

Post-doctoral position in the field of neural stem cell metabolism

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<https://wp.unil.ch/knobloch-lab/>

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Metabolism has emerged as a key player in the regulation of stem cells, but the underlying mechanisms are still poorly understood. Our laboratory's main focus lays on neural stem cells, which generate neurons and astrocytes during brain development and persist throughout adulthood. We are studying the intrinsic and extrinsic metabolic regulation of neurogenesis, with a specific interest in lipid metabolism. We have recently shown that lipid droplets (LDs), the lipid storing organelles, play a crucial role for adult neural stem cells (Ramosaj Madsen et al. Nat. Commun. 2021). We furthermore have generated an exciting novel endogenous LD reporter mouse line (Madsen et al., in preparation), which allows the staining free visualization of LDs in living and fixed tissues and cells.

We are using innovative techniques such as virus-mediated gene expression in vitro and in vivo, time-lapse imaging, single cell RNA sequencing, as well as proteomic, metabolomic and lipidomic approaches. To tackle our questions, we use various mouse models as well as human iPSC-derived neural stem cells and brain organoids.

Job information

Starting date: 01.06.2022

Contract length: 2 years, renewable once, maximum 4 years Occupation: 100 %

Working place: Lausanne, quartier UNIL-Bugnon

Your responsibilities

This postdoctoral project will focus on the role of LDs during brain development and the consequences of altered LD availability through genetic and nutritional alterations.

Your qualifications

In order to complete our team, we are looking for someone with the following skills :

PhD degree in life science or equivalent

Strong interest in cell and developmental biology, neurobiology and metabolism

Fluency in English (oral and written)

Previous research experience in embryonic brain development (desirable)

Experience in cell culture and live-imaging (desirable)

Highly motivated candidates should send their application and include a letter of motivation, CV and 2 reference letters. Deadline : 30.04.2022

To apply, click here: [Post-doc Position](#)