The 5th Annual Gerald Bronfman Centre Symposium and Awards Ceremony took place on November 30, 2015. The theme of this 5th anniversary symposium which coincided with the 25th Anniversary of the Department of Oncology, was Advances in the Genetics of Cancer. Dr. Todd Golub from the Broad Institute of Harvard and Massachusetts Institute of Technology was the keynote speaker. He was followed by Department of Oncology faculty members, Dr. Nada Jabado from the Montreal Children’s Hospital and Dr. William Foulkes who is at both the Jewish General Hospital and the McGill University Health Centre. Following the three seminars there was a question and answer period moderated by Dr. Patricia Tonin, from the Research Institute of the McGill University Health Centre. The symposium Chairperson was Dr. Morag Park from McGill’s Rosalind and Morris Goodman Cancer Research Centre.

Perspectives on Cancer Precision Medicine
Dr. Golub’s presentation focused on a number of issues that need to be addressed as we move towards cancer precision medicine. For example, there is still much work to be done to identify important cancer genes and data sharing is vital for the completion of the cancer genome map. In addition, it is important that patients be given the opportunity to share their genomic information. Dr. Golub discussed the need for a public repository of drug targets and biomarkers as many research groups contribute to the creation of a map of cancer dependencies. Innovative drug discovery methods will be necessary for the development of a range of drug classes that would allow cancer precision medicine to reach its full potential. However, drug resistance will always be a challenge thus research on mechanisms of resistance to drugs, such as the tumour microenvironment, is crucial. Dr. Golub was optimistic that cancer precision medicine could become a reality as long as the stakeholders work together and understand that this will take time.

Pediatric and Young Adult Gliomas: Brain Tumours: A Tale of a Histone Tail
The International Childhood Astrocytoma Novel Genomics and Epigenomics Consortium (ICHANGE) co-led by Dr. Jabado and two other McGill researchers, is comprised of an international team of researchers dedicated to understanding the development of high grade astrocytomas (glioblastomas are part of this group) in children. These tumours are not typically curable and cause considerable suffering. Dr. Jabado’s talk focused on the work of ICHANGE members in identifying mutations at amino acid residues lysine 27 and lysine 36 of histone H3.3 which results in the formation of an oncohistone. These mutations result in deleterious posttranslational modifications facilitating the survival and spreading of the tumour.

The mooring of starting out: cancer genes and families
Dr. Foulkes gave a brief overview of the field of cancer genetics, the types of gene testing (diagnostic, predictive/presymptomatic, population-based) and clinical cancer genetics. He then focused his talk on small cell carcinoma of the ovary, hypercalcemic type (SCCOHT) which is the most common undifferentiated type of ovarian cancer in women under age 40 and which has a poor outcome. Dr. Foulkes described his work on determining the genetic cause of this type of
ovarian cancer. He looked at both familial and non-familial cases and ultimately found that mutations in SMARCA4 gene (“SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4”) are the major cause of SCCOHT. High dose chemotherapy treatments may be the best hope for survival; however, identifying mutations in chromatin remodelling genes may pave the way for novel therapeutics. With what is now known, genetic counselling, genetic testing and ovary removal can be done to prevent this disease.

Drs. David Eidelman (Dean of Medicine), Patricia Tonin, Nicole Beauchemin, William Foulkes Morag Park, Todd Golub, Nada Jabado, Eduardo Franco (Chair of Dept. of Oncology)

Following the symposium, the winners of the three 2015 Gerald Bronfman Centre Awards were called up to the podium to receive their personalized engraved award. The nominators also joined their respective nominees for the photograph. The recipients of the awards were the following: Dr. Jerry Pelletier (nominated by Dr. Peter Siegel) for Research or Clinical Service, Dr. Ari Meguerditchian (nominated by Dr. Nora Trabulsi) for Teaching and Mentorship and Maria Fossetti (nominated by Dr. Joanne Alfieri) for Academic, Clinical and Research Support. Drs. Nicole Beauchemin and Martin Black were each honoured with the Department of Oncology’s Lifetime Achievement Award. Since Dr. Black could not attend the event, Dr. Eduardo Franco accepted the award on his behalf. Following the awards ceremony there was a reception where audience members had the chance to mingle with colleagues, talk to the speakers and congratulate the award winners.