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(formerly: Karer)

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**Personal Data**

Date of Birth: 1993-03-09  
Place of Birth: Braunau am Inn, Upper-Austria, Austria  
Nationality: Austria

**Education**

2022 - ongoing: Residency in Internal Medicine, Specialty: Infectious Diseases and Tropical Medicine  
2022-2023: Basic Clinical rotations: Department of Clinical Pharmacology, Department of Cardiac Surgery and Department of Medicine I  
2018 - 2022: Ph.D. (MD-Ph.D. Excellence-program), Medical University of Vienna, Austria  
2015 - 2021: Master of Science (M.Sc.) in Molecular Biology, University of Vienna, Austria  
2014 - 2020: Medical School (M.D.), Medical University of Vienna, Austria  
2012 - 2015: Bachelor of Science (B.Sc.) in Biomedicine and Biotechnology, University of Veterinary Medicine, Vienna, Austria

**Career History**

2022 - ongoing: Residency in Internal Medicine, Specialty: Infectious Diseases and Tropical Medicine  
2016 - 2022: PhD student, Department of Clinical Pharmacology, Medical University of Vienna, Austria

**Career-related Activities**

2018: FELASA-B certificate: "Experimental biomedical studies in animals", Medical University of Vienna, Austria  
2016: Internship: Shire Pharmaceuticals, R&D Immunology, Vienna, Austria  
"Immunogenicity and Immunosafety of blood products"  
2014: Internship: Institute of Pharmacology, Medical University of Vienna, Austria  
"Hepatocyte specific  $\beta$ -catenin Knock-out in Mdr2 mice"  
2013: Internship: Institute of Molecular Biotechnology (IMBA), Vienna, Austria  
„Large scale polyethylene glycol based purification of plasmids"  
2012-2015: Student Speaker for course: Biomedicine and Biotechnology, University of Veterinary Medicine, Vienna, Austria  
2012-2013: Member of the Curriculum Commission "Biomedicine and Biotechnology", University of Veterinary Medicine, Vienna, Austria

## Description of research interests and most important scientific achievements

- Histamine metabolism in anaphylaxis
- New biomarkers and therapy options in bacterial and viral pneumonia

My scientific work focuses on histamine, one of the main mediators in anaphylaxis, and diamine oxidase (DAO), an endogenous enzyme responsible for histamine degradation. We aim to elucidate the complex functions of histamine *in vivo*, influencing e.g. coagulation, vascular integrity, inflammation and immune cell functions and provide a new treatment option for life-threatening conditions with excess histamine.

## Publications, talks and citations

15 peer-reviewed publications in scientific journals. (2 publications under review) Total citations: 110; h-index: 5 (Google Scholar)

### Publications:

1. **Weiss-Tessbach M**, Reiter B, Gludovacz E, Boehm T, Jilma J, Rager-Resch M. Recombinant human diamine oxidase prevents haemodynamic effects of continuous histamine infusion in guinea pigs. **Accepted** in Inflammation Research
2. **Weiss-Tessbach M**, Ratzinger F, Obermueller M, Burgmann H, Staudinger T, Robak O, Schmid M, Roessler B, Jilma B, Kussmann M\*, Traby L\*. Biomarkers for differentiation of COVID-19 or ECMO related inflammation and bacterial/fungal infections in critically ill patients: A prospective observational study. *Frontiers in Medicine*. 2022. (IF: **5.058**) doi: 10.3389/fmed.2022.917606
3. **Karer M**, Rager-Resch M, Haider T, Petroczi K, Gludovacz E, Borth N, Jilma B, Boehm T. Diamine oxidase knockout mice are not hypersensitive to orally or subcutaneously administered histamine. *Inflammation Research*. 2022. (IF: **6.986**) doi: 10.1007/s00011-022-01558-2
4. **Karer M**, Haider T, Kussmann M, Obermüller M, Tiehen C, Burgmann H, Lagler H, Traby L. Treatment of legionellosis including a single intravenous dose of 1.5 g azithromycin: 18-year experience at a tertiary care hospital. *International Journal of Antimicrobial Agents*. 2022. (IF: **15.441**) doi: 10.1016/j.ijantimicag.2021.106481
5. **Karer M**, Kussmann M, Ratzinger F, Obermüller M, Reischer V, Winkler HM, Kriz R, Burgmann H, Jilma B\*, Lagler H. Different Types of Coagulase are associated with 28-day Mortality in Patients with *Staphylococcus aureus* Bloodstream Infections. *Frontiers in Cellular and Infection Microbiology*. 2020 May 19. (IF: **5.293**) 10:236: doi: 10.3389/fcimb.2020.00236
6. **Karer M**, Stiasny K, Zeitlinger M, Jilma B. Subcutaneous injection of mRNA vaccines against severe acute respiratory syndrome coronavirus 2: an option for severe bleeding disorders or anticoagulated patients? *Blood Coagulation and Fibrinolysis*. 2021 April 30. (IF: **1.061**) 30:00-00. doi: 10.1097/MBC.0000000000001048
7. Zagiczek SN, **Weiss-Tessbach M**, Kussmann M, Moser D, Stoiber M, Moscato F, Schima H, Grasl C. 3D printing of microstructured surfaces and its influence on bacterial adhesion and growth. **Under review**.
8. Obermueller M, **Weiss-Tessbach M**, Hohl L, Kriz R, Spettel K, Schneider L, Burgmann H, Traby L, Kussmann M. *Staphylococcus aureus* small colony variants: A potentially underestimated microbiological challenge in peritoneal dialysis. **Under review**.
9. Boehm T, Gludovacz E, Sednev M, **Weiss-Tessbach M**, Brankovic J, Klavins K, Jilma B. Incubation of protonated NADH or NADPH with ortho aminobenzaldehyde generates a fluorescent nicotinamide

dihydroquinazoline condensate. *Analytical Biochemistry*. 2023 Sep 01. 676, 115246. (IF 2.9) doi.org/10.1016/j.ab.2023.115246

10. Kussmann M, **Karer M**, Obermueller M, Schmidt K, Barousch W, Moser D, Nehr M, Ramharter M, Poepl W, Makristathis A, Winkler S, Thalhammer F, Burgmann H, Lagler H. Emergence of a dalbavancin induced glycopeptide/lipoglycopeptide non-susceptible *Staphylococcus aureus* during treatment of a cardiac device-related endocarditis. *Emerging Microbes and Infection*, 2018 December 05. 5;7(1):202. (IF: 6.212) doi: 10.1038/s41426-018-0205-z
11. Kussmann M, Obermueller M, **Karer M**, Kriz R, Chen RY, Hohl L, Schneider L, Burgmann H, Traby L, Vossen MG. Synergistic effect of cefazolin plus fosfomycin against *Staphylococcus aureus* in vitro and in vivo in an experimental *Galleria mellonella* model. *Frontiers in Pharmacology*. 2021 May 11. 12:685807. (IF: 5.988) doi: 10.3389/fphar.2021.685807.
12. Boehm T, **Karer M**, Matzneller P, Buchtele N, Ratzinger F, Petroczi K, Schoergenhofer C, Schwameis M, Burgmann H, Zeitlinger M, Jilma B. Human diamine oxidase is readily released from activated neutrophils ex vivo and in vivo but is rarely elevated in bacteremic patients. *International Journal of Immunopathology and Pharmacology*, 2020 August 13. Jan-Dec;34:2058738420954945: (IF: 3.219) doi: 10.1177/2058738420954945
13. Boehm T, **Karer M**, Gludovacz E, Petroczi K, Resch M, Schuetzenberger K, Klavins K, Borth N, Jilma B. Simple, sensitive and specific quantification of diamine oxidase activity in complex matrices using newly discovered fluorophores derived from natural substrates. *Inflammation Research*, 2020 June 01. 69:937–950. (IF: 4.575) doi.org/10.1007/s00011-020-01359-5
14. Trab L, Kollars M, Kussmann M, **Karer M**, Sinkovec H, Lobmeyer E, Hermann A, Staudinger T, Schellongowski P, Rössler B, Burgmann H, Kyrle P, Eichinger S. Extracellular Vesicles and Citrullinated Histone H3 in Coronavirus Disease 2019 Patients. *Thrombosis and Haemostasis*. 2021 June 02. (IF: 6.681) doi: 10.1055/a-1522-4131
15. Lagler H, Bangert C, Quint T, Österreicher Z, Nussbaumer-Pröll A, Eberl S, Weber M, **Karer M**, Sommer M.O.A., Zeitlinger M. Comparison of non-invasive *Staphylococcus aureus* sampling methods on lesional skin in patients with atopic dermatitis. *European Journal of Clinical Microbiology & Infectious Diseases*. 2021 November 04. (IF: 5.103) doi: 10.1007/s10096-021-04365-5
16. Schubert L., Strassl R., Burgmann H., Dvorak G., **Karer M.**, Kundi M., Kussmann M., Lagler H., Lötsch F., Milacek C., Obermueller M., Oesterreicher Z., Steininger C., Stiasny K., Thalhammer F., Traby L., Vass Z., Vossen MG., Weseslindtner L., Winkler S., Tobudic S. A Longitudinal Seroprevalence Study Evaluating Infection Control and Prevention Strategies at a Large Tertiary Care Center with Low COVID-19 Incidence. *International Journal of Environmental Research and Public Health*. 2021 April 15. 18, 4201. (IF: 4.614) doi: 10.3390/ijerph18084201
17. Lemberger UJ, Fuchs CD, **Karer M**, Haas S, Stojakovic T, Schöfer C, Marschall HU, Wrba F, Taketo MM, Egger G, Trauner M, Österreicher CH. Hepatocyte specific expression of an oncogenic variant of  $\beta$ -catenin results in cholestatic liver disease. *Oncotarget*. 2016 November 23. 7(52):86985–98. (IF: 5.168) doi: 10.18632/oncotarget.13521

#### Further achievements

2018-2020	MDFhD Excellence Scholarship for 2 years, Medical University of Vienna, Austria
2017	Scholarship to conduct a diploma thesis, Medical University of Vienna, Austria
2020	Single-shot azithromycin in treatment of <i>Legionella pneumophila</i> : 18-year experience at the Vienna General Hospital, Austria. Poster presentation P_2005:

European congress of clinical microbiology and infectious diseases (ECCMID)  
2020, Paris, France

2018 The influence of various staphylococcal clotting factors on clinical parameters and  
in vitro biofilm formation. Poster presentation P\_2032: European congress of  
clinical microbiology and infectious diseases (ECCMID) 2018, Madrid, Spain

2018 Diagnostics of the fastidious growing urinary pathogen *Actinotignum schaalii* via  
Addis-count and urinary strips. Poster presentation P\_06: Austrian Congress for  
Infectious diseases 2018, Saalfelden, Austria

Vienna, 13 Sep 2023

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