





Are you interested in stem cells and regenerative medicine, and want to work in a diverse and multicultural lab at the heart of the Swiss Alps in the scenic city of Lausanne?

A postdoctoral research associate (RA) position in tissue engineering is available in the Habib lab (<a href="https://www.habiblab.org">www.habiblab.org</a>) at the department of Biomedical Sciences at the University of Lausanne.

The Habib lab has engineered a novel human bone tissue that maintains bone-stem cells and a cascade of osteogenic differentiation. The tissue can be used not only for drug screening and osteogenesis modelling, but

Collagen
Gel
Wnt
Bandage
Wnt-mediated
Asymmetric Cell Division

Without Bandage

Without Bandage

Critical Sized
Bone Defect
(Murine)

Our pipeline for skeletal stem cell technology and bone repair. The immobilised Wnt3a directs regeneration. can be incorporated into novel bandages that promote bone repair in vivo. These technologies resulted in a patent, over 107 news articles and a televised coverage in CBS-News.

The RA will initially investigate the epigenetic and metabolic profiles of the engineered tissue and apply RNAseq, gene editing and CRISPR approaches to investigate specific pathways. They will utilise bioengineering to increase the complexity of the tissue by adding vasculature, immune and neuronal cells that are found in bones. The RA will utilise the bandage technology to deliver the newly engineered tissue into bone defects and test for engraftment and bone repair.

This project will build on our recent progress in this area

(Okuchi et al Nature Materials 2021, Ma B et al Cell Reports 2020). You should hold or be working towards a PhD in a biological/bioengineering science, be highly motivated and have an interest in developmental signalling and regenerative medicine. To advance your career, the group leader will support your applications for fellowships.

## Job information

Expected start date: 01/May/2022 (to be discussed). Contract length: 1 year and renewable 1 year.

Starting salary: 80,000 CHF/annum

## Your application

Deadline: 10/March/2022

You must hold PhD in Biological/Bioengineering sciences or relevant disciplines, or PhD is near completion. Please submit your CV (maximum 2 sides of A4), publication list (You should have at least one first author publication) and a covering letter. In your covering letter (maximum one side of A4), please summarize your previous research experience(s) and explain how you meet the criteria above.

To apply: tinyurl.com/2n7crnrm