



Personal Information

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Research Interests

Phylo- and population genomics of fungal pathogens
Antifungal resistance
Evolution of microbial virulence

Education

August 2016 **PhD**, Microbiology and Immunology
University of Utah, Salt Lake City, UT (USA)
"Zebrafish reveal variable effects of Escherichia coli during sepsis"

December 2006 **BS**, Medical Microbiology & Immunology; Women's Studies
University of Wisconsin-Madison, Madison, WI (USA)

Academic Positions

2022 - present **Independent Junior Group Leader.**
Institute for Microbiology, Friedrich Schiller University, Jena, Germany.

2020 - 2022 **Junior Group Leader.** Integrated into the group of Gianni Panagiotou.
Leibniz-HKI, Jena, Germany.

2016 - 2020 **Postdoctoral Fellow**, Research group of Oliver Kurzai.
Leibniz-HKI and University of Würzburg, Jena and Würzburg, Germany.

2010 - 2016 **Doctoral Researcher**, Research group of Matthew A. Mulvey.
University of Utah, Salt Lake City, UT, USA.

2007 - 2009 **Associate Research Specialist**, Research group of Clive N. Svendsen.
University of Wisconsin-Madison, Madison, WI, USA.

Funding

2020 - 2026 Junior research group funded by the DFG Excellence Cluster Balance of the Microverse; UK MRC Early Career Fellowship declined.

2019 - 2022 Contributed to FINAR 2.0 funded by the BMBF/InfectControl.

2012 - 2014 T-32 Microbial Pathogenesis Doctoral Training Grant funded by NIAID.

Publications

Five Selected Publications

Barber AE, Sae-Ong T, Kang K, Li J, Walther G, Panagiotou G, Kurzai O. *Aspergillus fumigatus* pan-genome analysis identifies genetic variants associated with human infection. Nat Microbiol. 2021;6(12).

Barber AE*, Riedel J, Sae-Ong T, Kang K, Brabetz W, Panagiotou G, Kurzai O. Effects of Agricultural Fungicide Use on *Aspergillus fumigatus* Abundance, Antifungal Susceptibility, and Population Structure. mBio. 2020;11(6).

Hamprecht A, **Barber AE**, Mellinghoff SC, Thelen P, Walther G, Yu Y, et al. *Candida auris* in Germany and Previous Exposure to Foreign Healthcare. Emerg Infect Dis. 2019;25(9):1763-5.

Barber AE, Weber M, Kaerger K, Linde J, Golz H, Duerschmied D, et al. Comparative Genomics of Serial *Candida glabrata* Isolates and the Rapid Acquisition of Echinocandin Resistance during Therapy. Antimicrob Agents Chemother. 2019;63(2).

Barber AE, Fleming BA, Mulvey MA. Similarly Lethal Strains of Extraintestinal Pathogenic *Escherichia coli* Trigger Markedly Diverse Host Responses in a Zebrafish Model of Sepsis. mSphere. 2016;1(2).

Full publication list available at: <https://scholar.google.com/citations?user=COgbwJ4AAAAJ>

Preprints

Loos D, Pereira ADCF, Dutilh BE, **Barber AE***, Panagiotou G*. A Global Survey of Host, Aquatic, and Soil Microbiomes Reveals Ecological Properties and Genomic Features Shared Between Bacterial and Fungal Generalists. bioRxiv. 2022. *corresponding author

Honors and Awards

2022	Publication Prize, German Speaking Mycological Society
2021-22	Leibniz Mentoring Program
2021	Medac Research Prize
2021	Finalist, Leibniz Best Minds Competition
2018	International Society for Human and Animal Mycology Attendance Grant
2017	European Confederation of Medical Mycology Young Investigator 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

Supervision

- Since 2021 Postdocs: *L. Fabre*
PhD students: *P. Brassington, A. Pereira, M. Perrier*
Masters student: *H. Lin*
- 2012 - 2022 Co-supervision of: PhD students: *T. Sae-Ong, D. Loos* // Masters student: *A. Lange* // Bachelors students: *A. Tran, K. Nelson*

Teaching

- 2022 - present Lecture and practical modules, Microbiology and Molecular Biology. Friedrich Schiller University.
- 2014 - 2015 Instructor, Initiative to Bring Science Programs to the Incarcerated (INSPIRE) Utah State Prison and Salt Lake County Jail
- 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

Academic Service and Society Memberships

Peer reviewer for mBio, PLoS Pathogens, Nature Microbiology, Microbial Genomics, Antimicrobial Agents and Chemotherapy, Environmental Microbiology, Infection and Immunity, Journal of Fungi, and PLoS One.
External grant reviewer for UKRI and BSF.

- Since 2023 Elected member, Aspergillus Genomes Research Policy Committee
- Since 2021 Member, German Speaking Mycological Society (DMyKG)
- Since 2020 Invited member, Scientific Network for Antifungal Resistance (SN-AFR)
- Since 2020 Support CRC/Transregio 124 FungiNet with infrastructure subproject
- Since 2020 National Research Data Infrastructure NFDI4Microbiota representative for the Microverse Cluster and the Leibniz-HKI
- Since 2018 Member, International Society for Human and Animal Mycology (ISHAM)
- 2013 - 2016 Member, American Society of Microbiology (ASM)
- 2012 - 2015 University of Utah Academic Misconduct Committee in Graduate Biosciences
- 2011 University of Utah Department of Pathology Faculty Retention and Promotion Committee

Selected Presentations

- 2023 University of Gießen. *Gießen, DE.*
2023 Jena Microbiome Meeting. *Jena, DE.*
2023 Reinhardsbrunn Symposium. *Freidrichroda, DE.*
2023 European Conference on Fungal Genetics. *Innsbruck, AT.*
2022 Mykosen am Mittwoch. *Virtual.*
2022 Antifungal Resistance: An Environmental Update. *Wageningen, Netherlands.*
2022 Microbial Communities: Current Approaches and Open Challenges.
Cambridge, UK
2022 Global Health Institute, Swiss Federal Institute of Technology. *Lausanne, Switzerland.*
2022 FEBS Host-Pathogen Interactions in Human Fungal Pathogens.
La-Colle-sur-Loup, France.
2022 University of Basel Biozentrum. *Virtual.*
2022 EMBL The Next Generation of Infection Biology. *Virtual.*
2022 Advances Against Aspergillosis and Mucormycosis. *Virtual.*
2021 Scientific Conference of the German-speaking Mycological Society. *Virtual.*
2021 LIFE Mini-Symposium. Friedrich Schiller University. *Jena, Germany. Virtual.*
2020 Medical Mycology Trainee Seminar Series. *Virtual.*
2020 European Conference on Fungal Genetics. *Rome, Italy.*
2019 Trends in Medical Mycology Conference. *Nice, France.*
2019 Fungal Genetics Conference. *Pacific Grove, CA, USA.*
2017 Visions for Infection Control: InfectControl Strategy Conference. *Jena, Germany.*
2015 ASM Microbe. *New Orleans, LA, USA.*

Outreach

- 2019 Long Night of Science Jena
2019 Skype a Scientist
2018 World Sepsis Day
2017 Long Night of Science Jena
2014 McMillian Elementary School
2014 University of Utah Educational Outreach Program
2012 – 2013 Explore Utah Science