

Barbara Hammer, MSc.

bhammer@fz-borstel.de

Date of birth: 24.07.1989 in Tulln an der Donau

Nationality: Austrian

Education

Jan. 2016 –

present

PhD Candidate

Effects of parental preconceptional or prenatal cigarette smoke exposure on lung development and immunity in murine offspring

Early Life Origins of Chronic Lung Diseases, Research Center Borstel, Leibniz Lung Center, Member of the German Lung Society (DZL), Borstel, Germany

2013-2016

Master of Science (Biology), University of Salzburg, Austria

Acute and chronic allergy models and their effect on behavior and immune signaling in the hippocampus

Institute of Molecular Regenerative Medicine, Paracelsus Medical University Salzburg, Austria

Division of Allergy and Immunology, University of Salzburg, Austria

2009-2013

Bachelor of Science (Biology), University of Salzburg, Austria

Major subjects: Genetics/Molecular biology, Immunology

Methods:

Laboratory animals:

- mouse models: intergenerational studies with parental cigarette smoke exposure, asthma model (ovalbumin), acute and chronic asthma model (Phl p 5, Timothygrass)
- cigarette smoke exposure (inExpose system, SCIREQ)
- lung function test (FlexiVent, SCIREQ)
- behavioral tests: Open Field, Elevated Plus Maze, Novel Object Location, Morris Water Maze (software: Noldus EthoVision XT 9.0)
- breeding (mouse)
- sperm isolation (cauda epididymis)
- routes of administration: intraperitoneal (i.p.), subcutaneous (s.c.), intravenous (i.v.), intranasal (i.n.), aerosol provocation
- bronchoalveolar lavage, nasal lavage

Molecular biological techniques:

- flow cytometry and single cell sorting (LSRII and Aria IIu, BD Bioscience)
- RT-qPCR
- RNAseq (RNA preparation and quality testing for next-generation sequencing)

Histological techniques:

- Hematoxylin and eosin staining (murine lung and thymus)
- Diff-quick staining (bronchoalveolar lavage)

Analysis and statistics (software):

- BD FACSDiva™ (BD Bioscience, USA)
- FlowJo v10 (FlowJo, LCC, USA)
- FlexiWare (Scireq, Canada)
- EthoVision XT 9.0 (Noldus Technology, The Netherlands)
- Prism 6 (Graph Pad, USA)

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.

Conferences

2015 14th Austrian Neuroscience Association (ANA) Meeting, Salzburg, Austria (poster)

2016 Animal models in biomedical research, Luebeck, Germany (poster)

5th DZL International Symposium, Hamburg, Germany (poster)

Autumn meeting DGP, Hannover, Germany (talk)

Life Science Student Conference, Kiel, Germany (poster)

2017 DZL International Symposium, Munich, Germany (poster)

ERS 2017, Milan, Italy (poster)

NDI₃ conference 2018, Borstel, Germany (organization)

2018 16th EAACI Immunology Winter School, Saas-Fees, Switzerland (poster)

DZL Annual Meeting, Bad Nauheim, Germany (poster)

1st Borstler Asthma & Allergy Conference, Borstel, Germany (poster)

EAACI congress, Munich, Germany (poster)

Asthma meets Infection, Luebeck, Germany (poster)

Autumn meeting DGP, Essen, Germany (talk)

NDI₃ conference 2017, Borstel, Germany (talk)

2019 17th EAACI Immunology Winter School, Trysil, Norway (poster)

DZL Annual Meeting, Mannheim, Germany (poster)

Awards & Prizes

2018 Poster Award

Smoking in adolescence alters the body weight of the next generation in a sex-specific manner

2nd International Symposium on Allergy meets Infection, Luebeck, Germany

Work experience

Nov. 2017

Conference organization

New Developments in Immunology, Inflammation and Infection
(NDI₃) 2017

Research Center Borstel, Leibniz Lung Center, Borstel, Germany

Nov. – Dec. 2015

Laboratory RNA isolation, RT-qPCR

*Institute of Molecular Regenerative Medicine, Paracelsus Medical University Salzburg,
Austria*

Jan. 2015

Jun. 2015

Tutorial Tutor in immunology practical course (Bachelor studies)

Division of Allergy and Immunology, University of Salzburg, Austria

Summer 2011, 2012 and 2013

Internship Support of animal facility (mouse, rat, mini pig), assistance of animal studies (rat), assistant during surgery (rat, mini pig), cooperation with Baxter (animal study, rabbits), attendance at TERMIS Congress 2012

*Ludwig Boltzmann Gesellschaft, Institute for Experimental and Clinical Traumatology,
Vienna, Austria*

2009-2015

Gastronomy Commis de Rang (service), caterings and support of sommelier at wine store

Magazin:o, magazin HandelsgmbH & Co KG, Salzburg, Austria

Additional information

Language skills:

German – mother tongue, **English** – fluent, **French** – basic skills

Animal facility software:

PyRAT System (Animal Facility Software, Scionics Computer Innovation GmbH, Germany)

Certificates:

- 2016 Laboratory Animals (mouse and rat)
2017 FELASA B
 (Federation for Laboratory Animal Science Associations Category B)
2019 Flow Cytometry

Completed vocational training:

- 2008 cook and waitress
 Höhere Lehranstalt für Wirtschaftliche Berufe (HLW), Tulln an der Donau, Austria