Paris, Jannuary 2021

Post-doctoral position in BioMicrofluidics at Bioaster – Institut Pasteur (Paris)

Project title: Immunocompetent skeletal muscle-on-chip for the pre-clinical prediction of adjuvant effects in human vaccines

Project abstract: A major challenge in pre-clinical vaccines discovery is the development of advanced *in vitro* models to better understand and predict adjuvant's mode of action, especially immune cell recruitment and activation. In this project, the successful candidate will develop a new microfluidics platform to address this challenge. The selected candidate will be responsible for the fabrication and optimization of a multi-compartment microfluidic chip, as well as cell culture and microtissues characterization. The outlook is to develop a robust platform that can be used as an *in vitro* platform for vaccine formulation testing. In the context of this immunocompetent skeletal muscle-on-chip, we will evaluate the activity of adjuvants and the cell-to-cell interaction, in order to better understand the mechanisms of different type of commercially available immunostimulants.

Place of work: BIOASTER and Institut Pasteur are both located near the center of Paris. BIOASTER is the only Technological Research Institute in the field of health in France, which focuses on infectious diseases and microbiology. BIOASTER brings together the skills of industry and public research to respond to health issues. The Institut Pasteur is a private, non-profit foundation. Its mission is to help prevent and treat diseases, mainly those of infectious origin, through research, teaching, and public health initiatives. This is an excellent opportunity for a scientist to collaborate with experts of both institutions.

We are looking for a motivate and creative post-doc candidate with a background in microfluidics and ideally experience in cell culture and immunostaining characterization. Its objective is to design, develop and apply the novel microfluidic platform.

Candidates should send application online (CV, motivation letter and 2 recommendation contacts) via the Bioaster Institute website (https://www.bioaster.org/bioaster/hr/).

PROFILE

Skills

- PhD in engineering (physics, biotechnology) or PhD in biology with strong experience in microfluidics engineering.
- Knowledge and practice of computer-aided design (CAD) of microfluidic circuits.
- Strong expertise in microfabrication and lab-scale development of microfluidic chips (i.e. photolithography, soft lithography or micromilling) applied to biology, concretized by publications in recognized scientific journals or patents.
- Expertise of cell culture techniques and immunofluorescence imaging is a plus.
- Fluent English.

Personal skills

- Open-mindedness, curiosity, taste for innovation.
- Listening and adaptive skills.
- Teamwork skills, excellent communication and interpersonal skills.
- Excellent organizational skills.