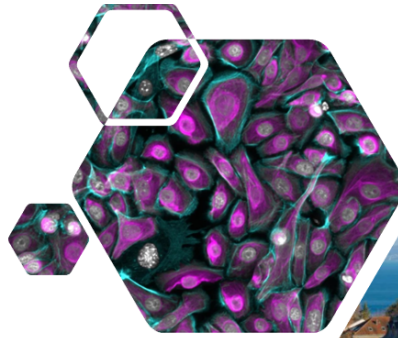


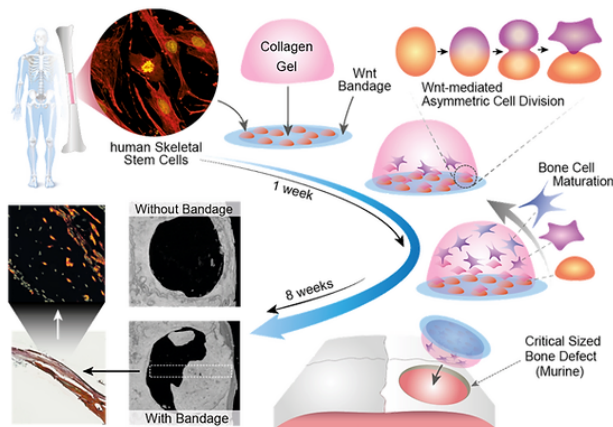


Université de Lausanne

PhD Position In Regenerative Medicine & Nutrition



Are you passionate about stem cells and regenerative medicine? Are you seeking an opportunity to work in a diverse and multicultural laboratory at the University of Lausanne (UNIL)? We have an exciting PhD position available in the Habib lab at the Department of Biomedical Sciences (www.habiblab.org).



Our pipeline for skeletal stem cell technology and bone repair.
The immobilised Wnt3a directs regeneration.

The Habib lab has recently achieved a significant breakthrough in the field of regenerative medicine. Our team has developed groundbreaking bandages that effectively promote bone repair *in vivo*. This revolutionary technology has earned us a patent, received coverage in 107 news articles, and even been featured on CBS News.

In this proposed project, the selected student will have the opportunity to delve into the study of bone structure and repair in Aged mice, with particular relevance to human bone fractures in aged individuals. As we age, the regenerative capacity of our bones

diminishes, leading to increased vulnerability to fractures and slower healing processes. By studying Aged mice, the student will gain insights into the underlying mechanisms of age-related bone loss and develop innovative strategies to enhance tissue repair and promote bone healing in elderly individuals.

The student will also explore the nutritional, metabolic, and epigenetic aspects of bone-forming stem cells throughout the mouse's lifespan. By utilizing cutting-edge techniques such as RNAseq, gene editing, and advanced imaging, the student will investigate specific pathways that have an impact on bone formation. Furthermore, they will be involved in designing innovative approaches that target metabolic pathways within the bone stem cell niche, aiming to enhance bone repair, particularly in aged mice.

This project will build upon our recent advancements in this field, as published in Okuchi Y., et al Nature Materials 2021 and Habib SJ., et al Trends in Cell Biology 2022.

If you are enthusiastic about the potential of stem cells and regenerative medicine and wish to contribute to groundbreaking research in the context of human bone fractures, particularly in aged individuals, we encourage you to apply for this exceptional PhD position. Join our team at UNIL and be part of a vibrant and collaborative scientific community. The findings from this research could have significant implications for improving the quality of life and mobility of aged populations worldwide.