

CURRICULUM VITAE AND TRACK RECORD

PERSONAL DETAILS

Name: PD Dr. rer. nat. Constanze A. Jakwerth

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EDUCATION

- 03/2024 **Habilitation** in Molecular Immunology, ZAUM/IAF – Center of Allergy and Environment, Technical University of Munich (TUM) and Helmholtz Center Munich, Munich, Germany; Type-2 priming of airway epithelium; Asthma pathogenesis
- 08/2016 **PhD** in Experimental Medicine, Department Haematology & Oncology, TUM University Hospital, Munich, Germany (PD Dr. Ringshausen)
- 01/2010 **Master of Science** (German Diploma) in Molecular Medicine, Albert-Ludwigs-University, Freiburg, Germany, Master Program of Molecular Medicine

CURRENT POSITION(S)

- 12/2025 – today **Deputy Director of ZAUM**
ZAUM/IAF – Center of Allergy and Environment, Technical University of Munich (TUM) and Helmholtz Center Munich, Munich, Germany
- 10/2024 – today **Group Leader of AG Airway Immunology**
ZAUM/IAF – Center of Allergy and Environment, Technical University of Munich (TUM) and Helmholtz Center Munich, Munich, Germany

PREVIOUS POSITIONS

- 05/2022 – 10/2024 **Principal Investigator**
ZAUM/IAF – Center of Allergy and Environment, Technical University of Munich (TUM) and Helmholtz Center Munich, Munich, Germany
- 09/2015 – 05/2022 **Postdoctoral scientist**, ZAUM/IAF – Center of Allergy and Environment, Technical University of Munich (TUM) and Helmholtz Center Munich, Munich, Germany, Airway Immunology Group (Prof. Carsten Schmidt-Weber)
- 10/2010 – 08/2015 **PhD**, in Experimental Medicine, Department Haematology & Oncology, TUM University Hospital, Munich, Germany (PD Dr. Ringshausen)
- 05/2012 – 08/2015 **Clinical study administrator** of clinical allergen-specific immunotherapy trials, Department of Otorhinolaryngology and Head and Neck Surgery, TUM University Hospital, Munich, Germany, Munich, Germany, Supervisor: PD Dr. Adam Chaker
- 01/2010 **Master's Thesis** (German Diploma thesis) in Molecular Medicine, Albert-Ludwigs-University, Freiburg, Germany (Supervisor: Prof. Dr. Hendrik Veelken), conducted at EpiVax Inc. in Providence, RI, USA (mentor: Dr. Anne Searls De Groot)
- 06/2008 – 08/2008 **Study program-related internship** in Molecular Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, Department of Pathology, Group Dr. Aster

Research achievements

1. **Jakwerth CA**, Weckmann M, Illi S, Charles H, Zissler UM, Oelsner M, Guerth F, Omony J, Nemani SSP, Grychtol R, Dittrich AM, Skevaki C, Foth S, Weber S, Alejandre Alcazar MA, van Koningsbruggen-Rietschel S, Brock R, Blau S, Hansen G, Bahmer T, Rabe KF, Brinkmann F, Kopp MV, Chaker AM, Schaub B, von Mutius E, Schmidt-Weber CB; ALLIANCE Study Group as part of the German Center for Lung Research (DZL). 17q21 Variants Disturb Mucosal Host Defense in Childhood Asthma. Am J

Respir Crit Care Med. 2023 Dec 8. doi: 10.1164/rccm.202305-0934OC. Epub ahead of print. PMID: 38064241. *This study reveals how 17q21 genetic variants weaken mucosal defences, contributing to childhood asthma.*

2. Emerging Investigator Highlights: Constanze Jakwerth, Ph.D., *Am J Respir Crit Care Med.* 2024 Apr 15; 209(8): xxviii; <https://doi.org/10.1164/rccm.209i8xxviii>. (see below)
3. Erb A, Zissler UM, Oelsner M, Chaker AM, Schmidt-Weber CB, **Jakwerth CA**. Genome-Wide Gene Expression Analysis Reveals Unique Genes Signatures of Epithelial Reorganization in Primary Airway Epithelium Induced by Type-I, -II and -III Interferons. *Biosensors (Basel)*. 2022 Oct 26;12(11):929.
4. Wang SH, Zissler UM, Buettner M, Heine S, Heldner A, Kotz S, Pechtold L, Kau J, Plaschke M, Ullmann JT, Guerth F, Oelsner M, Alessandrini F, Blank S, Chaker AM, Schmidt-Weber CB, **Jakwerth CA**. An exhausted phenotype of TH 2 cells is primed by allergen exposure, but not reinforced by allergen-specific immunotherapy. *Allergy*. 2021 Sep;76(9):2827-2839.
5. **Jakwerth CA**, Grass V, Erb A, Pichlmair A, Boonen G, Butterweck V, Schmidt-Weber CB. Inhibition of SARS-CoV-2 infection and replication by Petasites hybridus CO2-extract (Ze 339). *Biomed Pharmacother.* 2024 Jan;170:115959. doi: 10.1016/j.biopha.2023.115959. Epub 2023 Dec 7. PMID: 38061134.
6. **Jakwerth CA**, Feuerherd M, Guerth FM, Oelsner M, Schellhammer L, Giglberger J, Pechtold L, Jerin C, Kugler L, Mogler C, Haller B, Erb A, Wollenberg B, Spinner CD, Buch T, Protzer U, Schmidt-Weber CB, Zissler UM, Chaker AM. Early reduction of SARS-CoV-2-replication in bronchial epithelium by kinin B2 receptor antagonism. *J Mol Med (Berl)*. 2022 Apr;100(4):613-627. doi: 10.1007/s00109-022-02182-7. Epub 2022 Mar 5. PMID: 35247068; PMCID: PMC8897552.
7. **Jakwerth CA**, Chaker AM, Guerth F, Oelsner M, Pechtold L, Zur Bonsen LS, Ullmann JT, Krauss-Etschmann S, Erb A, Kau J, Plaschke M, Winkler M, Kurz A, Kloss A, Esser-von Bieren J, Schmidt-Weber CB, Zissler UM. Sputum microRNA-screening reveals Prostaglandin EP3 receptor as selective target in allergen-specific immunotherapy. *Clin Exp Allergy*. 2021
8. Zissler UM*, **Jakwerth CA***, Guerth FM, Pechtold L, Aguilar-Pimentel JA, Dietz K, Suttner K, Piontek G, Haller B, Hajdu Z, Schiemann M, Schmidt-Weber CB, Chaker AM. Early IL-10 producing B-cells and coinciding Th/Tr17 shifts during three year grass-pollen AIT. *EBioMedicine*. 2018 Oct;36:475-488.
***These authors contributed equally to this publication.**

Granted Patents

9. **06/2017** A ratio of immune cells as prognostic indicator of therapeutic success in allergen-specific immunotherapy, EP3418738A1
10. **05/2020** Bradykinin B2 receptor antagonist for treatment of SARS-CoV2-Infection, EP3909646

Peer recognition

Emerging Investigator Highlights: Constanze Jakwerth, Ph.D., *Am J Respir Crit Care Med.* 2024 Apr 15; 209(8): xxviii; <https://doi.org/10.1164/rccm.209i8xxviii>. I was featured in the *Emerging Investigator Highlights* section of the *American Journal of Respiratory and Critical Care Medicine*, one of the leading journals in my field. This recognition emphasizes her contributions to the molecular mechanisms of childhood asthma, specifically highlighting my expertise in airway immunology.

Prizes, Awards and Fellowships

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| 10/2024 | Helmholtz Munich Best Paper Award , 3 rd place in Munich, Germany |
| 06/2023 | Oral presentation prize , EAACI Congress 2023 in Hamburg, Germany |
| 06/2023 | Poster presentation prize , DZL Annual Meeting 2023 in Munich, Germany |
| 2022 and 2023 | EAACI Congress Travel Grant to attend EAACI Congress 2022 in Prague, Czech Republic, and 2023 in Hamburg, Germany, awarded by the EAACI Congress Committee |
| 11/2009 | Young Investigator Award , International Forum on Immunoglobulin Research, Fort Lauderdale, FL, USA, awarded by the IFIR Scientific Advisory Board |
| 2008 | Financial scholarship for a 6-months research visit in the United States of America awarded by the Studienstiftung des Deutschen Volkes |
| 2007 – 2010 | Student scholarship for duration of study program Molecular Medicine, awarded by the Studienstiftung des Deutschen Volkes |

Other contributions to the research community

- **INSTITUTIONAL RESPONSIBILITIES**

- 2024 – today Teaching officer
2023 – today Safety officer
2022 – today **Co-organiser and representative** of the medical faculty of the TUM for the establishment of a new overarching research school (Environmental Health and Lung Research School, Helmholtz Center Munich)
2022 - today **Organiser** of the lecture series “Immunology Crash Course, RTG2668”
2020 - today **Organiser** of the annual internal seminar series “Type-2 immune responses”

- **REVIEWING ACTIVITIES**

- 2024 – today Reviewer for *American Journal of Respiratory and Critical Care Medicine*
2023 – today Reviewer for JACI, Front Immunol, Allergy
2022 – today Reviewer for funding agency ANR, France
2022 Speaker at *Collegium Internationale Allergologicum (CIA)*, 2022 CIA

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2024 – today Member, European Research Society (ERS)
2024 – today Member, Gesellschaft für Pädiatrische Pneumologie (GPP)
2015 – today Member and PI, German Center of Lung Research (DZL)
2015 – today Member, European Academy of Allergy and Clinical Immunology (EAACI)
2015 – today Member, Deutsche Gesellschaft für Allergologie und klinische Immunologie (DGAKI)

PD Dr. rer. nat. Constanze A. Jakwerth is a Group Leader of Airway Immunology and Deputy Director at the Center of Allergy and Environment (ZAUM), Technical University of Munich and Helmholtz Munich. Her research focuses on the molecular mechanisms of childhood asthma, with a particular emphasis on airway epithelial biology, immune regulation, and non-invasive translational approaches. She studied Molecular Medicine in Freiburg and at Harvard Medical School and completed her PhD at the Technical University of Munich. In 2024, she obtained her habilitation in Molecular Immunology. Her work integrates human cohort studies, high-dimensional omics, and experimental models to unravel genotype-driven disease mechanisms and epithelial-immune interactions. PD Dr. Jakwerth is an active member of the German Center for Lung Research (DZL) and contributes to national and international collaborative research initiatives. Her research aims to advance personalized diagnostics and targeted therapies for airway diseases.