



**University of
Zurich** ^{UZH}

Department of Molecular
Mechanisms of Disease

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MSc thesis project in “**Uncover and investigate the functional role of PARP8 targets in cancer cell viability**”

Hottiger laboratory, Irchel Campus, University of Zurich

Our international team is looking for a motivated M.Sc. student to join the lab.

Description: Research in our group aims to understand how cellular signaling is regulated by protein ADP-ribosylation and how these mechanisms are subverted in highly proliferative cancer cells. PARP8, also known as ARTD16 (ADP-ribosyltransferase 16), is a catalytically active mono-ADP-ribosyltransferase that remains underexplored. Recent structural predictions from AlphaFold2 have revealed several unique domains shared exclusively between PARP6 and PARP8, suggesting novel and distinct functional roles. The aim of this MSc project is to uncover the in vivo targets of PARP8 and investigate its roles in cancer cell viability, immune signaling, and the DNA damage response. By elucidating the molecular functions of PARP8, we seek to determine its potential as a therapeutic target. Our research will leverage a broad range of molecular biology techniques, including CRISPR-based gene editing, qPCR, immunoblotting, and immunofluorescence, to comprehensively analyze PARP8’s functional impact.

Working environment: You will be part of a dynamic international research group of approximately 6-8 people, embedded in the interactive and supportive environment of our department, the Department of Molecular Mechanisms of Disease. You will participate in weekly group meetings, individual discussions, progress report seminars and literature sessions and will benefit from a comprehensive scientific training in a vibrant research environment.

Qualifications: You should be enrolled in a MSc program of the UZH and comfortable as well as confident working in the laboratory, have a genuine interest in cell biology and molecular cancer research, and be highly motivated. Experience of mammalian cell culture and standard molecular biology techniques would be an advantage. Good communication skills and enthusiasm are essential for working with our team.

Applications: Interested candidates should send their CV together with a short motivation letter to michael.hottiger@dmmd.uzh.ch.

Starting date: Negotiable.



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