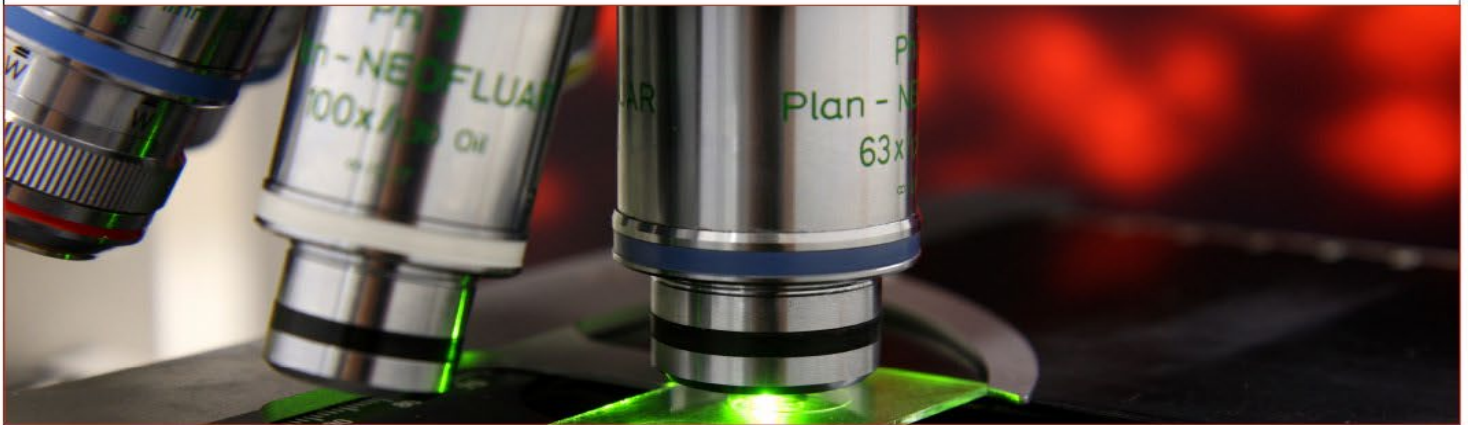


# SÉMINAIRES ET CONFÉRENCES



## **ELI ROTHENBERG**

**Department Biochemistry and Molecular Pharmacology  
NYU Grossman School of Medicine**

**“Mechanisms of PARP Inhibitors in Therapeutic Response and Resistance”**

PARP inhibitors (PARPi) have emerged as promising treatment options for targeted therapy for BRCA mutated cancers. Despite initial clinical success, a substantial number of patients are either unresponsive to therapy or develop resistance. While both de-novo and acquired resistance to therapy are linked to rewiring and interplay between DNA repair pathways, the specific mechanisms by which PARPi treatment affect PARP1/2 enzymes to causes toxicity in BRCA mutated cancers and other genetic backgrounds remains unclear, with several model proposed ranging from PARP1 trapping, increase rate of DNA synthesis at replication forks, to formation of replication gaps. I will discuss some of my lab's recent and ongoing research efforts to address these issues, by application of single-molecule microscopy methods to investigate the mechanisms of PARPi starting from their activity at the molecular level, through their effects on the repair of distinct DNA lesions in cells, and their associated cellular pharmacokinetics.



Faculté de médecine  
Département de biochimie  
et médecine moléculaire

Université   
de Montréal

**Lundi 27 mai 2024, 11h30**

**Pavillon Joseph-Armand-Bombardier, Salle : 1035**

**ET**

**Lien Zoom**

invité de John Pascal  
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