



POSTDOC POSITION

Postdoctoral position in biophotonics

Optical microscopy for 3D cellular imaging in microfluidics chip

The Technologies for biology and health department of CEA-LETI in Grenoble proposes a post-doctoral position to develop an optical microscopy system coupled with microfluidic devices for the ex vivo characterization of vascularized tissues.

Though still confronted with multiple challenges, regenerative medicine (tissue reconstruction) offers many promises for the future. One of the current limitations remains the tissue vascularization. Ex vivo, this development requires the use of microfluidic systems to mimic vasculogenesis. A challenge remains however to be addressed: the characterization of the reconstructed tissues without altering their functionality to allow implantation. The aim of the project is to develop an optical imaging system allowing a morphological and functional 3D characterization on a micrometric scale of vascularized tissues inside a fluidic chamber. This research is a close collaboration between the biology laboratory CIBEST (Chimie Interface Biologie pour l'Environnement la Santé et la Toxicologie), the microfluidics laboratory LBCP (Laboratoire Biochip et bioPackaging) and the optics laboratory LISA (Laboratoire Imagerie et Systèmes d'Acquisitions) of CEA Grenoble.

The successful candidate will be responsible for developing and characterizing an innovative optical microscopy system that meets the expected performance to characterize the samples, including spatial resolution, field size, and sensitivity. Coupling and integration with microfluidics systems will be part of the objectives of this development. The impact of the complete system (fluidic and optical) on the samples will also be studied.

The candidate must have solid experience and experimental skills in optics and microscopy. He / she will work in a multidisciplinary environment and will have to interact strongly with the biologists and micro-fluidicists of the project to carry out this work.

Do not hesitate to contact us by e-mail for more detailed information on this project and its environment. The project will start in the fourth quarter of 2017.

Please send your application (CV and cover letter) to pierre.blandin@cea.fr.

Contact : Pierre BLANDIN (pierre.blandin@cea.fr)

Place : CEA LETI - Grenoble

Duration : 2 years (1 year extendable)