



Project title	Anillin-dependent mechanisms of midbody ring biogenesis during cytokinesis		
Study level(s)	<input type="checkbox"/> MSc	<input checked="" type="checkbox"/> PhD	<input type="checkbox"/> Postdoctorate
Principal investigator(s)	Gilles Hickson, Ph.D.		
Project duration	4 years		
Start date	As soon as possible		

Research laboratory presentation

Dr. Gilles Hickson's research unit at CHU Sainte Justine is looking for doctoral students. The lab is mainly interested in the process of cytokinesis, the final stage of cell division. Our goal is to understand and characterize the molecular mechanisms that regulate cytokinesis since defects in this process can lead to cancer.

Research project description

We use *Drosophila* S2 cells in culture as a model system in combination with techniques of cellular biology, molecular biology, biochemistry and real-time microscopy. This model allowed us to define all the genes necessary for cytokinesis by large-scale RNAi screen. Our work is now focused on understanding how the components of this machinery interact throughout cytokinesis. In addition, we would like to understand how the mechanisms of cytokinesis are regulated during development. We begin to explore them *in vivo* using high-resolution microscopy and the powerful genetic tools that *Drosophila* offers.

Under the supervision of Dr. Gilles Hickson, the candidate will be involved in the design and implementation of research projects, data analysis and interpretation. He/she will be expected to present his results at laboratory meetings, institutional forums and national and international scientific meetings.

Required training and profile

The student must hold a master's degree in one of the following disciplines, or a closely related field:

- Biochemistry
- Molecular biology
- Pathology and cell biology
- Biomedical sciences

Language: French and/or English spoken and written.



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Qualifications:

- Excellent academic record
- Highly motivated, curious and passionate about research
- Experience with the basic techniques of molecular biology and biochemistry (cloning, cell culture, western blot)
- Excellent organizational skills, meticulousness, independent and team work

Conditions of internship

Admission in a PhD program at Université de Montréal

Submit your application

Candidates must send the required documents to Dr. Gilles Hickson at gilles.hickson@umontreal.ca, including "I am interested in cytokinesis" in the subject heading.

Please provide:

- ✓ *Curriculum vitæ*
- ✓ Most recent transcripts
- ✓ Cover letter (describing your background and expertise)
- ✓ References (at least two, including the Masters supervisor)

Gilles Hickson, Ph.D.

Principal Investigator, Sainte-Justine Hospital Research Center

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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

