



INSTITUT
PIERRE-GILLES
DE GENNES
Pour la microfluidique

Research Engineer/Project Manager in Microfluidics for Cell Biology

- *Training : PhD in microtechnologies/microfluidics, preferably involving applications in biology*
- *Type of contract : CNRS employee, 18 months, with possible extension up to 36 months depending on results/funding*
- *Location : Institut Pierre Gilles de Gennes pour la Microfluidique / Institut Curie Paris, UMR 168, team Macromolecules and Microsystems in Biology and Medicine (MMBM)*

Project context

The team is recruiting an Engineer to develop innovative technologies and coordinate interactions within the team and with partners, in the frame of the European project HoliFAB (<https://holifab.eu>). The project aims at developing a new generation of microfluidic instruments combining conventional microlithography, soft lithography, polymer technologies and additive manufacturing. This is a large scale project, coordinated by the leader in microfluidics Fluigent, located in Kremlin-Bicetre, and combining several European and French large and small industries, academic labs, and technological platforms. The role of the team in the consortium is to design, develop and validate proof of concept applications of this technology in biological and clinical applications.

The team :

The MMBM team is an interdisciplinary group of about 20 persons, developing new concepts and applications of microfluidics in biology and medicine. It is located in Institut Pierre Gilles de Gennes pour la Microfluidique (IPGG), an Institute with above 150 researchers in Microfluidics, equipped with a unique technological platform entirely dedicated to this domain. The MMBM team also belongs to Institut Curie, a highly renowned Institute for Research and Treatment in Cancer, and benefits from collaborations with biologists and clinicians.

The mission

The recruited person will be responsible of the technological developments during the project, including in particular: the design of the microfluidic devices, in close collaboration with the biologists in the team on the one hand, and the other partners of the HoliFab project on the other hand. He/She will fabricate on the technological platform of IPGG the prototype chips of the project, and will be involved in the interactions with the industrial partners towards their transfer to industrial scale. He/She will implement the microfluidic operation of the developed systems (microfluidic stations) and perform biological tests. The systems will concern in particular microfluidic systems for neurosciences and fight against cancer. Some experience in cell culture and manipulation will thus be preferred, but is not mandatory as this training may be acquired through interactions with the biologists of the team. The recruited person will also be the privileged interface of the team with its

partners within HoliFAB, and be responsible for scientific reporting to the coordinator. Besides this coordination mission, it is expected that the work will lead to publications and/or patents, and the recruited person will participate in their writing.

Candidate's profile:

The recruited person will have good organizational skills, and collaboration facilities. Easy communication in English, both oral and written, is mandatory. The project involves the development of non-conventional microfabrication technologies, but as a basis, the recruited person must be fully autonomous in classical clean room technologies, mask design, aligner, photoresist technologies, soft lithography (PDMS technologies). Prior experience in microfluidics and its biological applications, notably in relation with cells, will be a strong advantage. Experience in polymers, polymer processing or additive manufacturing, or in microscopy would also be a strong asset but is not a pre-requisite

Starting date : funding already available.

Please address CV, letter of motivation, and references to :
catherine.villard@curie.fr and jean-louis.viovy@curie.fr

Reference websites:

<https://science.institut-curie.org/research/multiscale-physics-biology-chemistry/umr168-physical-chemistry/team-viovy/>

<https://holifab.eu/>

<https://www.institut-pgg.fr/>