



Announcement for the recruitment of a student intern in the field of microfluidics

Supervisor : Melody Shahsavarian

Biologics Research
Sanofi, Centre de recherche à Vitry
13, Quai Jules Guesde, 94400 Vitry sur Seine
Tel : 01 58 93 30 78
Email : melody.shahsavarian@sanofi.com

Title : Set up and evaluation of microfluidic systems for use in the repertoire mining of cognate paired antibodies

The Biologics Research department of Sanofi, based at the research center in Vitry-sur-Seine, has the mission of developing therapeutic antibodies in the context of different diseases. As the discovery of potential targets with higher therapeutic implication is advancing, and more and more complex targets are being identified, there is a demand for correspondingly more complex antibodies with sometimes quite rare characteristics. To meet this demand, it is crucial for Biologics Research to increase the throughput of antibody screening and selection processes in order to generate a more diverse panel of antibody hits which in turn will increase the chance of finding antibodies with those rare characteristics.

Biologics Research is investing in developing a microfluidic platform to meet this high throughput need. The unit of Enabling Technologies is working toward developing a system for the encapsulation of single B lymphocytes isolated from immunized animals for the high throughput cognate paired repertoire mining, functional screening and sorting of antigen-specific antibodies with desired characteristics.

In the context of this project, we would like to evaluate a number of different systems for the high throughput mining of cognate paired antibody repertoires. The present internship will be focused around this theme. The student will work on:

1. The setup of a system for encapsulation of single DNA barcoded polyacrylamide beads using Fluidigm microchips
2. The setup of a single cell analysis assay using digital droplet PCR (ddPCR)

The student will need to have strong knowledge in the field of microfluidics (Bac+5 final internship). Knowledge of antibodies and experience in molecular biology and ddPCR is desirable.

Desired start date : September-December 2018

Duration : 6 months

Interested candidates will have to send CV and cover letter by email before July 31.

Confidentiality clause : Results presented to external parties will remain confidential and written reports will be returned to Sanofi.