



MSc thesis project in cancer biology on “ADP-ribosylation signaling and biology in melanoma and breast cancer cell lines”.

Hottiger laboratory, Irchel Campus, Y13L, University of Zurich
Our international team is looking for a motivated M.Sc. student to join the lab.

Description:

NAD⁺ functions as a coenzyme in the redox reactions catalyzed by dehydrogenases in major metabolic pathways in human cells. Additionally, it acts as a substrate in the ADP-ribosylation of proteins catalyzed by ADP-ribosyltransferases (ARTs), which regulate various cellular processes. Our mass spectrometry analysis of muscle tissue indicates that ectopically expressed ART3 (i.e., ARTC3) is extensively modified, despite being considered inactive. Interestingly, ART3 is deemed to be enriched in both melanoma and breast tumor cell lines, particularly in metastatic cells. Currently, the functional role of ART3 in these cells is currently unknown.

The aim of this master project is to explore the functional contribution of ART3 in distinct tumor cell lines, including its expression, localization, regulation, activity and modified targets. The project comprises of various biochemical, molecular, and cell biology measurements, including cloning, cell transfection, immunofluorescence, or immunoblotting.

Work environment: It involves active participation in an internationally recognized research group consisting of approximately nine to twelve individuals. This highly interactive and supportive group operates within the Department of Molecular Mechanisms of Disease (DMMD). You will partake in weekly group meetings, one-to-one conversations, progress report seminars, and literature sessions. Furthermore, you will benefit from a comprehensive scientific education in a lively research setting.

Qualifications: Applicants must possess an authentic passion for cell biology and molecular cancer research, exhibit high levels of motivation, and feel at ease and self-assured in the laboratory. Prior experience with mammalian cell culture and standard molecular biology techniques is preferred. Good communication skills and enthusiasm are vital attributes necessary for interacting with our team.

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

The starting date is negotiable.