Curriculum Vitae

Personal Data

Title	Prof. Dr.
First name	Claudia
Name	Jessen-Trefzer
Current position	Professor (W3) of Pharmaceutical Biology and Biotechnology
Current institution(s)/site(s), country	Institute of Pharmaceutical Science, University of Freiburg, Germany
Identifiers/ORCID	https://orcid.org/0000-0003-4216-8189

Qualifications and Career

Stages	**Periods and Details**
Degree programme	Chemistry, 2003 – 2008, University of Konstanz, Germany
Doctorate	17.08.2012, thesis supervisor: Prof. Dr. Kai Johnsson, Organic Chemistry, EPFL, Switzerland
Stages of academic/professional career	2022, Habilitation in Pharmaceutical Biology, University of Freiburg, Germany 10/2015 – 03/2025, Group Leader, University of Freiburg, Germany 06/2015 – 09/2015, Postdoctoral Researcher, University of Zurich, Switzerland, Laboratory of Prof. Dr. Cristina Nevado 06/2014 – 05/2015, Study Leader in Biocompatibility, DePuy Synthes – Johnson & Johnson Medical Devices, Oberdorf BL, Switzerland 11/2012 – 05/2014, Postdoctoral Researcher, CeMM – Center for Molecular Medicine, Vienna, Austria, Laboratory of Prof. Dr. Giulio Superti-Furga

Supplementary Career Information

Maternity leave: September 2018 – December 2018 (100%) and April 2019 – April 2020 (50%)
Industry experience: July 2014 – May 2015: Study Leader at DePuy Synthes – Johnson & Johnson Medical Devices
Other: "First-generation academics"

Activities in the Research System

Year(s)	**Activities**
2025	Organization Committee: University Meets Industry 2026, Bayer AG Wuppertal
2025	Organization Committee: Annual Meeting of the DPhG (German Pharmaceutical Society) 2025, University of Freiburg
2024 – Now	Board member of the Chemical Biology Group - DECHEMA
2023 – Now	Board member of BIOSS – Center for Biological Signal Studies, University of Freiburg
2023 – Now	Principal Investigator at BIOSS, University of Freiburg
2023 – 2025	Associate Editor, *Nature Scientific Reports*, Springer Nature Limited

2022 – Now	Adjunct Investigator in the CIBSS Excellence Cluster (Center for Integrative Biological Signal Studies), University of Freiburg
2021	Guest Editor, *Biological Chemistry*, DeGruyter, Germany
2021	Organization Committee: ICBS Conference (International Chemical Biology Society), Session 3: Antimicrobial Discovery and Resistance: Addressing an Emerging Health Crisis
2021 – 2025	Principal Investigator of the Graduate College 2202 "Transport across and within Membranes", University Freiburg
2020 – 2024	Deputy member of the Structure and Development Commission in the Senate of the University of Freiburg
2018	Founding member of Academia Meets Industry Freiburg e.V. - Connecting pharmacy students with the pharmaceutical industry: academia-meets-industry.de
2017 – Now	Equality Officer of the Faculty of Chemistry and Pharmacy, University of Freiburg

Supervision of Researchers in Early Career Phases

Supervision of 9 doctoral dissertations, 7 Masters dissertations, 7 Bachelor dissertations (within the last 5 years and ongoing).

Scientific Results

Category A (max. 10 publications)
(**corresponding author*)

1. Grimmeisen M, Wang X, Weldle M, Sartory K, Benkhelifa S, Zhang Y, Dao T, Meyer J, Gorka O, Groß O, Jessen-Trefzer C*. Synthesis and Evaluation of Trehalose-Based Mertansine Warheads for Bacillus Calmette-Guérin Delivery of Anticancer Agents. **Chembiochem**, 2025, 27:e2500390. doi: 10.1002/cbic.202500390. Epub ahead of print. PMID: 40423659.
2. Zmyslia M, Capper MJ, Grimmeisen M, Sartory K, Deuringer B, Abdelsalam M, Shen K, Jung M, Sippl W, Koch HG, Kaul L, Suess R, Koehnke J*, Jessen-Trefzer C*, A nanoengineered tandem nitroreductase: designing a robust prodrug-activating nanoreactor, **RSC Chemical Biology**, 2025, 6 (1), 21–35. https://doi.org/10.1039/D4CB00127C.
3. Abdelsalam M, Zmyslia M, Schmidtkunz K, Vecchio A, Hilscher S, Ibrahim HS, Schutkowski M, Jung M, Jessen-Trefzer C*, Sippl W*. Design and synthesis of bioreductive prodrugs of class I histone deacetylase inhibitors and their biological evaluation in virally transfected acute myeloid leukemia cells. **Archiv der Pharmazie** (Weinheim), 2024, 357(2):e2300536. https://doi: 10.1002/ardp.202300536.
4. Zmyslia M, Fröhlich K, Dao T, Schmidt A, Jessen-Trefzer C*, Deep Proteomic Investigation of Metabolic Adaptation in Mycobacteria under Different Growth Conditions, **Proteomes**, 2023, 11 (4), 39, https://doi: 10.3390/proteomes11040039.
5. Ebensperger P, Zmylia M, Lohner P, Braunreuther J, Deuringer B, Becherer A, Süss R, Fischer A, Jessen-Trefzer C*. A dual-metal catalyzed sequential cascade reaction in an engineered protein cage, **Angewandte Chemie International Edition**, 2023, 62:e202218413. doi.org/10.1002/anie.202218413.
6. Lohner P, Zmyslia M, Thurn J, Pape JK, Gerasimaité R, Keller-Findeisen J, Groeer S, Deuringer B, Süss R, Walther A, Lukinavičius G, Hell SW, Hugel T, Jessen-Trefzer C*, Inside a shell - Organometallic catalysis inside encapsulin nano-reactors, **Angewandte Chemie International Edition**, 2021, 60:23835–23841. https://doi.org/10.1002/anie.202110327.
7. Wang X, Bittner T, Milanov M, Kaul L, Mundinger S, Koch H-G*, Jessen-Trefzer C*, and Jessen HJ*, Pyridinium Modified Anthracenes and Their Endoperoxides Provide a Tunable

Scaffold with Activity against Gram-Positive and Gram-Negative Bacteria. **ACS Infectious Diseases**, 2021, 7, 8, 2073–2080. https://doi.org/10.1021/acsinfecdis.1c00263.
8. Li M, Gašparovič H, Weng X, Chen S, Korduláková J*, Jessen-Trefzer C*: The two-component locus MSMEG_0244/0246 together with MSMEG_0243 affects biofilm assembly in *M. smegmatis* correlating with changes in phosphatidylinositol mannosides acylation. **Frontiers in Microbiology**, 2020, https://doi.org/10.3389/fmicb.2020.570606.
9. Li M, Muller C, Frohlich K, Gorka O, Zhang L, Gross O, Schilling O, Einsle O, Jessen-Trefzer C*: Detection and Characterization of a Mycobacterial L-Arabinofuranose ABC Transporter Identified with a Rapid Lipoproteomics Protocol. **Cell Chemical Biology**, 2019; 26 (6): 852-862.e6, https://doi.org/10.1016/j.chembiol.2019.03.002.
10. Dutta A, Choudhary E, Wang X, Záhorszka M, Forbak M, Lohner P, Jessen H, Agarwal N, Korduláková J, Jessen-Trefzer C*: Trehalose Conjugation Enhances Toxicity of Photosensitizers against Mycobacteria **ACS Central Science**, 2019; 5 (4): 644–650, https://doi.org/10.1021/acscentsci.8b00962.

Category B

Patent Application: „Encapsulation of dimer or tandem-enzymes within capsid proteins, in particular within engineered encapsulins“ (DE102024131602.0; 2024070101/ZEE)

Academic Distinctions

Year(s)	Activities
2024	Dual Career offer from the University of Dresden (declined)
2023	Admission to the Heisenberg Program of the DFG (German Research Foundation)
2023	Offer for a W2 Professorship "Pharmaceutical Biology" at the University of Bonn (declined)
2022	Offer for a W1 to W2 Professorship "Molecular Pathogenicity" at the University of Düsseldorf (declined)
2019	Maria Gräfin von Linden Prize 2019, VBWW – Stuttgart, Germany
2019	Eugen-Graetz Prize 2019 for Young Scientists – University of Freiburg
2019	CORA - Coaching Women in Science – University of Freiburg, Germany
2019	Starting Grant, Swedish Research Council, Sweden (declined, offer of a permanent group leader position at the University of Freiburg)
2015	Ambizione Grant – Swiss National Science Foundation, Switzerland (declined, offer of a habilitation position at the University of Freiburg)

Other Information

During my career, I faced significant dual-career issues requiring a particular choice of location.