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| Project title | Characterizing leukemia sub-population aberrant gene expression by single cell transcriptomic and immuno-phenotype. | | |
| Study level(s) | <input type="checkbox"/> MSc | <input type="checkbox"/> PhD | <input checked="" type="checkbox"/> Postdoctorate |
| Principal investigator(s) | Vincent-Philippe Lavallée, M.D. | | |
| Project duration | 2 years, renewable | | |
| Start date | As soon as possible | | |

Date of posting: 2020-12-07

Research project description

The Lavallée laboratory is looking to hire a post-doctoral fellow with expertise in computational biology, bio-informatics or genomics applied to cancer biology to work on single cell sequencing data. The selected fellow will have access to the single cell transcriptome and immuno-phenotype (Cite-Seq) of a large cohort of leukemia patients. The underlying hypothesis of this project is that some genes aberrantly expressed in specific cellular sub-populations can reveal functional dependencies specific to this cellular population. The goal is to analyze such aberrantly expressed genes from single-cell multi Omics data to identify aberrant transcriptional networks that characterize different cellular leukemia populations. A secondary and somewhat more fundamental aspect of this research project is to characterize the RNA/protein relationship and how these fluctuate in hematopoiesis and leukemia. The findings from this research will be validated experimentally through collaborations already in place.

The Lavallée laboratory is a new laboratory with lots of achievement, collaborations and huge ambitions. The candidate working with us will be well supported by a multidisciplinary dynamic team and will work in the new research center of CHU Sainte-Justine. If you want to work with state of the art genomics data in the context of a large scale project and are not afraid to tackle new challenges, we invite you to submit your application.

Required training and profile

To successfully perform this research, the post-doctoral fellow will need proficiency with the standard bio-informatics tools, a good competence with R or Python programming languages and a knowledge of single cell approaches. An advanced knowledge of systems biology, ideally in cancer biology is also expected. The recruited fellow will need to work in close collaboration with other researchers from various backgrounds and so is required to show independence, great interpersonal ability and be passionate about their research.

Submit your application

Candidates must send the required documents before **February 2021** to **Véronique Lisi** at veronique.lisi.chusj@gmail.com



Please provide:

- ✓ Academic *Curriculum vitæ*
- ✓ Most recent transcripts
- ✓ Cover letter detailing your achievements and goals
- ✓ References

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Equity, diversity and inclusion

The masculine gender is used without discrimination and for the sole purpose to facilitate reading. The CHU Sainte-Justine subscribes to the principle of equal access to opportunities and invites women, members of visible and ethnic minorities, persons with disabilities and Indigenous people to apply. We would appreciate it if you could inform us of any disabilities that would require technical and physical accommodation adapted to your situation during the selection process. Please be assured that we will treat this information as confidential.

Studies at the CHU Sainte-Justine Research Center

Pursue your [graduate or postdoctoral studies](#) at the **CHU Sainte-Justine Research Center**, and be one of the 500 students, fellows and interns involved in accelerating the development of knowledge in the field of maternal, child and adolescent health, whether in basic or clinical research. Under the supervision of prominent scientists, especially in leukemia, rare pediatric diseases, genetics, perinatology, obesity, neuropsychology and cognition, scoliosis and rehabilitation, you will have the opportunity to work with multidisciplinary scientific teams and collaborators from all over the world.

About the CHU Sainte-Justine Research Center

CHU Sainte-Justine Research Center is a leading mother-child research institution affiliated with Université de Montréal. It brings together more than 200 research investigators, including over 90 clinician-scientists, as well as 500 graduate and postgraduate students focused on finding innovative prevention means, faster and less invasive treatments, as well as personalized approaches to medicine. The Center is part of CHU Sainte-Justine, which is the largest mother-child center in Canada and the second most important pediatric center in North America. More on research.chusj.org

