

# Master's Thesis Position Pediatric Cancer Metabolism

Join the Morscher Lab at the University Children's Hospital Zurich and contribute to cutting-edge research in pediatric cancer metabolism. We have an exciting Master's Thesis position available for a motivated student interested in biochemistry, metabolism, and cancer research.

## Project

Osteosarcoma is the most common primary bone cancer in children and adolescents. Despite recent improvements, the treatment of relapsed/refractory and metastatic tumors remains challenging, with a 5-year survival rate below 20%. In this project, we aim to address this therapeutic challenge by identifying targetable genes involved in osteosarcoma metabolism.

To address this aim, we have generated dCas9 osteosarcoma cell lines. These cell lines will be used for a genome wide CRISPRa/i screen under therapeutic pressure to identify novel candidate genes for therapy resistance. Candidates from this screen will then be more closely investigated for their mechanism of action and potential use as targets to counter drug resistance.

Potential technologies for this project include CRISPR/Cas9, high-throughput automated drug screenings, cell culture, and multi-omics.

## The Lab

The Morscher Lab (<https://www.morscherlab.org/>), a multidisciplinary research group located at the University Children's Hospital in Zurich, Switzerland, is dedicated to identifying novel targets in pediatric cancer metabolism. Our ultimate goal is to develop non-genotoxic treatments that minimize long-term damage to healthy cells induced by highly toxic therapy regimens.

The position is expected to start in December 2023, with a duration of 9-12 months. To apply, please submit your CV and a brief letter of motivation, highlighting your previous laboratory experience or relevant practical courses to [fiona.farnhammer@kispi.uzh.ch](mailto:fiona.farnhammer@kispi.uzh.ch).