



Project title	Molecular control of organ development and regeneration		
Study level(s)	<input type="checkbox"/> MSc	<input type="checkbox"/> PhD	<input checked="" type="checkbox"/> Postdoctorate
Principal investigator(s)	Rubén Marín Juez, PhD		
Research axis	Fetomaternal and Neonatal Pathologies		
Project duration	Maximum 5 years		
Start date	2025		

Date of posting: 2025-01-24

Research laboratory presentation

The Marín-Juez laboratory, at the Centre de recherche Azrieli du CHU Sainte-Justine, is recruiting a postdoctoral fellow (up to 5 years fully funded position). Our laboratory is interested in the cellular and molecular mechanisms regulating cardiac regeneration and development.

The successful applicant will join the Marín-Juez laboratory at the CHU Sainte-Justine Research Center, where s/he will have access to state-of-the-art facilities and technology platforms including Advanced imaging platform (light-sheet, spinning-disc confocal, multiphoton, STED super-resolution, etc.), genomics (DropSeq, 10x, Illumina Novaseq, Visium), iPSC Cell Reprogramming 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

We have previously identified coronary network regeneration as a critical determinant of heart regeneration (Marín-Juez et al., *PNAS* 2016; Wang et al., *Development* 2024). Our work has uncovered mechanisms governing coronary network replenishment, including the formation of a vascular scaffold that supports cardiomyocyte regeneration and mediates coronary-epicardial interactions (Marín-Juez et al., *Dev Cell* 2019; El-Sammak et al., *Circ Res* 2022). Building on these findings, we now aim to elucidate how the cardiac endothelium, epicardium, and immune system components cooperate to regulate tissue replenishment, as well as the specific mechanisms underlying their roles in cardiomyocyte regeneration.

Required training and profile

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.

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 **30/04/2025** to **Rubén Marín Juez** at **ruben.marin.juez.hsj@ssss.gouv.qc.ca**

Please provide:

- ✓ *Curriculum vitæ*
- ✓ 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 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 Azrieli Research Center

Pursue your [graduate or postdoctoral studies](#) at the **Azrieli Research Center of the CHU Sainte-Justine**, 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 Azrieli Research Center

Azrieli Research Center of the CHU Sainte-Justine is a leading mother-child research institution affiliated with Université de Montréal. It brings together more than 300 research investigators, including over 120 clinician-scientists, as well as 580 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

