



CHU Sainte-Justine
Research Center
Mother and Child
University Hospital Center

Université
de Montréal

Project title	Pre-requisites to the clinical use of oscillometry in children		
Study level(s)	<input type="checkbox"/> MSc	<input type="checkbox"/> PhD	<input checked="" type="checkbox"/> Postdoctorate
Principal investigator(s)	Francine M. Ducharme		
Project duration	2-3 years		
Start date	Fall 2020		

Research laboratory presentation

Dr. Ducharme's clinical laboratory tests several instruments and oscillometric techniques applicable to children aged 1 to 17 years old. Indeed, asthma guidelines recommend periodically assessing not only symptoms but also lung function (i.e., spirometry) in children to properly adjust the treatment. For the vast majority of children with asthma, doctors do not use spirometry, because of insufficient cooperation in young children and/or lack of access. An interesting alternative is the use of oscillometry performed in spontaneous breathing, which is effortlessly for the child, using portable devices newly (or in the process of being marketed) in Canada. An entire research program aims to provide reliable, valid and accessible measurement of lung function in children.

Research project description

Postdoctoral fellowship in clinical epidemiology applied to pediatric oscillometry

Using the ongoing cohort studies and the development of new prospective studies, the objectives of this postdoctoral training are:

- To gain experience in the management and coordination of clinical studies
- Determine the feasibility and reproducibility of oscillometry and associated techniques in different age groups.
- Propose threshold values to distinguish between mild, moderate and severe obstruction and to identify clinically significant improvement or deterioration;
- Propose a simple interpretation algorithm and develop a training module for health professionals
- Develop skills for grant applications

Required training and profile

- Completed PhD in epidemiology, physiology, biomedical sciences, or related sciences or an MD with advanced training in clinical research and expertise in pediatrics or pulmonology.
- Excellent academic record
- Excellent statistical analysis skills
- Excellent knowledge of computers and softwares (Office Suite, SPSS, SAS, R, etc.)
- Excellent ability to review scientific literature
- Excellent competence in written and oral English. Linguistic competence in French is an asset.



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Conditions

A research grant, reserved for this project, will cover the first year; the candidate will be invited to apply for training awards and operational funds at various competitions and programs for the following years.

Submit your application

Candidates must send the required documents to Annie Théoret at annie.theoret@recherche-ste-justine.gc.ca by putting the title of the project in subject.

Please provide:

- ✓ *Curriculum vitae*
- ✓ Most recent transcripts
- ✓ Cover letter
- ✓ References (2)

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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

