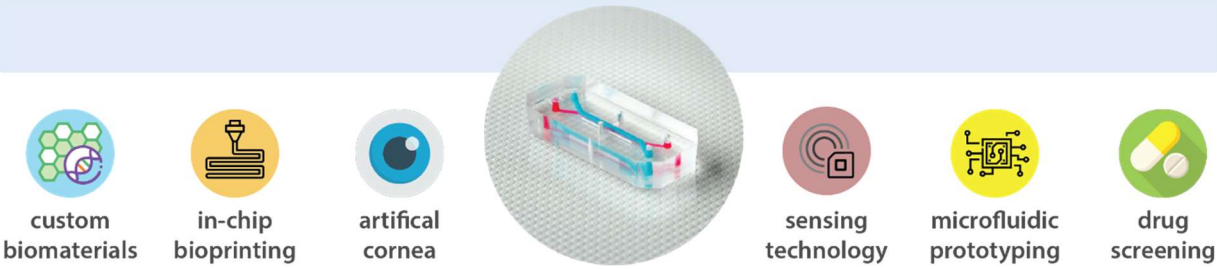
Wanted: Doctoral fellow for an organ-on-a-chip project



Synthesis of photo-crosslinkable polymers for the development of a cornea-on-a-chip

Project background – *Collaborative top-notch organ-on-a-chip research*

The offered doctoral position is embedded in the Excellence of Science program "Artificial lithographic model for corneal drug screening" funded by the Belgian government (3 million EUR). Within this project, 6 partners from Belgium, France and Austria collaborate to develop a microfluidic chip with an artificial cornea built from laser-activated biomaterials. This unique prototype device will include on- and off-chip sensing technology that enables the efficient microfluidic screening of corneal drugs without relying on animal experiments or donor eyes.

Doctoral research – *Synthesis and processing of photo-crosslinkable polymers*

The doctoral research will be performed at the Polymer Chemistry & Biomaterials Group which is embedded in the Faculty of Sciences at Ghent University. The doctoral project encompasses the synthesis, characterization, processing and integration of custom biomaterials into a cornea-on-chip platform. The doctoral fellow will be mainly engaged with the following research tasks:

- Synthesis of photo-crosslinkable biocompatible polymers
- Chemical and molecular characterization of biomaterials (NMR, IR spectroscopy, GPC, etc.)
- Physical and mechanical characterization of biomaterials (photo-rheology, swelling, tensile testing)
- Processing of photo-crosslinkable polymers through two-photon polymerization (2PP) 3D-printing
- Characterization of 3D-printed constructs (SEM, optical microscopy, confocal microscopy, etc.)

Practical information

Required degree: We expect a master in chemistry or biomedical engineering to be a particular good fit, but any scientific background, in line with the requested competences, will be considered. Skills in materials science and materials processing are an asset.

Main place of work: Ghent University but frequent interactions with UCLouvain (Louvain-la-Neuve) and UA (University of Antwerp, Antwerp) are foreseen.

Expected contract start: as soon as possible

Eager to join? – *Please get in touch with us*

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