



Opening position at **Université Paris-Cité**

## **24-month POST-DOCTORAL FELLOWSHIP**

### **Research**

The ANR-sponsored MucOnChip (*Lab-on-a-chip model of mucociliary clearance for the treatment of Inflammatory Lung Diseases*) project aims at the fabrication and evaluation of a microfluidic device which mimics the fundamental clearance functions in the bronchial region of the human lung. The device comprises soft elastomer micropillars that can be remotely actuated, thereby mimicking ciliary waves. Following this development, the device will be used to screen new drug nanocarriers in relation to the treatment of inflammatory lung diseases such as chronic obstructive pulmonary disease and some late stages of COVID-19 infection.

### **Context**

The post-doctoral position is funded from the Agence Nationale de la Recherche in France for 24 months. The work will be performed at the Université Paris-Cité at the Laboratoire Matière et Systèmes Complexes (MSC) laboratory\*. MucOnChip is a collaboration with Prof. Sandra Lerouge from the MSC laboratory, and the groups of Dr Jérôme Fresnais of Sorbonne University and Dr. Nicolas Tsapis of the Institut Galien Paris-Saclay. In the postdoctoral work, the focus will be on the structure and rheology of mucus and its *in situ* exposure to drug particles. Motivated candidates should have strong expertise in soft condensed matter, microfluidics and/or hydrodynamics of viscoelastic materials, as well as a genuine interest in pulmonary biophysics. The candidate must have good writing and communication skills, be able to work independently and coordinate with other researchers in the group.

If you are interested in this position, please contact Dr. Jean-François Berret ([jean-francois.berret@u-paris.fr](mailto:jean-francois.berret@u-paris.fr)) and Prof. Sandra Lerouge ([sandra.lerouge@u-paris.fr](mailto:sandra.lerouge@u-paris.fr)). You can also visit the website: <https://www.jean-francois-berret-website-pro.fr> for more information.

**Send applications to above emails, include CV with names and addresses of two referees. A motivation letter is required.**

### **\*Université Paris-Cité**

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