

## Post-Doctoral position in epigenetics/cellular genomics

### General information

Reference:

Workplace: INSTITUT PASTEUR DE LILLE, LILLE (FRANCE)

Date of publication: 13/12/2018

Type of Contract: CDD

Contract Period: 34 months

Expected date of employment: 1 February 2019

Proportion of work: Full time

Remuneration: 33k€ /year

Desired level of education: PhD (or equivalent)

Experience required: 1 to 4 years

### Missions

We have a Postdoctoral Research Scientist training opportunity available starting from Feb/Apr 2019 at CNRS UMR8199, Institut Pasteur de Lille (IPL), France. This appointment will involve the training of a post-doctoral scientist to become an outstanding researcher adept in molecular and computational biological skills. The focus of the project will be on characterizing the cellular genomic events associated with early exposure and increased risk for age-related diseases combining single-cell technology, genome-wide and *in vitro* functional assays on Hematopoietic Stem and Progenitor Cells (HSPCs).

### Activities

The candidate will be responsible for the molecular aspect of the project (Genome-wide assays and single-cell library preparation, *in vitro* characterization of stem cell abilities, (epi)genomic editing technology) and will also have the opportunity to develop her/his skills in computational genomics.

The training of the Postdoctoral Research Scientist will not only involve gaining expertise in epigenetics/cellular genomics and data analyses, but also, travel to participate in conferences or courses. The goal will be to develop the trainee to become an independent researcher.

### Skills

Candidates should hold a PhD or equivalent degree in molecular genetics, cell biology, or a closely related field.

Candidates should have an extensive training in cellular biology with knowledge in stem-cell culture, cell-sorting strategies and genome-wide assays.

Experience with single-cell technology and enthusiasm for computational biology will be highly appreciated.

Excellent spoken and written English is essential and evidence of scientific publications in peer-reviewed journals will be required.

The group values meticulous care with experiments, collegiality, responsibility, autonomy and curiosity.

The group is committed to equity and inclusion. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, or age.

## Work Context

*The Institut Pasteur de Lille* is located in Lille (Northern France), a very active and attractive city. At the intersection of Brussels, Paris and London, the city has a university of 70,000 students.

IPL is an independent non-profit private foundation created by Pasteur in 1894, and devoted to biomedical research, education & health promotion. IPL is working in strong partnership with the University and Hospitals of Lille and research Institutions (Inserm, CNRS). The campus hosts about 800 employees (23 nationalities represented), 6 research units and 25 research teams (mainly focusing on infectious and inflammatory diseases, neurodegenerative diseases, cardiovascular diseases, metabolic diseases, diabetes, obesity, cancer and drug discovery), 10 technological platforms ("omics", cell imaging, animal facilities, BSL-2-3, mass spectrometry...) and 6 start-up (see website Annual report: <https://www.pasteur-lille.fr/>).

The CNRS UMR8199 unit (<http://www.good.cnrs.fr>) is a research unit located in Lille, including 60 people headed by Professor Philippe FROGUEL. He is a member of the European Institute of Diabetes Genomics EGID (<http://www.egid.fr>) and was the winner of the calls for projects "Laboratory of Excellence" and "Equipment of Excellence" (EQUIPEX LIGAN-MP). Research activities are focused on the identification and characterization of genetic variations associated with metabolic diseases such as diabetes and obesity and use modern approaches in genomics, bioinformatics, biostatistics, molecular biology and animal models.

This project is linked to a broader program recently funded by the IPL and will be supervised by Dr. Delahaye who has recently joined the CNRS UMR8199 as Junior Team Leader. Dr Delahaye will lead this innovative project using his broad expertise in functional genomics and developmental programming.

All the facilities required to be successful in such a multidisciplinary approach are available at the Institut Pasteur de Lille.

- Saeed S *et al.* *Loss of function mutations in ADCY3 cause monogenic severe obesity.* Nat Genet. 2018 Feb;50(2):175-179. doi: 10.1038/s41588-017-0023-6.
- Bonnefond A *et al.* *Rare MTNR1B variants impairing melatonin receptor 1B function contribute to type 2 diabetes.* Nat Genet. 2012 Jan 29. doi: 10.1038/ng.1053.
- Delahaye F *et al.* *Sexual dimorphism in epigenomic responses of stem cells to extreme fetal growth.* Nature Communications 10;5:5187. doi: 10.1038/ncomms6187, 2014
- Delahaye F *et al.* *The influence of genetic variants on the placental regulatory landscape.* PLoS Genet. 2018 Nov 19;14(11):e1007785. doi: 10.1371/journal.pgen.1007785.
- Wijetunga NA & Delahaye F *et al.* *The meta-epigenomic structure of purified human stem cell populations is defined at cis-regulatory sequences.* Nature Communications 5:5195. doi: 10.1038/ncomms6195, 2014

**Contact: [fabien.delahaye@pasteur-lille.fr](mailto:fabien.delahaye@pasteur-lille.fr)**