

Ogris lab

Master's Thesis Opportunity

Molecular mechanism of the "PP2A-activating" anti-cancer drug DT-061
Is Protein Phosphatase 2A indeed the prime target of the anti-cancer drug DT061?

About the lab

The **Ogris Lab** is dedicated to uncovering the mechanisms of Protein Phosphatase 2A (PP2A) biogenesis in eukaryotic cells. We are currently seeking a talented and motivated Master's student to join us in a project aimed at understanding the molecular mechanism of DT-061, an anti-cancer drug, proposed to exert its anti-cancer activity by acting as a small-molecule activator of specific PP2A holoenzymes.

About the project

PP2A comprises a large family of trimeric holoenzymes, each of which consist of a catalytic C (PP2Ac), a structural A (PP2Aa) and a regulatory, substrate-targeting B-type subunit. PP2A dysfunction has been implicated in numerous cancer types, contributing to uncontrolled cell growth and tumor progression. Therefore, targeting and restoring PP2A activity holds promise as a potential therapeutic strategy for cancer treatment. The assembly of PP2A trimers with tumor-suppressive functions is regulated by the reversible methylation of the PP2A catalytic subunit. A small molecule compound (SMAP), was reported to restore PP2A's tumor-suppressive role by enhancing methylation and stabilizing PP2A-B56 α complexes, leading to tumor cell death. However, cells lacking the PP2A methyltransferase or the targeted PP2A holoenzyme were not resistant to DT-061 and died at similar drug concentration as wild-type cells. Interestingly, DT-061 lead to the destruction of mitochondria, alterations of the Golgi and ER organelles and apoptotic cell death.

The project's main goal is to decipher the mechanism how the anti-cancer drug DT-061 affects Mitochondria, Golgi and ER. In the frame of this project, you will gain expertise in the following techniques: mammalian tissue culture, cell metabolic assays, fluorescent activated cell sorting, protein analysis methods like, western blotting, immunoprecipitation, quantitative western blot and immunofluorescence analysis, DNA modification with CRISPR/Cas9.

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.

MAX PERUTZ LABS

Vienna BioCenter • Dr.-Bohr-Gasse 9 • 1030 Vienna
Tel: +43 1 4277 24001 • office@maxperutzlabs.ac.at
www.maxperutzlabs.ac.at

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Application and contact

Please send your CV and motivation letter to egon.ogris@meduniwien.ac.at and ingrid.frohner@meduniwien.ac.at until April 19, 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.

www.maxperutzlabs.ac.at