



MSc Internship: Biomaterial Design for Bone-on-Chips

Project Description:

Biomaterials are essential to develop advanced *in vitro* models such as organ-on-chip systems. Using bottom-up fabrication, these materials can provide control over the architecture and physicochemical cues in these models. This project aims to fabricate new biomaterials for bone-on-chip development and characterize the effects of different physicochemical cues in osteogenic differentiation in these systems. This interdisciplinary project involves mastering multiple cutting-edge techniques that can enable new innovations in this emerging field.

Internship Activities:

- Chemical modification of polymers
- Droplet microfluidics
- Formulation of hydrogel biomaterials
- Microscopic characterizations
- Rheological characterizations
- Colorimetric biochemical assays
- Preparation of scientific reports
- Presentation of scientific findings

Background Requirement:

This MSc internship is suitable for a student with an academic background in (bio)chemistry/chemical engineering, (bio)materials science/engineering, or biomedical engineering (or related fields).

Duration: 6 -12 months

Start date: September-October 2024

Contact Information:

If you're interested, please send your CV and a cover letter to: farhad.sanaei@radboudumc.nl

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