UNIVERSITÉ LAVAL

INSTITUT DE BIOLOGIE INTÉGRATIVE ET DES SYSTÈMES IBIS

C O N F É R E N C E

Dr Rodrigo Reyes, Associate Professor

Canada Research Chair in Chromosome Biology
Department of Biology, McGill University

Tracking single fluorescent proteins to understand DNA replication in live cells

LE JEUDI 10 OCTOBRE 2019 À 12 H 30

Pavillon Charles-Eugène-Marchand, salle Hydro-Québec (1210)

Intracellular conditions are too complex to be reproduce in tubes. Our work aims to bypass this limitation by exploiting the single-molecule fluorescence microscopy, which are a set of techniques that allow us to detect and track single copies of proteins in live cells. My group has used these techniques to understand fundamental aspects of how cells duplicate their genome. In my talk, I will summarize our work on the multi-component machine that coordinates DNA replication, the replisome, in the bacteria Escherichia coli. I will show that, in contrast to what was previously believed, most replisome subunits have a high turnover during active synthesis, including the DNA polymerase. Our work suggests that in bacteria the synthesis of DNA in both strands occurs discontinuously. I will then discuss the methods we developed to capture similar information in Saccharomyces cerevisiae and will discuss the difference and similarities in the mode of action of the replisome of these two organisms.

Lunch et breuvages seront offerts.
SVP confirmer votre présence sur : https://doodle.com/poll/r2ctpdikiw9fkyyf
avant le mercredi 9 octobre, 10 h

Hôte : Christian Landry

Responsable : Dr Christian Landry
Christian.landry@bio.ulaval.ca