

## NK cell biology – PhD or Postdoctoral internship

### CHU Sainte-Justine Research Center

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Principal Investigator **Élie Haddad, M.D. PhD,**  
Professor, Departments of Paediatrics & Microbiology,  
Infectiology and Immunology  
University of Montreal, CHU Sainte-Justine

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Starting date Immediate

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Project “New cytotoxic mechanism used by Natural Killer cells to kill cancer cells”

#### Research laboratory presentation

Élie Haddad’s laboratory is studying various aspects of the human immune system, spanning from stem cells to cancer immunotherapy, in both fundamental and translational research. The project will be conducted in a multidisciplinary environment, involving oncologists and immunologists. The CHU Sainte-Justine will be the administrative center.

#### Research project description

A PH.D student/Post-Doctoral position is currently open in the lab. The proposed research project is focused on Natural Killer (NK)-cell biology, on a new mechanism of cytotoxicity against tumor cells. A better understanding of this new mechanism could lead to the development of new cancer immunotherapy. This project aims at identifying key proteins involved in this new mechanism through the use of cutting-edge technology such as CRISPR library, co-immunoprecipitation followed by HPLC and metabolic analyses. This project combines molecular biology (gene editing, cellular engineering), cellular biology (NK cell amplification, cytotoxic assays by flow cytometry) and biochemistry (immunoprecipitation, HPLC). The student will be assigned a research project that will allow him to apply a translational research approach. He will have the opportunity to drive a project that could have a profound impact on our global knowledge of NK cells. The candidate will benefit from the complementary expertise of a multidisciplinary team and of a rich research environment. In addition, he will benefit from cutting-edge methods and technologies in the field.

#### Candidates must have:

- Hold an appropriate degree for the targeted level (MSc for PhD; PhD or M.Sc. with a MD degree without the right to practice for post-doctoral fellowship) and excellent academic record;
- Demonstrate motivation and autonomy to bring this project to term;
- Possess a strong knowledge in immunology and experimental techniques (eg. Flow cytometry, molecular biology);
- Have experience with cell culture (primary and cell lines).
- Have good communication and organization skills;
- Established publication records
- Speak and write in English.
- Although University of Montreal and the CHU Sainte-Justine are french-speaking institution, it is not required that the candidate speaks and/or understand French.

#### Conditions of internship

The student must apply for admission at the University of Montreal as a PhD or a postdoctoral fellow and will comply with all applicable eligibility conditions. Because the recipient is a trainee



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and not an employee of the CHU Sainte-Justine or Université de Montréal, the recipient is not entitled to employment benefits. For post-doctoral fellow, deductions for Canadian income tax will be made from twice monthly stipend, but the stipend is no subject to source deductions for Employment Insurance or Canada Pension Plan. All students at the CHU Sainte-Justine receive a stipend from their Principal investigator research funds (according to the minimum amount required at the CHU Sainte-Justine Research Center). The candidate should apply for external scholarship awards. The candidate will also have access to the internal fellowship program of the Sainte-Justine UHC Foundation.

The duration of research development is conditional:

- On the availability of research funds;
- To the project's progress;
- Eligibility of the intern to renew its status as postdoctoral fellow at the university.

### **Submit your application**

Interested candidates are invited to submit their application by email to Dr **Élie Haddad** at: [labo.haddad@gmail.com](mailto:labo.haddad@gmail.com), including:

- ✓ CV showing scientific activity, academic background and research experience
- ✓ Cover letter
- ✓ Transcripts
- ✓ References



[Check out all our fellowship/internship opportunities on LinkedIn!](#)

### **How is it like to study or make a fellowship 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 360 students, fellows and interns who are helping to fast track the development of knowledge in the field of mother, child and adolescent health. 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.



[Our students talk about their experience](#)

### **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 360 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 second most important pediatric center in North America. More on [research.chusj.org](http://research.chusj.org)