

**Bioinformatician engineer position available in the “Chromatin remodeling”
ATIP-Avenir group at the INSERM U981 - Gustave Roussy Cancer Centre**

INSERM-CNRS-funded contract available for 1 to 2 years

A computational biologist or bioinformatician engineer position is available in Sophie Postel-Vinay's ATIP-Avenir group at U981 INSERM as of February 2018 to work on therapeutic approaches to target chromatin remodeling deficiencies in solid tumors.

Recent large-scale tumor genomic profiling studies have uncovered mutations in several chromatin remodeling genes, notably SWI/SNF (Switch / Sucrose Non-Fermentable) subunits, in approximately 20% of all solid tumors, highlighting its pivotal role in tumorigenesis and making it a potential target for cancer therapy. While chromatin remodeling deficiency has been extensively studied in tumorigenesis, little is known about how to selectively target defects in the SWI/SNF-chromatin remodeling complex, and no targeted drug is approved to date in such indication.

The INSERM/CNRS-funded research programme will focus on identifying novel therapeutic approaches for targeting SWI/SNF deficiency, using hypothesis-based and hypothesis-generating approaches. The selected bioinformatician will be involved in the analysis of RNAseq data, ChIP Seq, metabolomics and proteomics data from isogenic models of SWI/SNF deficiency. This will be integrated with in-house WES and RNAseq patient tumour profiles, as well as publicly available data (e.g. TCGA, ICGC). The candidate will also take part in the interpretation of in-house high-throughput drug and CRISPR screens, the results of which will have to be enriched with *in silico* publicly available data (e.g. Achilles and Drive's projects). The programme will be developed at the basic research and fundamental level, as well as at the translational level thanks to a direct collaboration with the Drug Development Department of Gustave Roussy's Hospital. Collaborations are also set up with Sage Bionetworks (Seattle, USA), the Institute of Cancer Research (London, UK) and Institut Curie (Paris, France) for this research programme.

Keywords: cancer, solid tumors, chromatin remodeling, WES, RNAseq, ChIP Seq, genetic vulnerability, high-throughput screen

Applicant's profile

- Strong scientific track record (international publications and communications)
- Robust experience with WES, RNAseq and ChIPSeq analysis techniques, as well as high-throughput data analysis; biological notions will be of added-value
- Ability of collaborative team work and autonomous work
- High motivation and interest in systems and computational biology
- Fluency in English

Application

- Curriculum vitae (including list of publications and communications)
- Motivation letter describing previous experiences and reasons underlying the application
- Contact information for referees or previous mentors

Applications should be sent to Dr Sophie Postel-Vinay (sophie.postel-vinay@gustaveroussy.fr)