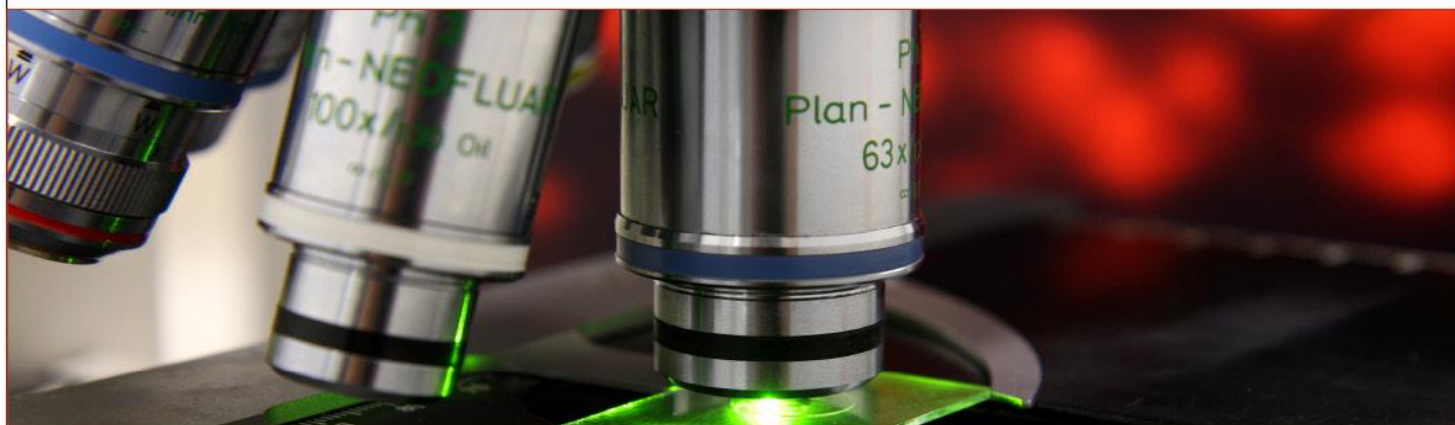


SÉMINAIRES ET CONFÉRENCES



Daniel Durocher, Ph.D.

**Lunenfeld-Tanenbaum Research Institute
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University of Toronto, Canada**

“ Charting the BRCA1/BRCA2 synthetic lethality network ”

The orchestration of DNA repair is of fundamental importance to the maintenance of genomic integrity and tumor suppression. DNA damage must be detected in the context of the varied chromatin landscape, its presence must be communicated throughout the cell to alter many ongoing processes, and the machinery that will mend the lesion must be recruited to the damage site. Inherited DNA repair deficiencies cause a variety of clinical phenotypes that impact multiple organs, including the brain and the blood lineage. In my presentation, I will discuss our recent efforts in mapping genome maintenance pathways using genome-scale CRISPR/Cas9 screens in human cells. In particular, I will discuss how synthetic lethality with BRCA1/BRCA2 allowed us to discover a novel genome maintenance pathway, underpinned by the protein CIP2A. Surprisingly, the role of CIP2A in genome maintenance is confined to mitosis where it forms a complex with TOPBP1 to promote the accurate segregation of broken chromosomes and under-replicated DNA. Exactly how CIP2A-TOPBP1 functions in genome maintenance is completely unknown and forms the basis of much of our current work. In my presentation, I will review the identification of CIP2A and will present the identification of a novel DNA-binding subunit to the complex that is critical for mitotic genome maintenance.



Faculté de médecine
Département de biochimie
et médecine moléculaire

Université 
de Montréal

Le lundi 17 novembre, 11h30

Pavillon Joseph-Armand-Bombardier, Salle : 1035

Et

[Zoom](#)

Invité de Stephen Michnick
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