



Announcement for the recruitment of a student intern in the field of Next-Generation-Sequencing for Antibody Discovery

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Title : Develop a methodology for cognate paired heavy and light chain high-throughput sequencing of antibodies from phage display enrichment outputs

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.

Next-Generation-Sequencing (NGS) and Phage Display are two cutting edge high-throughput technologies used by Biologics Research for antibody discovery. The current methodology used for sequencing of antibodies from phage display selections leads to the loss of pairing information of the heavy and light chains of antibodies. The unit of Enabling Technologies, focused on developing and expanding technologies used for antibody discovery, is working toward developing other sequencing approaches, which would provide additional information on the natural pairing of antibodies.

In the context of this project, we would like to develop a workflow to perform paired high-throughput sequencing of antibodies from phage display library selection campaigns. The student will work on implementing molecular biology techniques in order to reproduce cognate paired antibody sequences from multiple short-read sequences.

The student will need to have knowledge in the field of molecular biology (Bac+5 final internship). Previous introduction to antibodies and NGS is desirable.

Desired start date : February 2021

Duration : 6 months

Interested candidates will have to send CV and cover letter by email before November 30th.

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