

Master's Thesis / Research Project in Structural Microbiology

Weiss Lab – Institute of Medical Microbiology, University of Zürich
www.weiss-laboratory.com

We are offering Master's thesis and research project opportunities in the Weiss Lab at the Institute of Medical Microbiology, University of Zürich. Our lab provides a unique environment that bridges cutting-edge structural biology with clinically relevant microbiology and biochemistry enabling translational research at the interface of structural biology, microbiology, and medicine.

The Project

Our projects focus on understanding the structural adaptations of bacterial pathogens during infection and biofilm formation. Students will gain hands-on experience with a variety of advanced imaging and microbiological techniques, with a strong emphasis on:

- Cryo-focused ion beam milling (cryo-FIB) & cryo-electron tomography (cryo-ET)
- Additional methods such as light microscopy, correlative light and electron microscopy (CLEM), single-particle cryo-EM, and functional assays may also be integrated, depending on project scope and interests.

Students will have the opportunity to explore the cellular and molecular basis of infection, contribute to method development, and learn to work with state-of-the-art instrumentation in an interdisciplinary and collaborative environment.

Candidate Profile

- Master's program in Microbiology, Structural Biology, Biochemistry, Biophysics, or a related life science field
- Strong interest in modern structural biology techniques
- Motivated, independent, and curious, with a collaborative mindset
- Interest in infection biology and microbial ultrastructure
- Prior experience in cell culture, biochemistry, or microscopy is beneficial but not required
- Basic coding or data analysis skills (e.g., Python, MATLAB, R) are a plus

We Offer

- Direct supervision and mentoring in a dynamic, international research group
- Training in state-of-the-art cryo-EM and correlative microscopy workflows
- Opportunities to participate in ongoing research projects and collaborations
- A supportive and interdisciplinary environment ideal for students considering a PhD

If you are excited, we invite you to contact **Gregor Weiss** (gweiss@imm.uzh.ch) with a short motivation statement and CV.

Informal inquiries are welcome.