



Open PhD position at the Institute of Molecular Biology, Biocenter, Medical University of Innsbruck, Austria

A fully funded 3.5-year PhD position is available starting on 1st October 2025 in the "Applied Mycology" research group led by Florentine Marx (<https://www.i-med.ac.at/molbio/Research/Group-Marx-Ladurner.html>; ORCID: [0000-0002-8408-1842](https://orcid.org/0000-0002-8408-1842)). The position is based at the Institute of Molecular Biology at the Medical University of Innsbruck, located in Innsbruck, Austria.

Project background: The rise of drug-resistant bacteria and fungi presents a significant challenge to the prevention and treatment of human infections. There is an urgent need to develop alternative therapeutics with novel mechanisms of action. This project explores the potential of nature-inspired antimicrobial peptides as candidates for new antimicrobial therapies, with a particular focus on antifungal agents. The primary objectives include enhancing peptide stability and antimicrobial efficacy through rational design, elucidating the molecular mechanisms of antimicrobial action, and developing peptide formulations to improve their practical application.

The project employs a multidisciplinary approach, incorporating biochemistry, molecular biology, and high-end microscopy techniques, and multiparametric assay methods. In alignment with the "3Rs" principles to minimize animal use, the evaluation of improved peptide drugs will be conducted *in vitro* using infected 3D human tissue models. These models serve as effective alternatives to animal testing for screening potential drug candidates.

Profile of applicant: The applicant must hold an MSc in Life Sciences and possess fluent English skills, both written and spoken. The ideal candidate is passionate about science, capable of working independently, curious, creative, and an excellent team player. Highly motivated individuals with training in one or more of the relevant methodologies and a strong interest in microbial/fungal biology are particularly encouraged to apply.

We offer: PhD position funded by the Austrian Science Fund (FWF, [PAT-1835525](https://www.fwf.ac.at/PAT-1835525)) offering full social security coverage. Compensation will follow the salary guidelines for PhD candidates (75% employment, 30 hours per week) of the FWF and the Medical University of Innsbruck. The successful candidate will be enrolled in the PhD Program at the Medical University of Innsbruck (<https://biomed-phd.i-med.ac.at/>), with the completion and defense of a PhD thesis being a key component of the position. The position provides an engaging scientific environment with opportunities for national and international collaboration, access to cutting-edge facilities and advanced scientific technologies, extensive training programs, and career development support. Additional resources include mentorship through the [Women's Empowerment & Mentoring Unit](#), initiatives to promote women's academic careers, and support from the [Work-Family Compatibility Department](#) to help employees balance work and family life. Located in the heart of the Alps, Innsbruck is a dynamic university city that combines top-tier academic opportunities with unparalleled access to outdoor activities.

How to apply: Applications are open until **15th August 2025**. Interested candidates must submit the following documents in a **single electronic file**: Letter of motivation (maximum 1 page); CV (maximum 3 pages); academic certificates; list of publications (if applicable); names and contact details of two referees. Applications should be sent via email to floren.marx@gmail.com. Shortlisted candidates will be notified by email and invited for an interview (online).