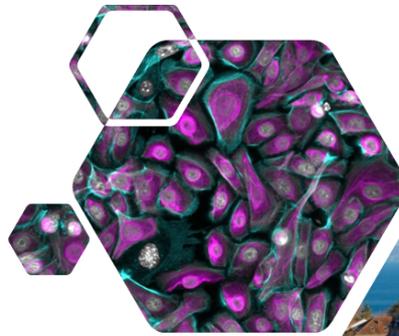




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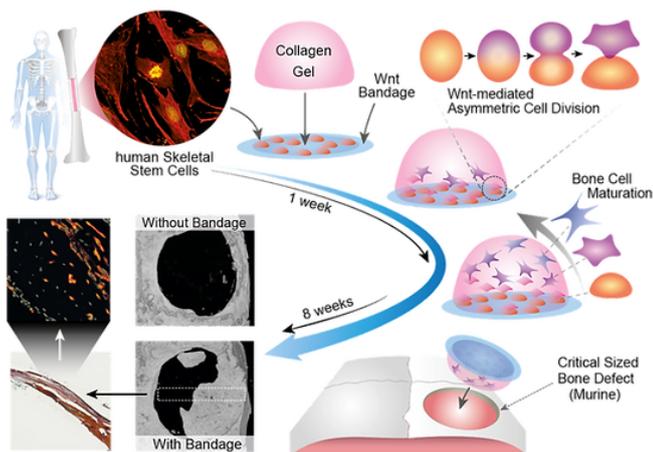


MD-PhD Position in Tissue Engineering and Regenerative Medicine

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 MD-PhD position in tissue engineering is available in the Habib lab (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 promote bone repair in vivo. These technologies resulted in a patent, over 107 news articles and a televised coverage in CBS-News.



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

(Okuchi et al *Nature Materials* 2021). The student should be highly motivated and have an interest in developmental signalling and regenerative medicine.

Selected Publications:

Habib SJ and Acebrón SP (2022) Wnt signalling in cell division: from mechanisms to tissue engineering. *Trends Cell Biol.* 2022 Jun 15;S0962-8924(22)00137-4

Okuchi Y, Reeves J, Ng SS, Doro DH, Junyent S, Liu KJ, El Haj AJ, and Habib SJ (2021) Wnt-modified materials mediate asymmetric stem cell division to direct human osteogenic tissue formation for bone repair. *Nature Materials* Jan;20(1):108-118

Junyent S, Garcin CL, Szczerkowski JLA, Trieu TJ, Reeves J, Habib SJ (2020) Specialized Cytonemes Induce Self-Organization of Stem Cells. *Proc Natl Acad Sci U S A* 31;117(13):7236-7244

Habib SJ, Chen BC, Tsai FC, Anastassiadis K, Meyer T, Betzig E, Nusse R (2013) A Localized Wnt signal orients asymmetric stem cell division in vitro. *Science.* 22;339(6126):1445-8