parental leave (100%)
05/2019 - 08/2019: maternity leave
06/2021 - 05/2022: Parental leave (25%)

Activities in the Research System

since 2023 Member of the German Society for Extracellular Vesicles (GSEV)
since 2022 deputy member of the examination board of the Center for Human and Molecular Biology (ZHMB) of Saarland University

since 2021	Member of the PhD Committee of the Medical Faculty of Saarland University
since 2018	Member of appointment committees
since 2018	Teaching at Saarland University Medical Faculty and Faculty of Natural Science
since 2016	Member of the German Society for Pharmacology
since 2009	Teaching at RWTH Aachen Medical Faculty and Faculty of Natural Science
since 2006	Member of the German Society for Stem Cell Research

Supervision of Researchers in Early Career Phases

Supervision of 13 Doctoral-, 9 Master/Diploma- and 7 Bachelor Students.

Fellowships to members of the Yildiz laboratory: DAAD fellowship.

Scientific Results

Category A

Discovered essential functions of leukocytic and epithelial ADAM proteases in inflammatory and infectious diseases influencing cell migration, cytoskeletal rearrangement, cell polarization, and physiological functions. Investigation of ADAM Proteases as EV cargos, e.g. promoting cleavage in trans.

1. **ADAM8 signaling drives neutrophil migration and ARDS severity.** Conrad C, Yildiz D, Cleary SJ, Margraf A, Cook L, Schlomann U, Panaretou B, Bowser JL, Karmouty-Quintana H, Li J, Berg NK, Martin SC, Aljohmani A, Moussavi-Harami SF, Wang KM, Tian JJ, Magnen M, Valet C, Qiu L, Singer JP, Eltzschig HK, CAPSyS Study Group, Bertrams W, Herold S, Suttorp N, Schmeck B, Ball ZT, Zarbock A, Looney MR, Bartsch JW (2022) *JCI Insight* 7, e149870. DOI: 10.1172/jci.insight.149870

2. ***Pseudomonas aeruginosa* triggered exosomal release of ADAM10 mediates proteolytic cleavage in trans.** Aljohmani A, Opitz B, Bischoff M, Yildiz D (2020) *Int J Mol Sci* 23, 1259. DOI: 10.3390/ijms23031259

3. **Elevated expression of the metalloproteinase ADAM8 associates with vascular diseases in mice and humans.** Schick D, Babendreyer A, Wozniak J, Awan T, Noels H, Liehn E, Bartsch JW, Vlacil AK, Grote K, Zayat R, Goetzenich A, Ludwig A*, Dreymueller D* (2016) *Atherosclerosis* 286, 163-171 (*senior authors). DOI: 10.1016/j.atherosclerosis.2019.03.008

4. **The metalloproteinase ADAM8 promotes leukocyte recruitment in vitro and in acute lung inflammation.** Dreymueller D, Pruessmeyer J, Schumacher J, Fellendorf S, Hess FM, Seifert A, Babendreyer A, Bartsch JW, Ludwig A (2017) *AJP Lung* 313, L602-L614. DOI: 10.1152/ajplung.00444.2016

5. **Leukocytes require ADAM10 but not ADAM17 for their migration and inflammatory recruitment into the alveolar space**. Pruessmeyer J*, Hess FM*, Ahlert H, Groth E, Pasqualon T, Schwarz N, Nyamoya S, Kollert J, van der Vorst E, Donners M, Martin C, Uhlig S, Saftig P, Dreymueller D*, Ludwig A* (2014) *Blood* 123, 4077-4088 (*first/senior authors). DOI: 10.1182/blood-2013-09-511543

6. **Lung endothelial ADAM17 regulates the acute inflammatory response to lipopolysaccharide.** Dreymueller D, Martin C, Kogel T, Pruessmeyer J, Hess FM, Horiuchi K, Uhlig S, Ludwig A (2012) *EMBO Mol Med* 4, 412-423. DOI: 10.1002/emmm.201200217

Flow cytometric characterization and purification of heterogenous cell populations and functional profiling including cell polarization of immune cells and 3D cell culture models.

7. **Bitter taste cells in the ventricular walls of the murine brain regulate glucose homeostasis.** Yu Q, Gamayun I, Wartenberg P, Zhang Q, Qiao Sen, Kusumakshi S, Candlish S, Götz V, Wen S, Das D, Wyatt A, Wahl V, Ectors F, Kattler K, Yildiz D, Prevot V, Schwaninger M, Ternier G, Giacobini O, Ciofi P, Müller TD, Boehm U (2023) *Nat Comm* 2023,14:1588. DOI: 10.1038/s41467-023-37099-3

8. **Transferring Microclusters of *P. aeruginosa* Biofilms to the Air-Liquid Interface of Bronchial Epithelial Cells for Repeated Deposition of Aerosolized Tobramycin.** Horstmann JC, Laric A, Boese A, Yildiz D, Röhrig T, Empting M, Frank N, Krug D, Müller R, Schneider-Daum N, de Souza Carvalho-Wodarz C, Lehr CM (2022). *ACS Infect Dis* Jan 14;8(1):137-149. DOI: 10.1021/acsinfecdis.1c00444.

9. **Estrogen serum concentration affects blood immune cell composition and polarization in human females under controlled ovarian stimulation.** Habib P*, **Dreymueller D*[1]**, Rösing B, Botung H, Slowik A, Zendedel A, Habib S, Hoffmann S, Beyer C (2018) *J Steroid Biochem Mol. Biol.* 178, 340-347 (*first authors). DOI: 10.1016/j.jsbmb.2018.02.005

10. **CX3CR1 is a gatekeeper for intestinal barrier integrity in mice: Limiting steatohepatitis by maintaining intestinal homeostasis.** Schneider KM, Biegs V, Heymann F, Hu W, Dreymueller D, Liao L, Frissen M, Ludwig A, Gassler N, Pabst O, Latz E, Sellge G, Penders J, Tacke F, Trautwein C (2015) *Hepatology* Nov; 62(5):1405-16. DOI: 10.1002/hep.27982

Category B

Establishment of a two-organ lung/liver microfluidic system for simulation and modeling of inter-organ communication.

1. **Modeling of lung-liver interaction during infection in a human microfluidic organ-on-a-chip.** Reinhold S, Herr C, Pourrostami M, Ritzmann F, Lehr T, Selzer D, Kohl Y, Yildiz D, Slevogt H, Beisswenger C, Bals R (2023) *bioRxiv* DOI: 10.1101/2023.06.01.543192

Regulation of extracellular ADAM protease release by anerobic bacteria. Heterogeneity of exosomes released from keratinocytes and neutrophils.

2. **Extracellular release of ADAM proteases orchestrates periodontal disease severity.** Aljohmani A, Heinze H, Gharzia FG, Reda B, Becker S, Bischoff M, Hannig M, Yildiz D (2023) *bioRxiv* DOI: 10.1101/2023.07.21.550016

3. **ADAM proteases as therapeutic target in pulmonary and vascular diseases.** Yildiz D (2018) *University Library RWTH Aachen* (habilitation thesis)

Academic Distinctions

2014-2017	Scholarship "Habilitation Support Program", Medical Faculty of RWTH Aachen University
2010/2012	Project Award of the Medical Faculty of RWTH Aachen University
2009	"Borchers-Plakette" for the dissertation passed with distinction, RWTH Aachen University

Other Information

2022-2027	Project leader and Cluster manager, COFUND Talents (EC)

2019-2022 Project leader UdS-HIPS-Tandem, Interdisciplinary Graduate School for Pharmaceutical Research.