

Curriculum vitae

Dr. rer. nat. Barbara Hammer, BSc, MSc

Current position: *Postdoctoral fellow*

Deputy group leader

Early Life Origins of Chronic Lung Diseases

Priority Research Area Chronic Lung Diseases

Research Center Borstel, Leibniz Lung Center, Borstel, Germany

and

Deputy head of animal facility

Research Center Borstel, Leibniz Lung Center, Borstel, Germany

University Education

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|----------------|---|
| 2009 – 2013 | Bachelor's degree in Biology (Molecular Biology/Genetics)
Paris Lodron University Salzburg, Salzburg, Austria |
| 2013 – 2016 | Master's degree in Biology (Molecular Biology/Genetics/Immunology)
Paris Lodron University Salzburg, Salzburg, Austria |
| 2016 – 2020 | Doctorate in Natural Science (PhD)
Christian-Albrechts-University of Kiel, Germany |
| 2022 – to date | Study of Master of Science in Laboratory Animal Science, North Rhine-Westphalia
Technical University of Aachen (RWTH), Aachen, Germany |

Scientific Career

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| 2016 – 2020 | PhD Thesis
“Parental smoking behavior – cellular and molecular consequences for murine offspring”
Early Life Origins of Chronic Lung Diseases, Priority Research Area Asthma and Allergy,
Research Center Borstel, Leibniz Lung Center, Borstel, Germany |
| 2020 – 2022 | Postdoctoral fellow, Division of Pulmonology, Department of Medicine II,
Medical University of Vienna, Vienna, Austria |
| 2022 – 2023 | Postdoctoral fellow, DZL Laboratory for Experimental Microbiome
Research, Priority Research Area Chronic Lung Diseases, Research Center
Borstel, Leibniz Lung Center, Borstel, Germany |
| 2022 – to date | Deputy group leader Div Early Life Origins of Chronic Lung Diseases
Priority Research Area Chronic Lung Diseases
Research Center Borstel, Borstel, Germany |
| 2024 – to date | Postdoctoral fellow, Early Life Origins of Chronic Lung Diseases,
Priority Research Area Chronic Lung Diseases, Research Center
Borstel, Leibniz Lung Center, Borstel, Germany |

Research publications

- 2018 **Hammer B**, Wagner C, Divac Rankov A, et al. In utero exposure to cigarette smoke and effects across generations: a conference of animals on asthma. *Clin Exp Allergy*. 2018;48:1378-1390. doi: <https://doi.org/10.1111/cea.13283>; IF: 5.401
- 2020 Danov O, Wolff M, Bartel S, Böhlen S, Obernolte H, Wronski S, Jonigk D, **Hammer B**, Kovacevic D, Reuter S, Krauss-Etschmann S and Sewald K (2020) Cigarette Smoke Affects Dendritic Cell Populations, Epithelial Barrier Function, and the Immune Response to Viral Infection With H1N1. *Front. Med.* 7:571003. doi: 10.3389/fmed.2020.571003; IF: 9.927
- 2021 **Hammer B.**, Kadalayil L., Boateng E. et al. Preconceptional smoking alters spermatozoal miRNAs of murine fathers and affects offspring's body weight. *Int J Obes* 45, 1623–1627 (2021). <https://doi.org/10.1038/s41366-021-00798-2>; IF: 5.551
- 2021 López-Cervantes JP, Lønnebotn M, Jogi NO, Calciano L, Kuiper IN, Darby MG, Dharmage SC, Gómez-Real F, **Hammer B**, Bertelsen RJ, Johannessen A, Würtz AML, Mørkve Knudsen T, Koplín J, Pape K, Skulstad SM, Timm S, Tjalvin G, Krauss-Etschmann S, Accordini S, Schlünssen V, Kirkeleit J, Svanes C. The Exposome Approach in Allergies and Lung Diseases: Is It Time to Define a Preconception Exposome? *Int J Environ Res Public Health*. 2021 Dec 1;18(23):12684. doi: 10.3390/ijerph182312684; IF: 4.614
- 2022 Sirocko K-T, Angstmann H, Papenmeier S, Wagner C, Spohn M, Indenbirken D, Ehrhardt B, Kovacevic D, **Hammer B**, Svanes C, Rabe K F, Roeder T, Uliczka K, Krauss-Etschmann S. Early-life exposure to tobacco smoke alters airway signaling pathways and later mortality in *D. melanogaster*. *Environmental Pollution* 309 (2022) 119696. doi: 10.1016/j.envpol.2022.119696; IF: 9.988
- 2023 **Hammer B**, Bal C, Gysan M, Zehetmayer S, Geleff S, Zech A, Kramer M, Ayazseven S, Idzko M, Mosleh B, Hoda MA, Gompelmann D. Evaluation of PD-1 T lymphocytes in bronchoalveolar lavage in lung cancer compared to benign lung diseases. *Clin Exp Med*. 2023 Aug 3. doi: 10.1007/s10238-023-01146-6; IF: 5.057

Certificates

- 2016 Tierschutz und Versuchstiere in der Forschung (mouse and rat), CAU Kiel
- 2017 FELASA B
(Federation for Laboratory Animal Science Associations Category B)
- 2019 Flow Cytometry LSR II – Level 1

Awards

- 2018 Poster Award, 2nd International Symposium on Allergy meets Infection, Luebeck, Germany
- 2019 Poster Prize (Poster Discussion Session), European Academy of Allergy and Clinical Immunology (EAACI) Congress 2019, Lisbon, Portugal
- 2021 Shared award for the two best PhD Theses 2020 (Kreis Segeberg, Germany)
- 2022 Travel Grant for Conference Participation Initiative (CPI) of the Leibniz Institute of Health-Technologies, Jena, Germany

Experience in Laboratory Animal Research

2011-2013	Internships as animal caretaker and assistance of experimental animal studies and surgeries with rats, rabbits and mini pigs (Ludwig Boltzmann Gesellschaft, Institute for Experimental and Clinical Traumatology, Vienna, Austria)
2014 – date	Active participation in over 10 animal proposals with mice
2016 – date	Planning and implementation of transgenerational mouse studies
2020 – date	Conception and writing of applications for animal proposals (mouse)
2020 – 2022	Responsible for breeding management and genotyping of transgenic mice at the Medical University of Vienna (MUW), Austria
2023 - date	Head of approved animal proposals