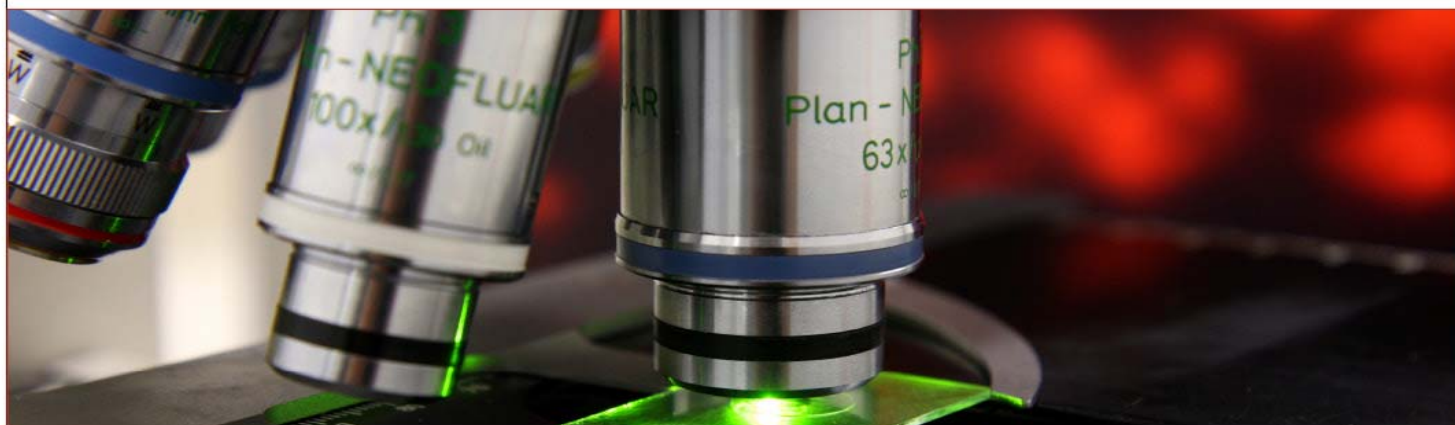


SÉMINAIRES ET CONFÉRENCES



Stephen Michnick **Département de Biochimie et médecine moléculaire** **Université de Montréal**

« The phases and dephases of endocytosis »

Clathrin-mediated endocytosis (CME) underlies intra- and extracellular material trafficking in eukaryotes, and is essential to protein metabolism, intercellular signaling, membrane remodeling and other cell regulatory processes. Although CME is normally driven by actin polymerization in yeast, it can also occur through actin independent and unknown mechanisms in yeast and animal cells. In this lecture I will describe our discovery that viscoelastic protein condensates formed via liquid-liquid phase separation at the sites of endocytosis initiation facilitate actin independent CME. Binding energies of the condensate with the membrane and surrounding cytosol provides work required to drive membrane invagination. Our findings expand the repertoire of functions associated with protein condensates that form via liquid-liquid phase separation to include their ability to do work at soft interfaces, thus shaping and organizing cellular matter.



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Pavillon Roger-Gaudry
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