



University
of Basel



OPEN POSITION – MASTER THESIS IN THE ORAL IMPLANTOLOGY LAB, UNIVERSITY CENTER FOR DENTAL MEDICINE BASEL UZB

About us

The Oral Implantology Lab welcomes applications from students in the field of biology, molecular biology, chemistry, biomedical engineering, health sciences and technology, or related disciplines.

In this lab, we develop predictive in vitro models to gain fundamental knowledge on cell-material interactions, and cell fate decision in response to environmental cues. We use a cell-molecular toolkit of biomaterials and different cell types to engineer 3-dimensional systems. Specifically, we develop fibrous scaffolds based on electrospinning, investigate osteogenesis of different progenitor cells under various outer stimuli, and aim to gain a thorough understanding of bone remodelling and soft tissue adhesion in response to dental implants. We thrive to find solutions for clinical challenges in oral implantology with the goal to ultimately improve patient satisfaction and provide long-term solutions.

Project outline

For your master thesis, you will be integrated in currently running projects and perform individual experiments that complement ongoing research activities from PhD candidates or Postdoctoral researchers. You will work with human dental pulp stem cells, and assess their proliferation and differentiation on selected biomaterials or under defined stimuli. Depending on your interest and expertise, the focus of your thesis can be placed either on cell culture, or scaffold development and functionalisation. Overall, you will work on an interdisciplinary project and will learn how to expand and culture human cells, assess their phenotype with microscopy and quantitative real time PCR.

How to Apply

The Oral Implantology Lab is based at the University Center for Dental Medicine Basel, UZB, next to the Rosenthal Campus. Our department comprises three research focus areas, Oral Microbiology, Biomaterials & Technology, and Oral Implantology, that work in tight collaboration and with strong links to the dental clinics. For further information, please contact Prof Géraldine Guex, PhD geraldine.guex@unibas.ch

