Research project offer

CHU Sainte-Justine Research Center

Project title	Role of mononuclear phagocyte plasticity in fibrosis in Crohn's disease		
Study level(s)	☒ MSc	☐ PhD	☐ Postdoctorate
Principal investigator(s)	Dr. Laurence Chapuy		
Project duration	2 years		
Start date	Winter 2024		

Date of posting: 2023-09-29

Research laboratory presentation

Dr. Chapuy's laboratory works on adult and pediatric inflammatory bowel diseases (IBD). IBD, including Crohn's disease and ulcerative colitis, represent a significant public health concern in Canada, where the incidence is growing, particularly in children. Using state-of-the-art techniques, we study the immunological mechanisms behind inflammation and intestinal fibrosis, focusing on innate immune cells.

Dr. Chapuy's team is based in the new research center of CHU Sainte-Justine, which offers a pleasant work environment conducive to interactions and discoveries. We are looking for motivated students to join our team!

Research project description

The research project investigates the role of mononuclear phagocytes in developing intestinal fibrosis in Crohn's disease. Using surgical resections from patients with fibrostenotic disease, we study, at the single-cell level, the phenotype and function of innate immune cells and their interactions with surrounding cells in blood, lymphoid and non-lymphoid tissues. The study will also be supplemented by high-definition cellular imaging techniques (spatial transcriptomics and proteomics).

Required training and profile

The ideal candidate will be interested in mastering basic laboratory techniques, including preparing mucosal, lymphoid, and blood tissue samples for single-cell analysis, multiparameter flow cytometry, and tissue imaging techniques. Additionally, they should have a strong interest in bioinformatics and computational analysis.

Submit your application

Applicants must email the required documents to Dr. Laurence Chapuy at laurence.chapuy.med@ssss.gouv.qc.ca

Please provide:

- √ *Curriculum vitæ*
- √ Most recent transcripts
- √ Cover letter
- √ References

Equity, diversity and inclusion

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