



Project title	Vascular control of organ development and regeneration		
Study level(s)	<input type="checkbox"/> MSc	<input checked="" type="checkbox"/> PhD	<input checked="" type="checkbox"/> Postdoctorate
Principal investigator(s)	Rubén Marín Juez, PhD		
Project duration	4 years		
Start date	January 2021		

Date of posting: 2020-11-12

Research laboratory presentation

The [Marín-Juez laboratory](#), at the CHU Sainte-Justine Research Center, is recruiting a PhD student and a postdoctoral fellow (4-year fully funded positions). Our laboratory is interested in the cellular and molecular mechanisms regulating cardiac regeneration.

The successful applicant will join the Marín-Juez laboratory at the CHU Sainte-Justine Research Center, where he/she will have access to state-of-the-art facilities and technology platforms including Advance imaging platform (light-sheet, spinning-disc confocal, multiphoton, STED super-resolution, etc.), genomics (DropSeq, 10x, Illumina Novaseq) and bioinformatics platforms. CHU Sainte-Justine Research Center provides a thriving scientific environment where the successful applicant will have the opportunity to work with multidisciplinary scientific teams and to collaborate with talented clinicians and researchers.

Research project description

For this project, we are particularly interested in understanding how the cardiac endothelium regulates different aspects of cardiac regeneration and how alterations in the coronary network formation impact the ability of coronary vessels to support tissue replenishment. We have recently found early coronary regeneration as a key determinant of heart regeneration (Marín-Juez et al., *PNAS* 2016), and identified mechanisms regulating coronary network replenishment to form a vascular scaffold that supports cardiomyocyte regeneration (Marín-Juez et al., *Dev Cell* 2019). We now seek to define how the different components of the cardiac endothelium regulate tissue replenishment and identify the different mechanisms involved in their regulation of CM proliferation and migration.

Required training and profile

Ph.D. student position: Applicants should have training in vascular biology, molecular biology, cell biology, or related fields. Suitable candidates should be enthusiastic about regenerative and vascular biology. Previous research experience with zebrafish and/or heart regeneration is desired.

Postdoctoral position: We are looking for candidates with a Ph.D. in the biological sciences and laboratory experience in tissue repair/regeneration, cellular, molecular biology, or genetics. Previous experience working with zebrafish, imaging and histology are highly valued but not essential.



Both positions: Candidates with experience in confocal/light-sheet imaging and/or genome engineering are strongly encouraged to apply. Preference will be given to applicants with excellent collaborative and communication skills. The Marín-Juez lab and the CHU Sainte-Justine Research Center subscribe to the principle of equal access to opportunities and encourage women, members of visible and ethnic minorities, persons with disabilities and Indigenous people to apply.

Submit your application

Candidates must send the required documents before **02/2021** to **Rubén Marín Juez** at ruben.marin.juez.hsj@ssss.gouv.qc.ca

Please provide:

- ✓ *Curriculum vitae*
- ✓ Cover letter
- ✓ References (2 or 3)

Rubén Marín Juez, PhD.

Assistant Professor, Department of Pathology and Cell Biology, University of Montreal
Researcher, CHU Sainte-Justine Research Centre

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

