

RESEARCH INSTITUTE SEMINAR SERIES

RESEARCH CONNECTIONS

A Research Institute seminar series showcasing successful partnerships between researchers in different research programs or in basic and clinical research. Each seminar will highlight the connections that have led to impactful discoveries and stimulated future productivity.

Molecular and Translational Implications of Replication Repair and Hypermutation in Cancer

There is a striking interplay between the germline and somatic genomes in cancer. We found that combined mismatch repair and/or DNA polymerase mutations lead to complete replication repair-deficient cancers. Our international collaboration, focused on these mutations and their signatures, led to the discovery of the highest mutated human cancers, termed ultrahypermutant. Determination of the landscape of hypermutation across >80,000 human tumors provided insights into cancer evolution and reclassification of diverse cancers. This collaboration between clinicians and scientists has led to new tools for diagnosing cancer predisposition and novel therapies for children with otherwise deadly cancers – who are currently enrolled in international clinical trials based at SickKids.

Featured Speakers

Uri Tabori, MD

Senior Scientist,
Genetics & Genome Biology,
SickKids Research Institute
Staff Physician,
Haematology/Oncology
DPLMGarron Family Chair in Childhood
Cancer Research

Adam Shlien, PhD

Scientist,
Genetics & Genome Biology,
SickKids Research Institute
Associate Director,
Translational Genetics,
Assistant Professor,
LMP, University of Toronto

Panel Discussion with additional Panel Members

David Malkin, MD Senior Scientist, Genetics & Genome Biology
Meredith Irwin, MD Senior Scientist, Cell Biology

