

Master's graduate student position
Translational research on gynecological cancers

Location: Lady Davis Institute for Medical Research at the Jewish General Hospital, McGill University

Start date: Fall 2026

Degree: MSc (Thesis-based), Division of Clinical and Translational Research (Experimental Medicine)

Supervisor: Dr. Melica N. Brodeur

1. Project Overview

We are seeking a highly motivated master's student to join a translational research project focused on liquid biopsy-based next-generation sequencing (NGS) in ovarian cancer. Ovarian cancer remains the most lethal gynecologic malignancy, and improved molecular tools are urgently needed to guide precision therapy. This project will investigate the use of circulating tumor DNA (ctDNA) and related biomarkers to improve molecular profiling, treatment monitoring, and/or prediction of therapeutic response in ovarian cancer patients. The student will work with clinically annotated patient samples and cutting-edge genomic technologies, contributing to an active research program at the interface of molecular oncology, genomics, and clinical translation.

2. Research Objectives

- Analysis of liquid biopsy samples (e.g., plasma-derived ctDNA) from ovarian cancer patients
- Application and optimization of NGS-based assays for somatic mutation detection
- Bioinformatic interpretation of sequencing data with Clinical Biology Specialist
- Correlation of molecular findings with clinical and treatment outcomes
- Contribution to abstracts, manuscripts, and conference presentations

3. Training Environment

The student will be embedded in a multidisciplinary team that includes clinician-scientists, clinicians, and clinical biology specialists, with access to state-of-the-art laboratory and computational infrastructure. The project offers strong opportunities for skill development in translational cancer research and precision oncology.

4. Candidate Qualifications

- Bachelor's degree in a relevant field (e.g., molecular biology, biochemistry, genetics, biomedical sciences, bioinformatics, or related discipline)
- Requirements to apply for Division of Clinical and Translational Research (Experimental Medicine) program at McGill University
- Strong interest in cancer biology, genomics, and/or precision medicine
- Previous laboratory experience is an asset (e.g., DNA/RNA extraction, PCR, NGS library preparation), but not mandatory

- Familiarity with bioinformatics, statistics, or programming (e.g., R, Python) is an asset, but not mandatory
- Excellent organizational skills and ability to work independently and as part of a team
- Strong written and verbal communication skills
- Evidence of academic excellence (transcripts, CV)

5. Funding

Funding will follow guidelines set by Division of Clinical and Translational Research (Experimental Medicine): <https://www.mcgill.ca/expmed/>

6. How to Apply

Interested candidates should submit:

1. A brief statement of interest describing research background and career goals
2. A curriculum vitae (CV)
3. Transcripts
4. Contact information for 2–3 references

Applications should be sent to melica.brodeur@mcgill.ca. Review of applications will continue until the position is filled.

Workplace:

Lady Davis Institute for Medical Research, Cancer Axis
<http://www.ladydavis.ca/en/cancer>

Principal Investigator:

Dr. Melica Brodeur, M.D, MSc
Assistant Professor
Department of Obstetrics and Gynecology
Department of Oncology
McGill University
Jewish General Hospital (JGH) and Lady Davis Institute for Medical Research (LDI)

We thank all applicants for their interest. Only those selected for an interview will be contacted.

The Lady Davis Institute (LDI) is committed to equity, diversity and inclusion within its community. The LDI has an equal opportunity employment program and welcomes applications from all qualified candidates, regardless of their characteristics, with the skills and knowledge to productively engage with diverse communities. Accommodation for any part of the application process may be provided to persons with disabilities who request it.

The LDI encourages all persons, regardless of their characteristics, to apply. In accordance with Canadian immigration requirements, please note that priority will be given to Canadian citizens and permanent residents.