
POSTDOCTORAL FELLOWSHIP IN EPIGENOMICS AND CHILD OBESITY

We're hiring!

We're seeking a motivated, curious and ambitious postdoctoral fellow!

Research field

The ÉPIMET team at the Université de Sherbrooke's Faculty of Medicine and Health Sciences invites applications for a postdoctoral fellowship in epigenomics and child obesity. This is a two-year full-time renewable contract linked to the Saguenay hospital.

ÉPIMET is an epigenetics research team led by Professor Luigi Bouchard. Doctor Bouchard is a Full Professor in the Department of Biochemistry at the Université de Sherbrooke's Faculty of Medicine and Health Sciences and Researcher at the CIUSSS of Saguenay–Lac-Saint-Jean. His team works on hereditary diseases and the foetal metabolic programming of child obesity. He is especially interested in deciphering the nature of the link between the foetal environment and the epigenetic programming leading to the development of child obesity.

The CIUSSS of Saguenay–Lac-Saint-Jean, linked to the Université de Sherbrooke, offers an exceptional environment for genetics students with its founder effect and the openness of the population to research in this field. The close collaboration among researchers allows for the development and outreach of the research in various fields of activity in the area. The CIUSSS of Saguenay–Lac-Saint-Jean is also home to the biobank Génome-Québec, a national infrastructure with an international scope.

Job description

ÉPIMET is currently seeking a motivated candidate to complete a postdoctoral fellowship on the role of epigenetics in the development of child obesity. The specific goals of the fellowship are as follows:

1. Identify, on an epigenome scale (birth measurement), the loci linked to adiposity in children at 5 years old measured by DXA as part of a cohort prospective study representing the Quebec population;
2. Refine the association signals by conducting bis-DNA-Seq analyses;
3. Demonstrate that the methylation marks identified impact the regulation of the transcription of their target gene.

The candidate can use the genome-wide methylation data (EPIC Array) generated in the placenta (n=544), cord blood (n=448) and blood of children aged 5 (n=336), all monitored as part of the Gen3G (Guillemette et al. BMJ Open 2016) longitudinal cohort. The genetic sequencing of 444 children is also complete. The transcriptome profile, by RNA-Seq, of the placenta samples is in progress. The project is funded by the CIHR, American Diabetes Association and NIH.

Main responsibilities

- Develop and refine analytical plans for publications. This includes creating detailed analysis plans, deadlines and meetings with collaborators.
- Work in collaboration with the research team and collaborating statisticians to develop and complete data analyses.
- Draft reports detailing the research results according to the requirements of the funding agencies or research ethics committees.
- Prepare scientific articles detailing the research results and submit them to various scientific journals.
- Present the research results to department/faculty members and at conventions and conferences.
- Other related tasks.

Knowledge, skills and aptitudes

- Good knowledge of genomics and genetics;
- Expertise in epigenomics and/or biostatistics or great interest in developing his/her skills in the matter;
- Knowledge of the main biostatistics software (R) and tools linked to the types of analyses (Bioconductor) or open sources of information (GitHub);
- Ability to learn and master complex analysis techniques;
- Relevant experience in the development, qualification, validation and resolution of problems linked to genetics analyses;
- Excellent analytical and problem-solving skills;
- Aptitude for meticulous work, communication and teamwork;
- Independent, flexible and ingenious;
- Ability to meet deadlines and respect budgets;
- Knowledge of good clinical laboratory practices (GCLPs) is an asset.

Skills requirements

- Postgraduate degree (MD or PhD) in Biological Sciences (example: medicine, biochemistry, molecular biology, etc.).

Number of positions available

One (1)

Type of job

Contractual – Full time

Workplace

Chicoutimi Hospital, a university health centre

Wage

According to the current standards of the Université de Sherbrooke's Faculty of Medicine and Health Sciences.

Documents required to apply

- Cover letter.
- Resume.

Applications must be submitted to Prof. Luigi Bouchard (luigi.bouchard@usherbrooke.ca)

For more information on the content of this posting, please contact Prof. Luigi Bouchard at luigi.bouchard@usherbrooke.ca

*We thank all candidates for their interest in this position; however, only candidates considered for hiring will be contacted.