



MEDIZINISCHE
UNIVERSITÄT
INNSBRUCK

**PhD position in FWF-funded project HOROS on
"Metabolic remodeling of *Aspergillus fumigatus* during
iron starvation"
under supervision of Hubertus Haas**

Project mycoiron

**Iron and fungal infections
(Supervisor: Hubertus Haas)**

Aspergillus fumigatus is the most common airborne fungal pathogen in Europe causing allergic and invasive diseases. Invasive infection, termed aspergillosis, is a life-threatening disease mainly affecting immunocompromised patients. During infection, *A. fumigatus* faces iron limitation. In line, we have shown that defects in iron homeostasis-maintaining mechanism attenuate virulence of this mold in murine aspergillosis models. Transcriptional regulation of iron homeostasis involves the two iron-sensing transcription factors HapX and SreA as well as the SREBP (sterol regulatory element binding protein)-type regulator SrbA. Transcriptomic and proteomic approaches identified numerous iron-regulated genes that are subject to control of these three transcription factors, whereby many of these genes are yet functionally uncharacterized. The goal of this project is the characterization of iron starvation-induced metabolic remodeling of *A. fumigatus* by deletion and deregulation of iron-regulated genes followed by phenotypical and biochemical analyses as well as virulence inspection of respective mutant strains. We expect to identify novel virulence-related pathways to improve therapy and diagnosis of fungal infections.

The PhD student should have a background in molecular biology and microbiology. The most important criterion, however, is motivation, engagement and passion for science and the research topic. We offer a broad and stimulating environment covering diverse disciplines including microbiology, molecular biology, biochemistry, cell biology and infection biology.

Why HOROS?

The FWF project HOROS (HOst Response in Opportunistic infectionS) is funded as doctoral programme of excellence at the Medical University of Innsbruck. Its focus lies on education of young researchers in the field of opportunistic infections. This interdisciplinary doctoral programme is supported by a strong faculty from clinic and research. HOROS fellows will have a fully financed PhD position and many other benefits.

Benefits of the HOROS programme:

- Individual supervision and monitoring (individual thesis steering committee)
- A highly structured HOROS-specific educational programme
- Retreats and social activities
- Guaranteed salary as suggested by the [Austrian Science Fund](#) for the proposed 3-years (ca. 2.200 Gross salary/month + 13&14 month salary)
- Health insurance and social benefits
- State-of-the art facilities and resources

The position is advertised on www.horos.at. Please **apply** via this homepage until 06th June 2021.