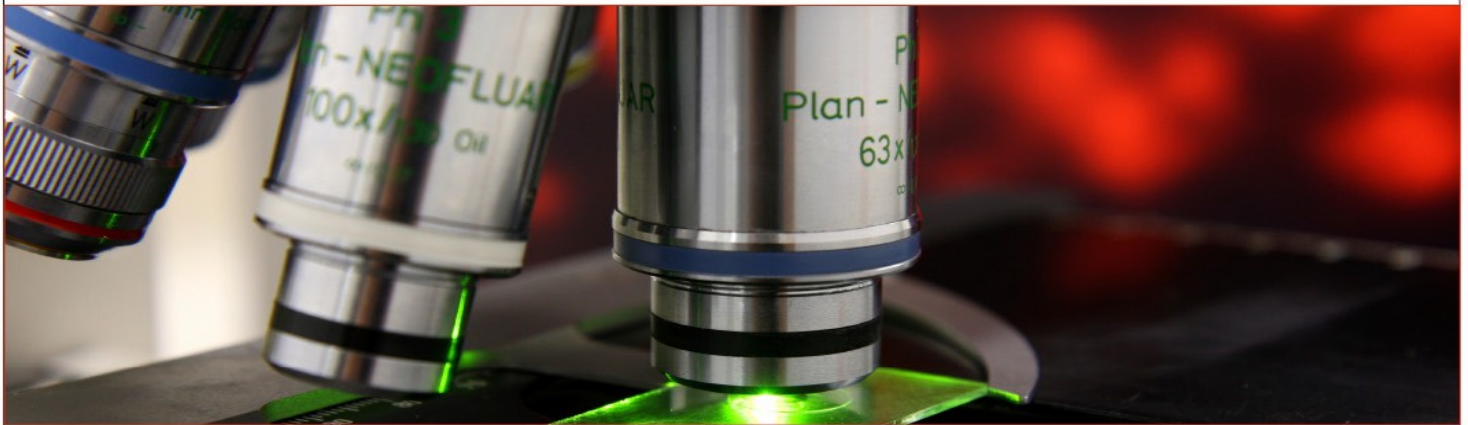


SÉMINAIRES ET CONFÉRENCES



Dae-Kyum Kim, Ph.D.

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Identification of therapeutic targets using a novel proteome-wide overexpression screening approach (BOGO)

This study introduces BOGO (Bxb1-landing pad human ORFeome-integrated system for a proteome-wide Gene Overexpression), a novel gene overexpression screening platform designed to identify mechanisms of drug resistance in cancer. Unlike traditional loss-of-function approaches, BOGO systematically overexpresses ~18,000 genes in cancer cell lines using a reusable, single-copy integration system. Applied to HeLa cells treated with 16 chemotherapeutic drugs, the platform uncovered drug-specific resistance genes and pathways, particularly in autophagy, apoptosis, and Wnt signaling. A synergistic drug combination targeting autophagy was found to be effective in colon and pancreatic cancer cells, but not in normal cells, and its efficacy depended on p53 status. This approach offers a scalable, clinically relevant method to uncover resistance mechanisms and guide combination therapies in precision oncology.



Lundi 3 novembre 2025, 11h30

Pavillon Joseph-Armand-Bombardier, Salle : 1035

Faculté de médecine
Département de biochimie
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