Invited Seminar Speaker

Wednesday, April 13, 2016
12:00 – 13:00
Cancer Research Bldg., Karp Room 501

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Translational Bioinformatics Approaches towards Subtyping of Model Systems and Inference of Drug Mechanisms

Advances in diagnosis of cancer patients remain challenged by the lack of effective subtype characterization of patient tumours and the experimental models used to study tumour pathogenesis. In parallel, effective selection of anti-cancer drug candidates is hindered by a lack of understanding of pharmacological, biochemical, and mechanistic actions of drug behaviour. In this talk, I discuss the development of the first single-sample classifier for Medulloblastoma (MB), which facilitates personalized diagnosis of MB subtypes across primary tumours, mouse models, and cell lines [1]. I describe how this method can be coupled with another approach, Drug Network Fusion (DNF) [2], towards inferring drug mechanisms of action for newly developed and existing compounds. Collectively, the presented approaches address the crucial link between translating experimental research conducted on primary tumours and model systems to their human counterparts, and the selection of drug candidates that are applicable for treatment of tumour subtypes.

References:
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STUDENTS: If you would like to attend a catered lunch with Dr. Gendoo following the lecture, please send an email to lina.luciano@mcgill.ca