



### MSc/PhD positions in genome stability and Cancer –Sept 2022

All organisms can suffer DNA double-strand breaks (DSBs), during meiosis, during DNA replication as elongating forks stall or collapse, or as a consequence of treatment with DNA damaging agents such as ionizing radiation. If left unrepaired, the consequences for genomic stability would be disastrous, resulting in chromosomal deletions and translocations leading to apoptosis or carcinogenesis. It is becoming increasingly clear that tumour formation can be triggered by mutations in genes involved in the surveillance of the genome integrity such as PALB2 and BRCA2. Defects in these genes can be exploited through synthetic lethal approaches, such as the inhibition of Poly(ADP)ribose polymerase. The laboratory studies mainly the repair of DNA double-strand breaks at the biochemical, cellular and genetic level. We have openings for students to study the roles of regulators of DNA double-strand break repair and the use of novel therapeutic compounds targeting cancer cells. Our research is at the interface of breast/ovarian cancer but also fundamental in nature.

For more information about our research programs, please visit: [jeanyvesmasson.com](http://jeanyvesmasson.com) and the following references: Nature Structural and Molecular Biology 17:1247-54 ; Cell Reports 6, 553-564; Nature Cell Biology 17, 1446-57, Molecular Cell 61 :405-18; Nucleic Acids Research 47:10662-10677; Nature Communications 10: 2954; Trends Biochem Sciences 45: 779-793.

The chosen candidate will be primarily located at the Laval University Cancer Research Center in old Quebec city in Canada. This is a very safe place to live in. Moreover, the student fees of foreign Laval University PhD students are the same as Canadian students.

Applicants should have a BSc or MSc degree in relevant fields of biochemistry or molecular biology or a related field. Applicants should be *highly motivated* for basic biomedical research and have excellent communication skills in English. Interested applicants should send a *curriculum vitae* including previous publications and two references to:

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