

Amelia E. Barber

Junior Group Leader, Leibniz-HKI

✉ amelia.barber@leibniz-hki.de

🌐 barber-lab.com

🐦 [frau_dr_barber](https://twitter.com/frau_dr_barber)

📺 [ameliabedelia](https://www.youtube.com/channel/UCv8v8v8v8v8v8v8v8v8v8v8)

Education

- 2016 **PhD**, *University of Utah*, Salt Lake City, UT, USA.
 - 🔵 **Zebrafish reveal variable effects of *Escherichia coli* during sepsis.**
 - 🔵 Doctoral advisor: Matthew Mulvey
- 2006 **BS**, *University of Wisconsin-Madison*, Madison, WI, USA.
 - 🔵 Medical Microbiology & Immunology; Women's Studies

Experience

- 2020-present **Junior Group Leader**, *Leibniz Institute for Natural Product Research and Infection Biology - Hans Knöll Institute*, Jena, Germany.
 - 🔵 *Integrated into the Systems Biology and Bioinformatics group of the Leibniz-HKI*
- 2016-2020 **Postdoctoral Fellow**, *Leibniz Institute for Natural Product Research and Infection Biology - Hans Knöll Institute*, Jena, Germany.
 - 🔵 *Research group of Oliver Kurzai*
- 2010-2016 **Graduate Research Assistant**, *University of Utah*, Salt Lake City, UT.
 - 🔵 *Research group of Matthew Mulvey*
- 2007-2009 **Associate Research Specialist**, *University of Wisconsin-Madison*, Madison, WI.
 - 🔵 *Research group of Clive Swendsen*
- 2005-2007 **Undergraduate Researcher**, *University of Wisconsin-Madison*, Madison, WI.
 - 🔵 *Research group of Ken Raffa*
- 2004-2005 **Undergraduate Researcher**, *University of Wisconsin-Madison*, Madison, WI.
 - 🔵 *Research group of Barbara St. Pierre Schneider*

Research Support

- 2020-2024 DFG Excellence Cluster 'Balance of the Microverse' Junior Research Group.
- 2012-2014 NIAID T-32 Microbial Pathogenesis Training Grant.

Awards

- 2018 International Society for Human and Animal Mycology Attendance Grant.
- 2017 European Confederation of Medical Mycology Young Investigators Travel Award.
- 2015 ASM Richard and Mary Finkelstein Travel Award.
- 2015 University of Utah Graduate School Travel Award.
- 2012 University of Utah Alma Mater Travel Award.

Preprints & submitted manuscripts

- 2021 **Pangenome analysis of *Aspergillus fumigatus* identifies genetic variants associated with human infection**, AE Barber, T Sae-Ong, K Kang, B Seelbinder, J Li, G Walther, G Panagiotou, O Kurzai, in revision.

Publications

- 2020 **Effect of agricultural fungicide use on *Aspergillus fumigatus* abundance, antifungal susceptibility, and population structure**, AE Barber, J Riedel, T Sae-Ong, K Kang, W Brabetz, G Panagiotou, HB Deising, O Kurzai, *mBio*.
- 2020 **Low rate of azole resistance in cases of avian aspergillosis in Germany**, AE Barber, S Scheufen, G Walther, O Kurzai, V Schmidt, *Medical Mycology*.
- 2019 ***Candida auris* in Germany and Previous Exposure to Foreign Healthcare**, A Hamprecht, AE Barber, SC Mellinghoff, P Thelen, G Walther, Y Yu, ..., *Emerging Infectious Diseases*.
- 2019 **Comparative genomics of serial *Candida glabrata* isolates and the rapid acquisition of echinocandin resistance during therapy**, AE Barber, M Weber, K Kaerger, J Linde, H Gölz, D Duerschmied, ..., *Antimicrobial Agents And Chemotherapy*.
- 2017 ***Escherichia coli* O78 isolated from septicemic lambs shows high pathogenicity in a zebrafish model**, CK Kjelstrup, AE Barber, JP Norton, MA Mulvey, TM L'Abée-Lund, *Veterinary Research*.
- 2016 **Similarly lethal strains of extraintestinal pathogenic *Escherichia coli* trigger markedly diverse host responses in a zebrafish model of sepsis**, AE Barber, BA Fleming, MA Mulvey, *mSphere*.
- 2016 **Strengths and limitations of model systems for the study of urinary tract infections and related pathologies**, AE Barber, JP Norton, TJ Wiles, MA Mulvey, *Microbiology and Molecular Biology Reviews*.
- 2013 **Urinary tract infections: current and emerging management strategies**, AE Barber, JP Norton, AM Spivak, MA Mulvey, *Clinical Infectious Diseases*.

- 2013 **The Cpx stress response system potentiates the fitness and virulence of uropathogenic *Escherichia coli***, I Debnath, JP Norton, AE Barber, EM Ott, BK Dhakal, RR Kulesus, ..., *Infection And Immunity*.
- 2010 **Ex vivo delivery of GDNF maintains motor function and prevents neuronal loss in a transgenic mouse model of Huntington's disease**, AD Ebert, AE Barber, BM Heins, CN Svendsen, *Experimental Neurology*.
- 2008 **Human neural progenitor cells over-expressing IGF-1 protect dopamine neurons and restore function in a rat model of Parkinson's disease**, AD Ebert, AJ Beres, AE Barber, CN Svendsen, *Experimental Neurology*.

Selected Presentations

- 2020 Medical Mycology Trainee Seminar Series. Virtual. Oral presentation: "Searching for the Source: how environmental fungi become clinically resistant." <https://youtu.be/Dm9yqtCkDw4>
- 2020 15th European Conference on Fungal Genetics. Rome, Italy. Flash talk and poster: "Azole use in agriculture reduces *Aspergillus fumigatus* abundance, but does not alter its population structure."
- 2019 Trends in Medical Mycology. Nice, France. Poster: "Comparative genomics of *Aspergillus fumigatus* and the influence of agriculture on ecology and azole resistance."
- 2019 30th Fungal Genetics Conference. Pacific Grove, CA, USA. Oral Presentation and poster: "Influence of conventional vs. organic agricultural practices on the ecology and azole resistance status of *Aspergillus fumigatus*."
- 2018 16th Congress of the International Society for Human and Animal Mycology. Amsterdam, Netherlands. Poster: "Comparitve genomics of environmental *Aspergillus fumigatus* and the role of agricultural azoles on the emergence of resistance."
- 2017 Trends in Medical Mycology. Belgrade, Serbia. Poster: "Incidence and mechanisms of azole resistance among *Aspergillus fumigatus* in Germany."
- 2017 Visions for Infection Control: InfectControl 2020 Strategy Conference. Jena, Germany. Oral presentation: "The State of Azole Resistance in *Aspergillus fumigatus* in Germany."
- 2015 ASM Microbe. New Orleans, LA, USA. Oral presentation and poster: "Differential stimulation of TLR5 by lethal strains of *Escherichia coli* triggers markedly diverse host responses during sepsis."
- 2012 Institute for Biology Education, University of Wisconsin-Madison. Madison, WI, USA. Oral presentation: "Zebrafish as a model of *Escherichia coli* septicemia."

Trainees Supervised

- 2021-present Phillip Brassington. PhD student.
- 2021-present Ailton Pereira da Costa Filho. PhD student.
- 2020-present Daniel Loos. PhD student (*co-supervised with Gianni Panagiotou*).
- 2018-present Tongta Sae-Ong. PhD student (*primary supervisor Gianni Panagiotou*).
- 2016-2017 Antonia Lange. Masters student (*primary supervisor Oliver Kurzai*).
- 2016 Alex Tran. Undergraduate research student.
- 2013-2016 Kevin Nelson. Undergraduate research student.

Academic Teaching Experience

- 2014 Instructor, Mechanisms of Bacterial Pathogenesis. University of Utah
- 2013 Teaching assistant, Mechanisms of Bacterial Pathogenesis. University of Utah
- 2011 Teaching assistant, Introduction to Medical Microbiology. University of Utah

Service

- 2020-present Scientific Network on Antifungal Resistance (SN-AFR).
- 2012-2015 Graduate Biosciences Academic Misconduct Committee. University of Utah
- 2011 Department of Pathology Faculty Retention and Promotion Committee. University of Utah
- 2010 Molecular Biology Graduate Program External Review. University of Utah

Outreach

- 2019 Long Night of Science Jena.
- 2019 Skype a Scientist.
- 2018 World Sepsis Day.
- 2017 Long Night of Science Jena.
- 2014-2015 Initiative to Bring Science Programs to the Incarcerated (INSPIRE).
- 2014 McMillian Elementary School.
- 2014 University of Utah Educational Outreach Program.
- 2012-2013 Explore Utah Science.