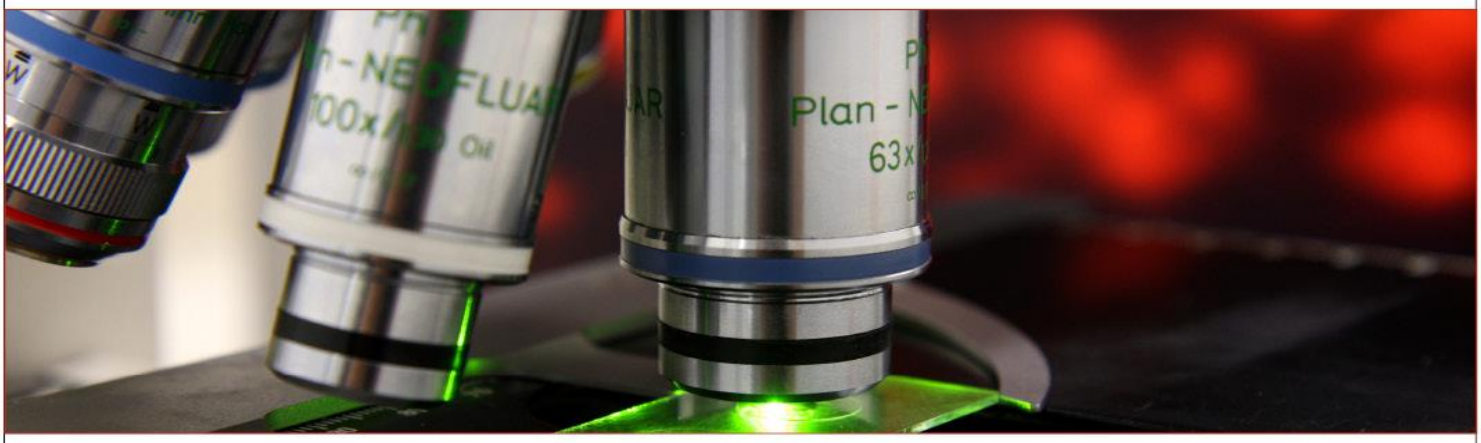
SÉMINAIRES ET CONFÉRENCES



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Université de Montréal

'' MULTI-OMIC PROFILING OF EXTRACELLULAR VESICLES FOR EARLY OVARIAN CANCER DETECTION''

The Cooper Laboratory investigates the biology of extracellular vesicles (EVs) and their potential as non-invasive biomarkers for gynecologic cancers. Our primary goal is to improve the early detection of high-grade serous ovarian carcinoma by identifying molecular signatures obtained from very small volumes of plasma, ascites, or cell culture media.

We integrate high-sensitivity isolation and analytical platforms, including Mag-Net**,** a magnetic strong anion-exchange technology optimized for the rapid and reproducible enrichment of EVs. These EVs are characterized using multi-omics approaches (proteomics, lipidomics, metabolomics), advanced microscopy, Raman spectroscopy, and nanobiophysical measurements. Data integration is performed through bioinformatics and machine learning to identify diagnostic signatures that distinguish early-stage disease from benign conditions.

The laboratory also investigates how EV biogenesis, molecular cargo, and surface properties reflect tumour progression and therapeutic resistance. By combining biology, nanotechnology, and data science, this program aims to develop translational tools for early detection, patient stratification, and clinical monitoring in ovarian cancer.

Faculté de médecine
Département de biochimie et médecine moléculaire
Université de Montréal

Le jeudi 8 janvier , 12h30

Pavillon Joseph-Armand-Bombardier, Salle : 1035
Et
Zoom

invité de Pascale Legault
pascale.legault@umontreal.ca