



Scheda di Offerta Tesi

Titolo (provvisorio): Development of a microfluidic device for the encapsulation of cells in hydrogel microbeads.

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Descrizione

Motivazione e campo di applicazione

Development and characterization of a device for cell encapsulation for applications in tissue engineering.

Obiettivi generali e principali attività

The device will be developed by 3D printing techniques.

Biopolymeric microbeads will be generated by the microfluidic device and the ability of encapsulating cell will be evaluated. The biopolymers to be used will be polysaccharides, such as alginate or chitosan, or modified proteins, such as GELMA. The microbeads will be characterized by optical and confocal microscopy and in vitro tested using immortalized cell lines.

Obiettivi di apprendimento (strumenti tecnici e analitici, metodologie sperimentali)

To gain practical experience in the development, engineerization and characterization of microfluidic devices for the encapsulation of cells to be used in tissue engineering applications.

Luogo/i in cui si svolgerà il lavoro: DIBRIS, University of Genova

Informazioni aggiuntive

Numero massimo di studenti: 1