

Ogris lab

Master's Thesis Opportunity

Discovery and characterization of new regulators of PP2A like phosphatases

About the lab

The **Ogris Lab** is dedicated to uncovering evolutionary conserved mechanisms involved in the assembly, the activation and regulation of Protein Phosphatase 2A like phosphatases (PP2A, PP4 and PP6). We are currently seeking a talented and motivated Master's student to join us in a project aimed at understanding the mechanism that protects these phosphatases from oxidative damage.

About the project

Assembly and activation of the PP2A family phosphatases - PP2A, PP4, and PP6 - are orchestrated by a set of common regulators, including alpha4, PTPA, TIPRL, LCMT1, and PME1. Recently, we characterized a novel factor, Irc21 (the yeast homologue of mammalian CYB5R4), whose absence strongly reduces the catalytic activity of PP4 and PP6, but not PP2A. Intriguingly, the deletion of Irc21 can be rescued by expression of the conserved heme-binding domain of mammalian CYB5R4, revealing an evolutionarily conserved mechanism of PP4/PP6 regulation. Purified PP4 and PP6 can also be activated in vitro by ascorbate, a potent reducing agent. Our observation that PP2A activity is neither dependent on Irc21 function nor on the presence of ascorbate points to a difference among these phosphatases in their sensitivity to oxidation and raises the question of the mechanism underlying PP2A's increased oxidative stress resistance.

The main goal of this project is to decipher the molecular mechanisms that confer increased resistance of PP2A to oxidative stress. Within the framework of this project, you will gain expertise in the following techniques: yeast cell culture and genetic manipulation, various cloning techniques, Western blotting, immunoprecipitation, enzymatic assays, and protein purification (FPLC).

The Master's thesis will be carried out in the Ogris Lab at the Max Perutz Labs. The start date is preferably May 2026 for the duration of 10-12 months. The student will receive a stipend of about € 550,- per month.

Application and contact

Please send your CV and motivation letter to egon.ogris@meduniwien.ac.at and jiri.veis@meduniwien.ac.at until the end of April 2026.

You can find more details on the research topics of the Ogris Lab here:

<https://www.maxperutzlabs.ac.at/research/research-groups/ogris>

About the Max Perutz Labs

The Max Perutz Labs are a research institute established by the University of Vienna and the Medical University of Vienna to provide an environment for excellent, internationally recognized research and education in the field of Molecular Biology. Dedicated to a mechanistic understanding of fundamental biomedical processes, scientists at the Max Perutz Labs aim to link breakthroughs in basic research to advances in human health. The Max Perutz Labs are located at the [Vienna BioCenter](#), one of Europe's hotspots for Life Sciences, and host around 40 research groups, involving approximately 450 scientists and staff from more than 50 nations.

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