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Project title	Single cell mutation detection		
Study level(s)	<input checked="" type="checkbox"/> MSc	<input checked="" type="checkbox"/> PhD	<input type="checkbox"/> Postdoctorate
Principal investigator(s)	Vincent-Philippe Lavallée		
Project duration	2-4 ans		
Start date	2022 or 2023		

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Date of posting: 2022-05-19

### Research laboratory presentation

The Lavallée laboratory is a young lab that has already accomplished a lot, has tons of collaborations and loads of ambition. We study cellular diversity at the genome, transcriptome and proteome scales by a variety of molecular biology techniques derived from next generation sequencing, combined to computational biology analyses. Our multidisciplinary team works in the new research center affiliated to the Sainte-Justine hospital.

### Research project description

The Lavallée laboratory, in collaboration with the members of the Leucegene group, has generated, using the Cite-Seq methodology, the single cell transcriptomic profile of a large cohort of leukemia patients. To complement this cohort, we wish to develop an experimental protocol to detect specific mutations at the single cell level, using previously generated cDNA. The recruit will have the opportunity to incorporate his/her results to the global analyses already performed.

### Required training and profile

The ideal candidate will have previous expertise in molecular biology (knowledge of next generation sequencing, understanding of concepts and approaches used with nucleic acid) and an interest for computational data analysis. An interest for a research project combining two fields of expertise is required together with the will to learn, the ability to communicate with others and interpersonal skills.

### Submit your application

Candidates must send the required documents as soon as possible to **Véronique Lisi** at [veronique.lisi.chusj@gmail.com](mailto:veronique.lisi.chusj@gmail.com). The applications will be evaluated as soon as they are received.

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](https://research.chusj.org)

