



PhD student position in Pediatric Oncology

Context:

A **PhD student position** in Pediatric Oncology, 4-years, occupation 100%) is available in the Pediatric Hematology-Oncology Research Laboratory (LHOP). The LHOP is affiliated to the Pediatric Hematology-Oncology Unit (HOP) at the University Hospital of Lausanne (CHUV), and is a nationally and internationally recognized competence center for the investigation of neuroblastoma (NB), an embryonic malignancy of the developing sympathetic nervous system. We provide an excellent scientific environment for high quality research, including through our integration into the Swiss Cancer Center Lausanne.

Research project:

NB is a heterogeneous pediatric tumor, whose prognosis remains dismal for high-risk cases despite multimodal treatments. The mechanisms mediating the initial stages of tumor development are still partially unclear and the precise cellular origin of NB remains to be defined. In this project, we aim to provide a detailed characterization of perturbations mediated by the ALK and TWIST1 oncogenes during NB initiation and progression, and to elucidate the underpinning mechanisms. Specifically, we plan to clarify the expression level and the time-frame whereby ALK deregulation is critical in the early steps of sympathoadrenal (SA) precursor differentiation. The selected candidate will have to combine *in vivo* studies using diverse ALK knock-in and transgenic mouse models, as well as immunofluorescence on murine embryos and transcriptomic approaches to identify precisely ALK-mediated alterations on the development and differentiation of sympathetic ganglia and adrenal glands. We will also investigate whether the activation of ALK and TWIST1 during the differentiation of SA neuroblasts is sufficient to induce the formation of NB in order to develop new preclinical models of NB.

This project is funded by the Swiss National Science Foundation for a total duration of 48 months.

For more detailed information see: Front. Oncol. 2019 9:275. doi: [10.3389/fonc.2019.00275](https://doi.org/10.3389/fonc.2019.00275).

Information on the laboratory and research environment can be found on <https://wp.unil.ch/lhop/>.

Requirements:

Applicants should hold a Master's degree in Biology, Molecular Life Sciences, Biochemistry or a related discipline acceptable for matriculation as a PhD student at the University of Lausanne.

The candidate should have a strong background in cell and molecular biology. Previous experience in the field of oncology and/or in animal experimentation in would be an advantage. Candidates must be proficient in oral and written English, have basic knowledge of French, be highly motivated, creative, well organized, dedicated to perform research of the highest quality, and team-oriented. The successful applicant will have to present research findings at national and international conferences.

Application, including CV, copies of academic transcripts, diplomas, a motivation letter with a brief description of research experience and interests, and the names and contact information for 3 references, should be send to Dr. Annick Mühlethaler by email: Annick.Muhlethaler@chuv.ch

Starting date : 01.10.2020 or to be agreed. Activity rate: 100%

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