


Master's Thesis Opportunity in ADP-ribosylation Biology


Are you a Master's student in **Biology, Biochemistry, Molecular Biology, Chemical Biology**, or a related field, looking for an exciting research opportunity? Join us at the **Laboratory of Decoding Post-Translational Modification Signalling Networks** at the **Max Planck Institute of Molecular Physiology (Dortmund, Germany)** for a hands-on Master's thesis project at the intersection of biochemistry, chemical biology and molecular biology!


About the Project

This project focuses on the **enzymatic synthesis and biological applications of ADP-ribose analogues**, innovative tools used to study **ADP-ribosylation signalling**—a key process in cellular regulation. You will have the opportunity to contribute to cutting-edge research at the intersection of chemical biology and biological function.

What You Will Do

 **Enzymatic Synthesis:** Develop and optimize enzymatic reactions for producing ADP-ribose analogues, including **click chemistry approaches**.


 **Structural Characterization:** Utilize techniques such as **HPLC, mass spectrometry, and NMR** to analyze synthesized compounds.

 **Biological Assays:** Investigate the effects of ADP-ribose derivatives in living cells using **molecular biology and biochemical techniques** (e.g., mammalian cell culture, protein expression, fluorescence microscopy, immunoblotting, mass spectrometry-based proteomics).

Who Should Apply?

- ✓ You are currently pursuing a Master's degree in **Biology, Biochemistry, Molecular Biology, Chemical Biology**, or a related field.
- ✓ You are **curious, motivated, and eager to learn**—previous lab experience is a plus but not required!
- ✓ You have a basic understanding (or a willingness to learn) techniques such as **protein expression, purification, and cell-based assays**.
- ✓ You have good communication skills in **English**.

What We Offer

 Training in state-of-the-art techniques combining **chemical biology, biochemistry and molecular biology**.

 A dynamic and supportive **research environment** within the Kliza Lab.

 Hands-on experience to **boost your scientific career**—ideal for those considering a PhD.

 Collaborative and friendly **team atmosphere** at the Max Planck Institute.

Other Master's Projects Available!

In addition to this project, our lab also offers Master's thesis opportunities with a stronger biochemical and biological focus. If you're interested in exploring alternative projects, feel free to reach out—we'd love to discuss how your interests align with our research!

How to Apply

Interested? Send your **CV (max. 2 pages)** to Dr. Katarzyna Kliza at recruitment.kliza@mpi-dortmund.mpg.de by **April 30, 2025**. For more details about our research, visit klizalab.com. We look forward to welcoming you to our lab!