



Université de Lausanne

## PhD Position In Tumour Tissue Engineering

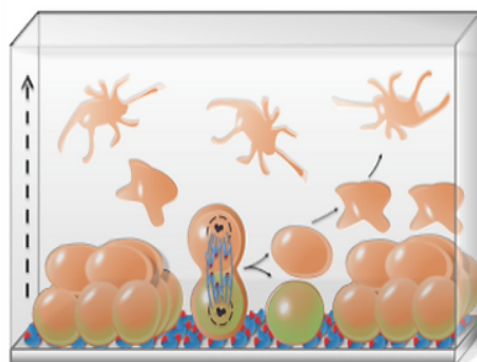


***Are you interested in stem cells and cancer, and want to work in a diverse and multicultural lab at the heart of the Swiss Alps in the scenic city of Lausanne?***

A PhD position in tissue engineering is available in the Habib lab ([www.habiblab.org](http://www.habiblab.org)) 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 can be incorporated into novel bandages that can promote bone repair *in vivo*. These technologies resulted in a patent, over 107 news articles and a televised coverage in CBS-News.

Despite surgery and chemotherapy, long-term survival rates for patients of the bone cancer osteosarcoma have not improved for three decades. Osteosarcoma remains the second leading cause of cancer-related deaths in paediatric patients.



A 3D model of Wnt-mediated osteogenic tissue formation

This project aims to engineer 3D osteosarcoma tissues that resemble aspects of the *in vivo* tumour. The student will characterise the tissue and use genomic approaches to investigate specific pathways that impact the tumour tissue formation. The engineered tumour tissue will be subjected to a high-throughput drug screen to identify molecules that can target osteosarcoma stem cells and their progeny *in vitro* and in osteosarcoma animal models.

This project will build on our recent progress in this area (Okuchi et al Nature Materials 2021). You should hold a MSc degree in a biological/bioengineering sciences or related disciplines, be highly motivated and have an interest in developmental signalling and tumour biology.

### Position information

Expected start date: 01/May/2022 (to be discussed).

Contract length: 1 year, renewable 2 x 2 years, maximum 5 years.

Starting salary: 55,250 CHF/annum

### Your application

Deadline: 10/March/2022

The candidate should hold a MSc in biology/bioengineering or relevant disciplines. Please submit your CV (maximum 2 sides of A4), publication list 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/4trzzf8v](https://tinyurl.com/4trzzf8v)

