CONFERENCE OVERVIEW

Saturday, November 4						
MORNING	Open and Closed Satellite Meetings					
13:30	Patient Involvement Program: Introductory Sessions and Dinner [CLOSED]					

Sunday, November 5						
07:30	Breakfast					
08:30	Welcome Remarks					
09:30	**Plenary Session: The Burden of Cancer**					
11:00	Break					
11:30	**Concurrent Sessions: A**					
	A1 – Genome Maintenance Mechanisms: Basic Biology and Translational Opportunities	A2 – Cellular Mechanisms of Tumour Cell Migration/Invasion	A3 – Reviewer's Choice	A4 – From Bench to Clinic – Generating Evidence to Support Policy and Practice	A5 – Canadian Indigenous Populations and Cancer	
13:00	Patient Involvement Program: Science Q&A [CLOSED]					
13:00	Lunch					
14:00	**Concurrent Sessions: B**					
	B1 – The Immune Microenvironment in Tumour Growth/Metastasis	B2 – Autophagy, Cell Stress and Plasticity	B3 – Impactful Canadian Clinical Trials	B4 – Pediatric Oncology	B5 – Tobacco, Cancer, and Control	
15:30	Poster Session 1 & Exhibits					
16:30	Welcome Reception					

Monday, November 6						
MORNING	Open and Closed Satellite Meetings					
07:30	Breakfast					
08:30	**Plenary Session: Cancer and the Immune System**					
10:00	Break					
10:30	**Concurrent Sessions: C**					
	C1 – Tumour Hypoxia and Metabolic Adaptations	C2 – Epigenetics	C3 – Emerging Fields: The Microbiome and Relevance to Cancer	C4 – Strategies to Personalizing Cancer Care: Putting the Patient First	C5 – Occupational and Environmental Risk Factors and Cancer	C6 – Canadian Partnership for Tomorrow Project (CPTP)
12:00	Patient Involvement Program: Science Q&A [CLOSED]					
12:00	Lunch					
13:00	**Plenary Session: CCRA Awards Presentation**					
14:30	Break					
15:00	**Concurrent Sessions: D**					
	D1 – Mechanisms of Metastasis	D2 – Proteomic Approaches to Monitor and Understand Cancer	D3 – Innovative Clinical Trial Design	D4 – Prevention and Cancer Control	D5 – Canadian Centre for Applied Research in Cancer Control	D6 – Marathon of Hope Lectures: Terry Fox Research Institute: Celebrating 10 Years!
16:30	Poster Session 2 & Exhibits					
17:30	**Public Lecture: Celebration of Science**					

Tuesday, November 7			
07:00	Supporters Recognition Breakfast [CLOSED]		
07:30	Breakfast		
08:30	**Concurrent Sessions: E**		
	E1 – Celebration of Science	E2 – Decision Making in Cancer: Evolving Perspectives	E3 – Regulation of Signalling Pathways in Cancer
10:00	Break		
10:30	**Plenary Session: Metabolism and Cancer**		
12:00	Closing Remarks		
12:30	Patient Involvement Program: Science Q&A, Program Debrief, and Program Closure [CLOSED]		

APERÇU DU PROGRAMME

Samedi 4 novembre	
MATIN	Réunions parallèles, ouvertes et fermées
13:30	Patient Involvement Program: Introductory Sessions & Networking Dinner [FERMÉ]

Dimanche 5 novembre	
07:30	Déjeuner
08:30	Mot de bienvenue
09:30	**Séance plénière : The Burden of Cancer**
11:00	Pause
11:30	**Séances simultanées : A**
13:00	Patient Involvement Program : Debrief [FERMÉ]
13:00	Dîner
14:00	**Séances simultanées : B**
15:30	Poster Session 1 & Exhibits
16:30	Réception de bienvenue

Lundi 6 novembre	
MATIN	Réunions parallèles, ouvertes et fermées
07:30	Déjeuner
08:30	**Séance plénière : Cancer and Immune System**
10:00	Pause
10:30	**Séances simultanées : C**
12:00	Patient Involvement Program : Debrief [FERMÉ]
12:00	Dîner
13:00	**Séance plénière : CCRA Awards Presentation**
14:30	Pause
15:00	**Séances simultanées : D**
16:30	Poster Session 2 & Exhibits
17:30	**Exposé public : Celebration of Science**

Mardi 7 novembre	
07:00	Supporters Recognition Breakfast [FERMÉ]
07:30	Déjeuner
08:30	**Séances simultanées : E**
10:00	Pause
10:30	**Séance plénière : Metabolism and Cancer**
12:00	Observations finales
12:30	Patient Involvement Program : Debrief [FERMÉ]

SATURDAY, NOVEMBER 4, 2017

EVENT LOCATIONS

08:00	C17 Workshop
08:00	Early Career Researcher Meeting [CLOSED]
08:00	Terry Fox Research Institute 8th Annual Scientific Meeting [CLOSED]
08:30	Canadian Bioinformatics Workshop: Working with Big Cancer Data in the Collaboratory Cloud [PRE-REGISTRATION]
13:30	Patient Involvement Program: Introductory Sessions and Networking Dinner [CLOSED]

DETAILED AGENDA – SATURDAY, NOVEMBER 4, 2017

08:00-18:00	C17 WORKSHOP	
08:00-18:00	EARLY CAREER RESEARCHER MEETING	*This meeting is closed (by invitation only).*
08:00-18:00	TERRY FOX RESEARCH INSTITUTE 8TH ANNUAL SCIENTIFIC MEETING	*This meeting is closed (by invitation only).*
08:30-12:30	CANADIAN BIOINFORMATICS WORKSHOP: WORKING WITH BIG CANCER DATA IN THE COLLABORATORY CLOUD	*Pre-registration is required for this meeting.*
13:30-19:00	PATIENT INVOLVEMENT PROGRAM: INTRODUCTORY SESSIONS AND NETWORKING DINNER	*This meeting is closed (by invitation only).*

SUNDAY, NOVEMBER 5, 2017

EVENT LOCATIONS

07:30	[To be announced]	
07:30	Breakfast	
08:30	Welcome Remarks	
09:30	**Plenary Session: The Burden of Cancer**	
11:00	Break	
11:30	Concurrent Sessions: A	A1 – Genome Maintenance Mechanisms: Basic Biology and Translational Opportunities A2 – Cellular Mechanisms of Tumour Cell Migration/Invasion A3 – Reviewer's Choice A4 – From Bench to Clinic – Generating Evidence to Support Policy and Practice A5 – Canadian Indigenous Populations and Cancer
13:00	Patient Involvement Program: Science Q&A [CLOSED]	
13:00	Lunch	
14:00	Concurrent Sessions: B	B1 – The Immune Microenvironment in Tumour Growth/Metastasis B2 – Autophagy, Cell Stress and Plasticity B3 – Impactful Canadian Clinical Trials B4 – Pediatric Oncology B5 – Tobacco, Cancer, and Control
15:30	Poster Session 1 & Exhibits	
16:30	Welcome Reception	

DETAILED AGENDA – SUNDAY, NOVEMBER 5, 2017

07:30-08:30

[TO BE ANNOUNCED]

[To be announced]

07:30-08:30

BREAKFAST

08:30-09:30

WELCOME REMARKS

Chairs:
David Huntsman
BC Cancer Agency

Stephen Robbins
CIHR Institute of Cancer Research & University of Calgary

WELCOME REMARKS FROM THE CCRA

GREETINGS AND WELCOME FROM KEY CONFERENCE SUPPORTERS

09:30 -11:00

PLENARY SESSION: THE BURDEN OF CANCER

Chairs:
Cathy Ammendolea
Canadian Breast Cancer Network

Eduardo Franco
McGill University, Montreal

Most Canadians will be affected by cancer either directly, by bearing the physical and emotional hardship caused by this disease, and/or indirectly, by having to care for a loved one affected by it. Thanks to prevention, however, the incidence of cancers caused by tobacco smoking has been declining and those caused by human papillomavirus (HPV) infection will become much less common, owing to the success of policies on tobacco control and HPV vaccination. Organized screening with rational technologies has helped to prevent, or will in the future, the types of cancers that have a long detectable pre-clinical phase and thus can be controlled via early detection and intervention. Yet, as Canadians live longer and our population ages and grows the numbers of new cancer cases will continue to increase. Despite advances in cancer therapy, survival rates are not substantially declining; the annual number of Canadians dying of cancer has nearly doubled since the mid-1980s. The implications span beyond the experience of cancer patients and their families. Providing health services for prevention, treatment, rehabilitation, and end-of-life care poses enormous challenges, requiring capacity building and expansion beyond the reach of provincial and federal cancer control budgets. What can we do? Knowing how much cancer is amenable to prevention is a good start. Understanding the psychosocial context greatly helps addressing the needs of patients, their families, and caregivers. Cancer burden is also measured on an economic scale; we need to understand the cost-effectiveness of policies that can help us meet the above challenges.

Learning Objectives:

- To understand the burden of cancer in Canada from epidemiologic, psychosocial, and economic perspectives;
- To become acquainted with Canadian research that is quantifying how much cancer is caused by different risk factors;
- To understand what would happen in the future if these risk factors were abolished or minimized;
- To understand the "whole of patient" approach to address psychosocial and mental health needs of cancer patients and their families;
- To become acquainted with the evidence regarding barriers to achieving improved psychosocial outcomes in cancer care;
- To understand how proper use of health administrative data can inform us about the cost of cancer; and
- To understand how health economic analysis can guide decisions about policies and strategies on cancer prevention and therapy.

9:30 Introduction

9:35 ESTIMATING THE CURRENT AND FUTURE BURDEN OF CANCER IN CANADA: IDENTIFYING OPPORTUNITIES FOR PREVENTION
Darren Brenner
Alberta Health Services, Calgary

This presentation will focus on the work that our Pan-Canadian team has been conducting to model and estimate past, current and future cancer incidence attributable to modifiable risk factors in Canada. The Canadian Population Attributable Risk of Cancer Project (ComPARe) is a multi-centered project aimed at estimating the current attributable and future avoidable burden of cancer due to all established lifestyle factors, environmental exposures and infectious agents in Canada up to 2042. Using a potential impact fraction framework, we have modeled future exposure prevalence levels based on past and current trends using national population-based surveys and cohort studies where available. We then applied "counterfactual" exposure trends based on known exposure reductions from existing interventions or under ideal scenarios based on agency/panel recommendations or guidelines. Our preliminary results suggest that modifiable factors account for a sizeable proportion of the current cancer burden in Canada – with dramatic variations by province. Implementation of presently available individual and population-level interventions is estimated to reduce tens of thousands of cases of cancer annually in Canada by the year 2042. Results from this project will be presented across exposure categories, with a focus on opportunities for intervention and prevention. As part of the ComPARe project, we have also examined age-specific cancer incidence trends across cancer sites using historical cancer incidence data. Current trends in specific age groups will be discussed in the context of changing epidemiologic risk factor profiles in Canada.

9:55 ADDRESSING THE PSYCHOSOCIAL BURDEN OF CANCER: PUTTING WHOLE PATIENT CARE INTO CLINICAL PRACTICE

Brian Kelly
University of Newcastle, Callaghan, Australia

Unaddressed psychosocial and mental health needs contribute substantially to the burden experienced by people with cancer and their families. The goal for "Whole of Patient" care in cancer has identified steps to address these needs. These include: better identification of psychosocial needs; improving the access to effective psychosocial interventions; clinical linkages aligning patients more effectively to services; and methods to address disparities in provision of such care. Improving the skills of all health care providers to effectively address these unmet needs is intrinsic to these goals.

Clinical research in psycho-oncology has provided robust evidence on strategies and interventions to improve psychosocial outcomes in cancer care. Both innovative models of integrated psychosocial care in cancer services, and methods of implementation research are necessary to successfully translate this evidence into clinical practice. Applicability to diverse settings and populations (including dispersed rural populations, and the socio-economically disadvantaged) is essential to overcome the well-recognised disparities in cancer care and outcomes.

This paper will provide a brief overview of evidence regarding barriers to achieving these goals. Intervention studies will be outlined that aim to address such barriers, focusing on building skills in psychosocial care among "front-line" cancer clinicians, promoting integration of psychosocial aspects of care and the reach of such care to high need populations.

10:15 HOW I LEARNED TO LOVE CANCER COSTS

Murray Krahn
University of Toronto, Toronto

Estimating cancer costs sounds dull, but it is surprisingly useful. Measuring costs of care can inform i) estimates of societal burden of disease, to complement health burden estimates; ii) provide key data for cost effectiveness estimates for cancer treatment and prevention; iii) represent understudied cancer system performance metrics; and iv) measure patient-borne burden of illness. This short talk will outline how data from various sources, especially health administrative data, can help us think us think about the cost of cancer.

11:00-11:30 BREAK

11:30 CONCURRENT SESSIONS: A

11:30-13:00 A1 – GENOME MAINTENANCE MECHANISMS: BASIC BIOLOGY AND TRANSLATIONAL OPPOTUNITIES

Chair:
Daniel Durocher
Lunenfeld-Tanenbaum Research Institute, Toronto

Genome maintenance mechanisms lie at the core of the cancer problem. Genome alterations are a near-universal feature of cancer genomes and ongoing genome instability endows tumours with the ability to adapt to new environments or evade cancer treatments. At the same time, genotoxic chemotherapies and ionizing radiation lie also at the core of cancer armamentarium. Therefore, a deep understanding of DNA repair and genome maintenance mechanisms is necessary to understand the mutagenic processes that underpin carcinogenesis and tumour evolution, cancer drug responses and resistance as well as the action of tumour suppressors, many of which are themselves involved in protecting the genome. This session will explore this vast field and will highlight the diversity of approaches where our understanding of DNA repair, mutagenesis and DNA damage signalling illuminates the processes that shape cancer genomes, along with clear translational opportunities that may help us develop new therapies based on modulating DNA damage repair or signalling.

Learning Objectives:

- To discuss basic mechanism of genome maintenance;
- To identify translational opportunities in cancer diagnosis, management and therapies; and
- To highlight the need for diverse models to study cancer biology.

11:30 CHARTING THE HUMAN DNA DAMAGE RESPONSE

Daniel Durocher
Lunenfeld-Tanenbaum Research Institute, Toronto

11:55 IDENTIFICATION OF SMALL MOLECULES FOR CANCER THERAPY AND ENHANCED GENE EDITING USING CRISPR/CAS9-BASED DNA REPAIR STRATEGIES
Graham Dellaire
Dalhousie University, Halifax

12:20 QUANTIFYING GENE-DRUG INTERACTIONS BY SYNTHETIC HYPERMUTATION AND DEEP SEQUENCING IN YEAST
Peter Sterling
BC Cancer Agency, Vancouver

12:40 FUNCTIONAL ANALYSIS OF THE PALB2 TUMOR SUPPRESSOR
Jean-Yves Masson
Centre de Recherche sur le Cancer de l'Université Laval, Quebec City

11:30-13:00

A2 – CELLULAR MECHANISMS OF TUMOUR CELL MIGRATION/INVASION

Chair:
Ivan Robert Nabi
University of British Columbia, Vancouver

Tumor cell migration and invasion are critical aspects of the metastatic process however cellular mechanisms that control the diverse means by which cancer cells invade remain poorly understood. In this session, we will explore the use of intravital microscopy to study invadopodia formation and cancer cell extravasation and how polarity transitions impact the malignant potential of cancer cells. Talks will encompass invadopodia protrusion, miRNA control of cancer cell invasion, disruption of apical-basal polarity in breast epithelia and targeting an apical mucin in collective invasion. Identifying mechanisms of tumor cell migration and invasion is key to understanding and targeting metastatic cancer.

Learning Objectives:

- Use of intravital microscopy to provide insight into molecular mechanism of tumor metastasis;
- Role of invadopodia, extracellular matrix organization and polarity transitions in invasive and malignant potential of cancer cells; and
- How disruption of apical/basal polarity in breast epithelia leads to breast cancer cell invasion.

11:30 CANCER CELL EXTRAVASATION: HOW TO AVOID UNINVITED GUESTS
Hon Leong
Mayo Clinic, Rochester, USA

12:00 INTRAVITAL DISCOVERY OF MIRNA DRIVERS OF HUMAN CANCER CELL DIRECTIONAL INVASION
Konstantin Stoletov
University of Alberta, Edmonton

12:15 EPITHELIAL POLARITY REMODELING AND LUMINAL COLLAPSE GENERATE SOLID DUCTS IN EARLY MAMMARY TUMOURIGENESIS
Ruba Halaoui
McGill University, Montreal

12:30 TARGETING PODOCALYXIN TO PREVENT SOLID TUMOR INVASION AND METASTASIS
Calvin Roskelley
University of British Columbia, Vancouver

11:30-13:00

A3 – REVIEWER'S CHOICE

Chair:
Christine Friedenreich
Alberta Health Services, Calgary

This session will highlight the top submitted abstracts from each research pillar identified by the reviewers. From pillar 1, a new mouse model is presented that could be developed to identify unique molecular signatures of premalignant lesions for pancreatic cancer for targeted treatments. From pillar 2, a randomized controlled trial in metastatic prostate cancer patients has compared two treatment options and identified a tumour marker that can predict poorer outcomes. From pillar 3, describes an e-health app developed with patients to provide them with access to their electronic medical data, engage them in their care, and inform them of educational material. From pillar 4, a detailed examination of existing legislation in Canada that could be harnessed for cancer control in the areas of tobacco, physical activity and healthy eating will be presented.

Learning Objectives:

- To acquaint conference participants to leading Canadian cancer research spanning from basic biomedical research to cancer policy and legislation for cancer control;
- To highlight opportunities for enhanced cancer control within each research pillar; and
- To discuss emerging topics for future research within each pillar with conference participants.

11:30 CONCOMITANT LOSS OF PTEN AND MUTANT KRAS ACTIVATION RESULTS IN DISTINCT DISEASE INITIATION AND PROGRESSION RESPONSES BOTH WITHIN AND BETWEEN PANCREATIC EXOCRINE CELL TYPES
Atefeh Samani
University of British Columbia, Vancouver

11:50 A RANDOMIZED PHASE 2 CROSS-OVER STUDY OF ABIRATERONE + PREDNISONE (ABI) VS ENZALUTAMIDE (ENZ) FOR PATIENTS WITH METASTATIC CASTRATION RESISTANT PROSTATE CANCER (MCRPC)
Kim Chi
British Columbia Cancer Agency, Vancouver

12:10 OPAL - THE ONCOLOGY PORTAL AND APPLICATION
John Kildea
McGill University, Montreal

12:30 CANADIAN LEGAL INTERVENTIONS TO PREVENT CANCER AND CHRONIC DISEASE: A SYSTEMATIC ASSESSMENT OF THE NATURE AND EXTENT OF PROVINCIAL LAWS TARGETING SMOKING, PHYSICAL ACTIVITY AND HEALTHY EATING
Katerina Maximova
University of Alberta, Edmonton

12:50 Panel Discussion

11:30-13:00

A4 – FROM BENCH TO CLINIC – GENERATING EVIDENCE TO SUPPORT POLICY AND PRACTICE

Chair:
Dean Regier
British Columbia Cancer Agency, Vancouver

Health care systems need to take timely advantage of new research knowledge while at the same ensuring system sustainability. In public health care settings, the appropriate introduction of innovation requires evidence that considers benefits, costs, patient and public acceptability, and implementation. These evidentiary inputs are challenging to generate for any technology, but are particularly difficult in context to early stage discoveries. In this session, the types of evidence needed for translational oncology will be presented, and frameworks to support technology assessment at various stages of discovery and implementation will be discussed.

Learning Objectives:

- To acquaint participants on the types of evidence needed to support sustainable health policy, practice and implementation;
- To provide practical examples of how cost and health outcomes evolve and how technology frameworks need to account for changing evidence; and
- To discuss with the audience their experience(s) and needs of translating discovery to sustainable health benefits.

11:30 WHAT EVIDENCE IS NEEDED TO SUPPORT POLICY RECOMMENDATIONS? THE EXPERIENCE OF PCODR PERC
Maureen Trudeau
Sunnybrook Health Sciences Centre, Toronto

11:50 THE COST AND COST-TRAJECTORY OF WHOLE-GENOME TRANSCRIPTOME ANALYSIS
Deirdre Weymann
British Columbia Cancer Agency, Vancouver

12:10 BUILDING BETTER IMPLEMENTATION TO IMPROVE HEALTH AND SUSTAINABILITY
Brenda Wilson
University of Ottawa, Ottawa

12:30 LIFE CYCLE TECHNOLOGY ASSESSMENT FRAMEWORKS FOR PRECISION MEDICINE TECHNOLOGIES AND INTERVENTIONS
Chris McCabe
University of Alberta, Edmonton

11:30-13:00

A5 – CANADIAN INDIGENOUS POPULATIONS AND CANCER

Chairs:
Joan L. Bottorff
University of British Columbia, Kelowna

[To be announced]

The burden of cancer for Indigenous Canadians is rising with increased rates and poor survivorship 5-years after initial diagnosis. Recent focused attention has led to increased research in prevention and screening, treatment of care, post treatment transitions to primary care, and survivorship. An underlying aim to identify root causes, enhance screening efforts and improve cancer care-related strategy and activities characterizes some of the research underway.

This session summarizes Indigenous-specific cancer data and information, identifies implications for health programming, examines relationships between risk factors for chronic disease and cancers in Indigenous populations, and shares outcomes from a national meeting regarding priorities in cancer research with Indigenous Canadians.

Four researchers will provide an overview of current cancer research and activity with Indigenous communities during a panel presentation. Each discussion will build on the previous speaker's presentation with the goal to provide participants with a comprehensive understanding of the critical health needs of Indigenous populations in relation to cancer. A question and answer period will be allotted to enable meaningful dialogue between researchers and those interested in improved cancer outcomes for Canada's Indigenous people.

Learning Objectives:

- To provide an overview of what is known about cancer in Canada's Indigenous populations;
- To provide examples of how respectful, appropriate and safe research can be carried out in partnership with Indigenous people; and
- To outline new opportunities and future directions in cancer research with Canada's Indigenous peoples.

11:30 CANCER SCREENING ACCESS AND UTILIZATION AMONG RURAL, REMOTE, AND NORTHERN INDIGENOUS PEOPLE
Nadine Caron
University of British Columbia, Prince George

11:45 CANCER PATTERNS AND TRENDS IN CANADA'S INDIGENOUS PEOPLES: WHAT WE KNOW AND DON'T KNOW
Loraine Marrett
Cancer Care Ontario, Toronto

12:00 STAGE DISTRIBUTION AND ROLE OF DIABETES AS A RISK FACTOR FOR CANCER IN INDIGENOUS POPULATIONS
Donna Turner
CancerCare Manitoba, Winnipeg

12:15 FUTURE PRIORITIES FOR RESEARCH FOCUSED ON CANCER AND INDIGENOUS POPULATIONS
Angeline Letendre
Alberta Health Services, Edmonton

12:30 Panel Discussion

13:00-13:30

PATIENT INVOLVEMENT PROGRAM: SCIENCE Q&A

This meeting is closed (by invitation only).

13:00-14:00

LUNCH

14:00

CONCURRENT SESSIONS: B

14:00-15:30

B1 – THE IMMUNE MICROENVIRONMENT IN TUMOUR GROWTH/METASTASIS

Chair:
Morag Park
McGill University, Montreal

Kevin Bennewith
BC Cancer Agency, Vancouver

Morag Park
McGill University, Montreal

[To be selected from abstracts]

[To be selected from abstracts]

14:00-15:30

B2 – AUTOPHAGY, CELL STRESS AND PLASTICITY

Chair:
Lynne Postovit
University of Alberta, Edmonton

In order to survive therapy and to metastasize, cancer cells must be able to adapt. This is accomplished via a number of processes, (including autophagy, translational reprogramming and epigenetic modifications) that enable energy conservation and/or promote the manifestation of adaptive stem cell-like phenotypes. This session will explore mechanisms by which cancer cells adapt to stress and will emphasize the deleterious consequences of these adaptations as they pertain to tumor progression and therapy evasion.

Learning Objectives:

- To describe how cells adapt to stress;
- To emphasize the role that adaption or plasticity plays in tumor progression; and
- To discuss the potential of targeting cellular adaptations to stress in the treatment of cancers.

14:00 MECHANISMS UNDERLYING THE STRESS INDUCED ACQUISITION OF BREAST CANCER STEM CELL PHENOTYPES
Lynne Postovit
University of Alberta, Edmonton

14:25 SYSTEMATIC REPROGRAMMING OF THE ACUTE TRANSLATOME UNDERLIES THE UNIQUE STRESS ADAPTABILITY OF CANCER CELLS
Hai-Feng Zhang
University of British Columbia, Vancouver

14:50 MITOPHAGY IN CANCER: AMF, GP78 AND ER-MITOCHONDRIA CONTACTS
I. Robert Nabi
University of British Columbia, Vancouver

15:10 STRESS PROTECTION INDUCED BY LIPID IMBALANCE PRESERVES HUMAN HSC DURING EX VIVO EXPANSION
Stephanie Xie
University Health Network, Toronto

14:00-15:30

B3 – IMPACTFUL CANADIAN CLINICAL TRIALS

Chairs:
Dianne Miller
University of British Columbia, Vancouver

Judy Needham
Patient Advocate

Though Canada is, relatively speaking, a large country with a dispersed and limited population, clinical trials in Canada have contributed to our understanding of oncology and care internationally. Through the dedication of our researchers and the generosity of our patients, knowledge generated across the country has increased the evidence base, improved care, and resulted in better patient outcomes. In this session we will hear examples of impactful Canadian clinical trials research.

Learning Objective:

- To illustrate the impact of Canadian-led clinical trials on patients with CNS, Lung, Prostate and Breast cancer.

14:00 Introduction

14:05 ELUCIDATING THE ROLE OF CHEMOTHERAPY IN THE TREATMENT OF MALIGNANT GLIOMA: A CANADIAN CONTRIBUTION
J. Gregory Cairncross
University of Calgary, Calgary

14:25 Glenwood Goss
University of Ottawa, Ottawa

14:45 INTERMITTENT ANDROGEN DEPRIVATION THERAPY FOR ADVANCED PROSTATE CANCER. A NEW PARADIGM
Laurence Klotz
Sunnybrook Health Sciences Centre, Toronto

15:05 TWO IMPACTFUL CANADIAN RT TRIALS IN BREAST CANCER
Ivo Olivotto
University of Calgary, Calgary

14:00-15:30

B4 – PEDIATRIC ONCOLOGY

Chair:
Patrick Sullivan
Team Finn Foundation, Vancouver

Annie Huang
The Hospital for Sick Children, Toronto

David Malkin
The Hospital for Sick Children, Toronto

Poul Sorensen
University of British Columbia, Vancouver

[To be selected from abstracts]

14:00-15:30

B5 – TOBACCO, CANCER, AND CONTROL

Chairs:
Joan L. Bottorff
University of British Columbia, Kelowna

Debi Lascelle
Patient Advocate, Ottawa, Ontario

The tobacco epidemic is not over. In 2015, smoking caused more than one in ten deaths worldwide, and tobacco use continues to be a leading cause of cancer and of death from cancer in Canada. With Canada's national tobacco control strategy set to expire in March 2018, new steps are being considered to reduce tobacco use among Canadians from current levels of about 13% to less than 5% by 2035. Policy options and new approaches to cessation are all being considered to prevent a new generation of smokers and reduce tobacco use. In this session, current research in the field of tobacco will be presented including new evidence related to novice smokers, the use of e-cigarettes, the risks of secondhand marijuana and tobacco smoke to young children, and new approaches to supporting smoking cessation. Implications for tobacco control policy and programs as well as priorities for tobacco research will be discussed.

Learning Objectives:

- To discuss trends in tobacco use and secondhand exposure;
- To acquaint participants with current developments in tobacco control and research priorities; and
- To provide examples of new developments in the field of tobacco control.

14:00 SEX DIFFERENCES IN ATTAINING CIGARETTE SMOKING AND NICOTINE DEPENDENCE MILESTONES IN NOVICE SMOKERS
Jennifer O'Loughlin
Université de Montréal, Montréal

14:25 E-CIGARETTES, 'HEAT-NOT-BURN' TOBACCO PRODUCTS, AND THE RAPIDLY EVOLVING NICOTINE MARKETING IN CANADA: IMPLICATIONS FOR TOBACCO USERS AND HARM REDUCTION
David Hammond
University of Waterloo, Waterloo

14:50 SECONDHAND MARIJUANA AND TOBACCO SMOKE IN CHILDREN
Karen Wilson
Children's Hospital Colorado, Aurora, USA

15:10 TARGETING FATHERS FOR CANCER PREVENTION: FEASIBILITY OF A GENDER-SENSITIVE SMOKING CESSATION PROGRAM
Joan L. Bottorff
University of British Columbia, Kelowna

15:30-16:30

POSTER SESSION 1 & EXHIBITS

16:30-18:30

WELCOME RECEPTION

MONDAY, NOVEMBER 6, 2017

EVENT LOCATIONS

06:30	Terry Fox Early Morning Run/Walk [OPEN]	
07:30	Breakfast	
08:30	**Plenary Session: Cancer and the Immune System**	
10:00	Break	
10:30	Concurrent Sessions: C	C1 – Tumour Hypoxia and Metabolic Adaptations C2 – Epigenetics C3 – Emerging Fields: The Microbiome and Relevance to Cancer C4 – Strategies to Personalizing Cancer Care: Putting the Patient First C5 – Occupational and Environmental Risk Factors and Cancer C6 – Canadian Partnership for Tomorrow Project (CPTP)
12:00	Patient Involvement Program: Science Q&A [CLOSED]	
12:00	CIHR Career Development Session: Finding Careers Within and Outside of Academia [OPEN]	
12:00	Lunch	
13:00	**Plenary Session: CCRA Awards Presentation**	
14:30	Break	
15:00	Concurrent Sessions: D	D1 – Mechanisms of Metastasis D2 – Proteomic Approaches to Monitor and Understand Cancer D3 – Innovative Clinical Trial Design D4 – Prevention and Cancer Control D5 – Canadian Centre for Applied Research in Cancer Control D6 – Marathon of Hope Lectures: Terry Fox Research Institute: Celebrating 10 Years!
16:30	Poster Session 2 & Exhibits	
18:00	Public Lecture: Celebration of Science [OPEN]	

DETAILED AGENDA – MONDAY, NOVEMBER 6, 2017

06:30-08:30

TERRY FOX RUN/WALK

The Early Morning Run/Walk is a tradition for attendees of TFRI's Annual Scientific Meeting.

This year, we will hold the run on Monday, November 6 as part of the CCRC and to celebrate our 10th Anniversary.

This event is open to all.

07:30-08:30

BREAKFAST

08:30-10:00

PLENARY SESSION: CANCER AND THE IMMUNE SYSTEM

Chairs:
Rebecca Auer
The Ottawa Hospital Research Institute, Ottawa

[To be announced]

While the rapidly progressing field of cancer immunotherapy is trying to make good on its promise to eradicate cancer, we are left with even more unanswered questions as to why the immune system fails to eradicate cancers and how immunotherapy can overcome this. In this session we will review how clinical studies of cancer immunotherapies, in particular checkpoint blockade and engineered T-cells, have identified unrecognized mechanisms of immune suppression, as well as opportunities for the development of novel immunotherapies. The unique Canadian contributions in cancer immunotherapy will be highlighted with a focused look at the barriers and future prospects of this field, in the context of our publically funded Canadian health care system.

Learning Objectives:

- To acquaint participants with the main cancer immunotherapy modalities being used in, or developed for, clinical care;
- To provide an overview of the current scientific understanding of how cancer immunotherapies, including checkpoint blockade and engineered T-cells are working; and
- To review the scientific and clinical opportunities and barriers for cancer immunotherapy in Canada.

8:30 CLINICAL IMMUNOTHERAPY: REAL IMPACT IN THE REAL WORLD

Marcus Butler
Princess Margaret Cancer Centre, Toronto

Cancer immunotherapy has resulted in real benefit for patients with cancer and has become first line standard of care therapy for most patients with metastatic or high-risk melanoma. Clinically, therefore, the focus has moved from whether immunotherapy can benefit the occasional patient treated with this approach to why it fails in some patients with metastatic melanoma. As we expand immunotherapy to treat all cancers, melanoma represents a model for understanding mechanisms of primary resistance and the development of secondary resistance to immunotherapy. A leading hypothesis is that some tumors are immunologically active, so called "warm" or "hot" tumors, which require modest immune modulation to induce a productive anti-tumor immune response. Other tumors are immunologically inert or "cold" and do not respond to immune modulating agents, such as immune checkpoint blocking monoclonal antibodies. These tumors, however, can me made immunologically active by engineering an immune response through a variety of methods such as vaccination or adoptive cell therapy with gene-engineered T cells. By understanding the emerging mechanisms of treatment resistance, novel therapies can be devised and tailored to patients for maximal benefit.

9:00 MECHANISTIC BASIS OF CANCER IMMUNOTHERAPY

Ira Mellman
Genentech, San Francisco, USA

The advent of new approaches to the immunotherapy of cancer has caused a dramatic shift not only in the treatment of cancer but also in our understanding of cancer biology. The rapid rate of progress in the clinic, however, has outpaced our understanding of the basic mechanistic features that underlie the therapeutic advances. This is most notable in the case of "checkpoint" inhibitors, such as antibodies to the negative regulatory axis defined by PD-1 and PD-L1. While blocking the interaction of PD-L1 with PD-1 is often assumed to reverse the process of T cell exhaustion, there is little direct evidence for this interpretation, an incomplete definition of what is meant by "exhaustion", and a poor understanding of how PD-1 (aka programmed cell death receptor 1) actually regulates T cell activity. Starting with observations made in the clinic, we have used biochemical reconstitution together with in vivo analysis in mice to illuminate key features of the PD-L1/PD-1 axis that place it better in the context of the cancer immunity cycle, i.e. the linked series of events that must occur in order to generate and maintain a therapeutically productive response to cancer. Further, combining basic and clinical discovery has led us to the identification of new T cell stimulators as well as to an understanding that neo-epitope vaccines might usher in yet another dramatic shift leading towards truly patient-specific therapeutic approaches.

9:30 FROM FAR AND WIDE: IMMUNOTHERAPY RESEARCH IN THE CANADIAN LANDSCAPE
Brad Nelson
BC Cancer Agency, Victoria

The striking clinical success of cancer immunotherapy creates an impetus and opportunity for the research community to build on this momentum through new lab-based discoveries and innovative clinical trials. At the same time, it brings significant clinical and fiscal challenges for publicly funded healthcare systems in Canada and beyond. Fortunately, the Canadian immunotherapy research community has a strong history of collaboration and clinical translation, which positions the country to excel in this new era. An overview of several major cancer immunotherapy initiatives in Canada will highlight the many opportunities for scientists and clinicians to engage with this field, as well as the challenges that must be addressed as immunotherapy plays an increasing role in cancer care. This will include a focus on made-in-Canada immunotherapies that are progressing successfully from the lab to the clinic. Looking to a future in which genetically engineered cell-based therapies become an essential part of the oncologist's toolkit, an exciting new initiative to create a national program for chimeric antigen receptor (CAR) T cell therapy will be described, which will leverage Canadian talent and innovation while enabling greater cost control for healthcare systems. The future of cancer immunotherapy lies in combinations, not only in the therapies themselves but in the cross-disciplinary expertise that will be required for Canada to remain internationally competitive in this promising new era of oncology.

10:00-10:30 BREAK

10:30 CONCURRENT SESSIONS: C

10:30-12:00 C1 – TUMOUR HYPOXIA AND METABOLIC ADAPTATIONS

Chair:
Bradly Wouters
University Health Network, Toronto

The development of cancer is associated with changes in cell signaling that have potent effects on cellular metabolism, and consequently the demand and use of oxygen and other nutrients within a heterogeneous tumour microenvironment. In this session, the speakers will explore how the availability of oxygen and other metabolites influences cell signalling in ways that has an impact on tumour progression and response to therapy. They will also explore how the molecular mechanisms that mediate metabolic adaptation in cancer can be exploited to direct new forms of therapy.

Learning Objectives:
- To discuss new research findings linking cell signalling to metabolism;
- To discuss novel relationships between hypoxia, metabolism and aggressive disease; and
- To discuss new therapeutic opportunities that exploit our new understanding of tumor metabolism.

10:30 METABOLIC ADAPTATION IN CANCER: NEW FUNCTIONS FOR OLD ENZYMES
Russell Jones
Goodman Cancer Centre, McGill University, Montreal

11:00 TARGETING HYPOXIA INDUCED CARBONIC ANHYDRASE IX: NEW INHIBITOR ENTERING CLINICAL TRIALS AND NEW INSIGHTS ON ITS ROLE IN METASTASIS
Shoukat Dedhar
BC Cancer Agency, Vancouver

11:30 EIF4F LINKS TRANSLATION TO ENERGY STRESS RESPONSE IN CANCER
Laura Hulea
McGill University, Montreal

11:45 NUCLEAR MTOR ACTS AS A TRANSCRIPTIONAL INTEGRATOR OF THE ANDROGEN-SIGNALING PATHWAY IN PROSTATE CANCER
Etienne Audet-Walsh
McGill University, Montreal

10:30-12:00

C2 – EPIGENETICS

Chair:
Cheryl Arrowsmith
University of Toronto, Toronto

It is well established that the epigenome of cancer cells is reconfigured to enable the phenotypic hallmarks of cancer. The packaging of the genome into chromatin and the consequent transcriptional programs that drive cell growth are orchestrated and maintained by epigenetic mechanisms in response to oncogenic mutations, changes in metabolism, and intracellular and extracellular signaling. Recurrent mutations in epigenetic regulatory factors are common in cancer, and changes in DNA methylation and histone modifications that establish heritable cellular phenotype are also aberrant. Although mutations cannot be altered in cancer, it is possible to change the epigenetic state of cells with an increasing number of pharmacological agents. As we learn more about the altered epigenomes of cancer, how they drive cancer, and how to target the cancer epigenome, there is increasing hope that epigenetic therapies can be used effectively to fight this disease.

Learning Objectives:
- To acquaint participants with key epigenetic processes in cancer including DNA methylation, oncogenic mutations in histones, coupling between epigenetics and metabolism and the immune system; and
- To provide examples of ongoing research to therapeutically target these processes.

10:30 ENHANCING ANTI-TUMOR IMMUNE RESPONSE BY DNA-DEMETHYLATING AGENTS
Daniel De Carvalho
Princess Margaret Cancer Centre, Toronto

10:55 IDENTIFICATION OF ELEMENTS OF DIFFERENTIATION AND CANCER-ASSOCIATED DNA METHYLATION STATES THAT CO-EXIST IN PHENOTYPICALLY DEFINED SUBSETS OF PRIMARY HUMAN PROSTATE CANCER CELLS
Davide Pellacani
BC Cancer Research Centre, Vancouver

11:15 ELUCIDATING THE FUNCTION OF NEOMORPHIC IDH MUTATIONS IN ACUTE MYELOID LEUKEMIA
Alireza Lorzadeh
BC Genome Sciences Centre, Vancouver

11:35 ONCOHISTIONES IN CANCER: HOW TO TURN THE CELL'S SYMPHONY INTO NON-HARMONIC RAP
Nada Jabado
McGill University, Montreal

10:30-12:00

C3 – EMERGING FIELDS: THE MICROBIOME AND RELEVANCE TO CANCER

Chair:
B. Brett Finlay
University of British Columbia, Vancouver

Alberto Martin
University of Toronto, Toronto

In the past decade there have been major advances in our understanding of the microbes in and on us (the microbiome), and their impact on human health and disease, including "Western" diseases. The microbiome has a significant effect on the immune system, both in its development and its function. Recently there has been increasing evidence that the microbiome plays a role in cancer. There are direct correlations with specific microbes and colorectal cancer, and the gut microbiome is closely linked to this cancer. However, there are also studies indicating that the microbiome has effects on distal cancers such as breast and liver. Even more surprising is the findings that the microbiome has a major effect on the outcome of chemotherapy. This session will overview the role of the microbiome in cancer and chemotherapy, and discuss colorectal cancer and the role microbes play in it, and the potential role in cancer development of cancer cachexia.

Learning Objectives:
- To acquaint participants with the microbiome in cancer and chemotherapy;
- To discuss further the role of the microbiome in colorectal cancer; and
- To discuss the potential role of the microbiome in cachexia.

10:30 THE ROLE OF THE MICROBIOME IN CANCER AND CHEMOTHERAPY
B. Brett Finlay
University of British Columbia, Vancouver

10:55 THE ROLE OF THE MICROBIOME IN COLON CANCER
Alberto Martin
University of Toronto, Toronto

11:15 FUSOBACTERIUM NUCLEATUM; A COLORECTAL CANCER ASSOCIATED PATHOGEN
Robert Holt
BC Cancer Agency, Vancouver

11:35 THE GUT MICROBIOME AND CANCER CACHEXIA
R. Thomas Jagoe
McGill University, Montreal

10:30-12:00

C4 – STRATEGIES TO PERSONALIZING CANCER CARE: PUTTING THE PATIENT FIRST

Chair:
François Bénard
BC Cancer Agency, Vancouver

François Bénard
BC Cancer Agency, Vancouver

Yvonne Bombard
Li Ka Shing Knowledge Institute, Toronto

Barry Bultz
University of Calgary, Calgary

Margaret Fitch
Sunnybrook Health Sciences Centre, Toronto

10:30-12:00

C5 – OCCUPATIONAL AND ENVIRONMENTAL RISK FACTORS AND CANCER

Chairs:
Paul Demers
Cancer Care Ontario, Toronto

[To be announced]

Millions of Canadians are exposed to well-established or suspected carcinogens in the places where they live or work. While much is known about some of these potential causes of cancer, more research on many of these occupational and environmental factors is needed. This session will cover a broad range of topics related to occupational and environmental cancers. Although prostate cancer is one of the most common cancers in men, very little is known about its causes. Marie-Élise Parent will talk about the emerging evidence linking prostate cancer to both workplace and environmental factors. Outdoor air pollution and fine particles have been identified as causes of lung cancer. Scott Weichenthal will present on a study that examined whether the oxidative burden of fine particles in air pollution is more strongly related to the risk of lung cancer. Over 80% of Canadians live in urban areas. Jeff Brook is leading a large national effort to build a research platform to study the complex mix of factors in cities, including pollution, land use, transportation, physical infrastructure and socioeconomic conditions, influence our health. Finally, Dylan O'Sullivan will describe the effects of sun exposure on skin cancer in Canada and how we assess the impact of this carcinogen, which is the most common environmental cause of cancer.

Learning Objectives:

- To provide participants with an overview of four major research projects in Canada that are contributing to our knowledge of workplace and environmental cancer risk factors; and
- To acquaint participants with the methods used to examine the risk of cancer due to environmental factors.

10:30 Introduction

10:35 EMERGING PATTERNS: THE WORKPLACE, THE ENVIRONMENT AND PROSTATE CANCER
Marie-Élise Parent
INRS-Institut Armand-Frappier, Laval

10:55 OXIDATIVE BURDEN OF FINE PARTICULATE AIR POLLUTION AND RISK OF LUNG CANCER
Scott Weichenthal
McGill University, Montreal

11:15 CANUE: THE CANADIAN URBAN ENVIRONMENTAL HEALTH RESEARCH CONSORTIUM
Jeffrey Brook
University of Toronto, Toronto

11:35 SKIN CANCER IN CANADA ATTRIBUTABLE TO ULTRAVIOLET RADIATION, INDOOR TANNING, AND SUN BEHAVIOUR HABITS
Dylan O'Sullivan
Queens University, Kingston

10:30-12:00

C6 – CANADIAN PARTNERSHIP FOR TOMORROW PROJECT (CPTP)

Chair:
Paula Robson
CancerControl Alberta, Alberta Health Services, Edmonton

The Canadian Partnership for Tomorrow Project (CPTP) is Canada's largest population-health cohort. Over 300,000 participants were recruited in partnership with five regional cohorts: the BC Generations Project, Alberta's Tomorrow Project, the Ontario Health Study, CARTaGENE, and the Atlantic PATH. All participants completed baseline questionnaires capturing health and lifestyle data; subsets of participants provided venous blood (>150,000), urine (>100,000), saliva (>18,000), and physical measurements (up to 90,000 participants). Access to data and biosamples is facilitated by a central Access Office; researchers do not require an affiliation with CPTP or one of its partner cohorts to place a request.
Dr. Trevor Dummer will provide an overview of CPTP, followed by highlights of current research using CPTP data and biosamples:
The Cancer DNA Screening Pilot Study (CANDACE), using blood samples from the BC Generations Project and led by Dr. Alan Nichol, seeks to assess whether preliminary signs of cancer may be detected using blood samples. Dr. Nichol will discuss his approach to understanding the predictive ability of circulating tumour DNA to identify a range of cancers or pre-cancerous lesions.
Cancer survivors have an increased risk of cardiovascular disease (CVD), attributable to both traditional risk factors, and as a result of undergoing treatment. Dr. Melanie Keats will discuss the prevalence of CVD risk factors and existing CVD in a sample of cancer survivors from the Atlantic PATH cohort. Dr. Scott Grandy will discuss medication use CVD morbidity among Atlantic PATH cancer survivors.
Dr. Darren Brenner will provide a brief overview of analyses to examine the impact of modifiable lifestyle factors on cancer risk and cancer burden in Alberta using the Alberta's Tomorrow Project cohort. Specifically the impact of physical activity, smoking, alcohol consumption, excess body weight and sleep on overall and site-specific cancer risk will be discussed.
Dr. Isabel Fortier will present the Cross-Cohort Harmonization Project for Tomorrow, a research network exploring the potential to harmonize and co-analyse data from CPTP, and 12 other international cohorts (totalling >2,700,000 participants) to address complex research questions.

Learning Objectives:

- To learn about types of data and biosamples available from CPTP;
- To provide case-studies demonstrating the types and range of research CPTP data and biosamples could support; and
- To understand how CPTP data could be co-analysed with harmonized data from other large international cohorts.

10:30 THE CANADIAN PARTNERSHIP FOR TOMORROW PROJECT: CANADA'S LARGEST POPULATION HEALTH RESEARCH PLATFORM
Trevor Dummer
BC Generations Project & University of British Columbia, Vancouver

10:48 CANCER DNA SCREENING PILOT STUDY (CANDACE)
Alan Nichol
University of British Columbia, Vancouver

11:06 CARDIOVASCULAR DISEASE RISK FACTORS AND CARDIOVASCULAR COMORBIDITY IN CANCER SURVIVORS
Melanie Keats
Atlantic PATH & Dalhousie University, Halifax

11:15 MEDICATION USE AND CARDIOVASCULAR COMORBIDITY IN CANCER SURVIVORS
Scott Grandy
Dalhousie University, Halifax

11:24 LIFESTYLE FACTORS AND CANCER RISK IN THE ALBERTA'S TOMORROW PROJECT COHORT
Darren Brenner
University of Calgary, Alberta Health Services, Calgary

11:42 THE CROSS-COHORT HARMONIZATION PROJECT FOR TOMORROW
Isabel Fortier
Maelstrom Research & McGill University, Montreal

12:00-12:30 PATIENT INVOLVEMENT PROGRAM: SCIENCE Q&A

This meeting is closed (by invitation only).

12:00-13:00 CIHR CAREER DEVELOPMENT SESSION: FINDING CAREERS WITHIN AND OUTSIDE OF ACADEMIA

Have you ever asked yourself what you want to be doing once you have finished your degree/fellowship? Are you curious about the broad range of opportunities that exist both within and beyond academia? Would you be interested in hearing from people who were in the same situation as you and are now in stellar careers?

Finding careers within and outside of academia is a major stressor for trainees at all levels, and it is sometimes difficult to get career advice from academic mentors, especially regarding the multitude of career paths that exist outside of academia. The purpose of this session is to provide trainees with relevant information about career paths within and outside of academia to support informed career-related decisions in the future.

This interactive panel session will consist of mentors from various sectors (academia, government, industry, and NGO) who will provide a brief synopsis of their career paths. Trainees and fellows will then be encouraged to ask the mentors about finding, obtaining, and excelling in careers within and outside of academia.

This event is open to all.

12:00-13:00 LUNCH

13:00-14:30 PLENARY SESSION: CCRA AWARDS PRESENTATION

Chair:
[To be announced]

CCRA Award for Exceptional Leadership in Cancer Research - [To be announced]

CCRA Award for Outstanding Achievements in Cancer Research - [To be announced]

CCRA Award for Distinguished Service to Cancer Research - [To be announced]

CCRA Award for Exceptional Leadership in Patient Involvement in Cancer Research - [To be announced]

14:30-15:00 BREAK

15:00 CONCURRENT SESSIONS: D

15:00-16:30

D1 – MECHANISMS OF METASTASIS

Chairs:
Ann Chambers
London Health Sciences Centre, London

Nathalie Baudais
Patient Advocate

Cancer therapy has improved significantly over the past few decades. Despite these advances, cancer is much more difficult to treat once it has metastasized to distant organs. Metastatic cancer is generally considered to be incurable, at least with currently available therapies but it is treatable and therapies have been improving. Research goals are to understand mechanisms of metastasis, to identify how metastatic disease can be successfully treated, and to devise strategies to prevent metastatic recurrences and to prevent or delay recurrences.

Learning Objectives:
- To provide participants with new knowledge about mechanisms of metastasis;
- To identify possible targets for development for treatment of metastatic disease; and
- To discuss new approaches for future therapies for metastatic disease.

15:00 Introduction

15:10 TARGETING STROMAL NICHES TO INCREASE THERAPEUTIC EFFICACY FOR BONE METASTASIS
Yibin Kang
Princeton University, Princeton, USA

15:30 AN INTEGRATED SYSTEMS BIOLOGY APPROACH IDENTIFIES KEY DETERMINANTS OF BREAST CANCER METASTASIS
Logan Walsh
McGill University, Montreal

15:50 TARGETING EZH2 REACTIVATES A BREAST CANCER SUBTYPE-SPECIFIC ANTIMETASTATIC TRANSCRIPTIONAL PROGRAM
Alison Hirukawa
McGill University, Montreal

16:10 TIGHT-JUNCTIONAL COMPONENTS AS PROMOTERS OF LIVER METASTASIS
Peter Siegel
McGill University, Montreal

15:00-16:30

D2 – PROTEOMIC APPROACHES TO MONITOR AND UNDERSTAND CANCER

Chair:
Anne-Claude Gingras
Lunenfeld-Tanenbaum Research Institute, Toronto

While genomic, epigenomic and transcriptomic sequencing of patient samples has already ushered a revolution in personalized medicine, the understanding of the proteome and its implication in cancer biology is only emerging. In this session, we will explore the multi-faceted roles of proteomics approaches to monitor, understand and target cancer. We will review the state of proteomics in biomarker discovery and highlighting success stories, but also important challenges. We will next discuss the power of proteomics approaches to understand the function of proteins deregulated in cancer, and end the session by describing powerful tools enabling systematic discovery of compounds disrupting interactions between proteins, or permit to alter the sequence of proteins in living cells.

Learning Objectives:
- To acquaint participants with the use of proteomics approaches in monitoring cancer (biomarker detection);
- To provide examples of the use of proteomics to understand protein function; and
- To discuss systematic approaches to identify therapeutically targetable proteins.

15:00 CLINICAL PROTEOMICS FOR CANCER – LESSONS LEARNED FROM CPTAC AND EDRN STUDIES
Michael Gillette
Broad Institute, Cambridge, USA

15:25 FUNCTIONAL PROTEOMICS: POWERFUL TOOLS TO EXPLORE CANCER BIOLOGY
Anne-Claude Gingras
Lunenfeld-Tanenbaum Research Institute, Toronto

15:50 HIGHLY PARALLEL INTRACELLULAR INHIBITION OF PROTEIN-PROTEIN INTERACTIONS IDENTIFIES NOVEL INHIBITORS WITH ANTI-CANCER EFFICACY
Philip Kim
University of Toronto, Toronto

16:10 MARKER-FREE COSELECTION FOR CRISPR-DRIVEN GENOME EDITING IN HUMAN CELLS
Yannick Doyon
Centre Hospitalier de l'Université Laval, Quebec City

15:00-16:30

D3 – INNOVATIVE CLINICAL TRIAL DESIGN

Chair:
Janet Dancey
Queen's University, Kingston

Scientific and technological developments are driving innovation in the way trials are designed, conducted and evaluated. Precision medicine strategies are being implemented that are utilizing next generation sequencing technologies and bioinformatics to analyze patient samples to identify potential signatures that will correlate with benefit of targeted cancers therapies. Therapies that stimulate the immune system are leading to changes in traditional definitions of tumour response and progression in clinical trials. These advances are yielding new biological insights and therapeutic approaches but also increasing complexities of trial conduct and data analysis. At the other end of the spectrum, new approaches that simplify clinical trial conduct through alternate methods of consent, randomization and streamlined data collections are being used. Finally, alternatives to clinical trials are proposed, such as through cohort studies and population databases to develop the good quality evidence to change practice. In this session, these novel approaches to cancer clinical trials and clinical research in the areas of precision medicine, immunotherapy, clinical methods and evidence generation will be presented, and the research implications will be discussed.

Learning Objectives:
- To acquaint participants with innovative approaches to trial design, trial conduct and evidence generation;
- To provide practical examples of approaches used to address these issues; and
- To discuss the implications and future directions of clinical trials and research studies.

15:00 PERSONALIZED ONCOGENOMICS (POG) PROGRAM AT THE BRITISH COLUMBIA
Janessa Laskin
BC Cancer Agency, Vancouver

15:23 THE CHALLENGES OF IMMUNOTHERAPY TRIALS AND THE NEED FOR INNOVATIVE ENDPOINTS
Teresa Petrella
Sunnybrook Health Sciences Centre, Toronto

15:45 STREAMLINING TRIALS TO ADDRESS IMPORTANT QUESTIONS IN CLINICAL PRACTICE
Mark Clemons
Ottawa Hospital Research Institute, Ottawa

16:07 COMPLEMENTARY APPROACHES TO CLINICAL TRIALS TO GENERATE EVIDENCE: USING COHORT STUDIES TO SHAPE PRACTICE CHANGES
Joseph Connors
BC Cancer Agency, Vancouver

15:00-16:30

D4 – PREVENTION AND CANCER CONTROL

Chair:
Karen Gelmon
BC Cancer Agency, Vancouver

[To be selected from abstracts]

[To be selected from abstracts]

[To be selected from abstracts]

[To be selected from abstracts]

15:00-16:30

D5 – CANADIAN CENTRE FOR APPLIED RESEARCH IN CANCER CONTROL

Chair:
Kelvin Chan
Canadian Centre for Applied Research in Cancer Control

The ability to generate data has rapidly increased in recent years, and the amount of digital information now available represents a gold mine – one that may yield fundamental insights across the cancer control spectrum, from prevention to treatment and beyond. With the objective of working towards sustainable cancer control, increasing efforts towards accessing and analyzing large administrative datasets are being made. The applied analysis of administrative data is fundamental to all of ARCC's program areas: health technology assessment; health systems, services, & policy; societal values and public engagement; and survivorship. In this session, a variety of ARCC projects using "big data" will be described, and barriers and facilitators to data access in different Canadian provinces will be addressed. Attendees will also learn about the different ARCC program areas, and opportunities to engage with ARCC reseachers.

Learning Objectives:

- To discuss available data holdings in various Canadian provinces, and examine some barriers and facilitators to data access;
- To outline different applied research programs and how large administrative sets are accessed for research purposes; and
- To provide practical examples of Big Data initiatives in Canada and their impact across the cancer control spectrum.

15:00 BIG DATA IN CANCER: MOVING FROM HEALTH SERVICE USE TO THE PATIENT PERSPECTIVE
Lisa Barbera
Sunnybrook Health Sciences Centre, Toronto

15:25 BUILDING CAPACITY FOR BIG DATA RESEARCH IN ALBERTA
Winson Cheung
Cancer Control Alberta, Calgary

15:50 HOW 'BIG DATA' CAN SUPPORT CANCER RESEARCH: CASE STUDIES OF REAL WORLD EVIDENCE
Wanrudee Isaranuwatchai
St. Michaels' Hospital, Toronto

16:10 DOES VALUE DRIVE TECHNOLOGY DIFFUSION? EVIDENCE USING CITIZENS' PREFERENCES FOR PRECISION ONCOLOGY
Dean Regier
BC Cancer Agency, Vancouver

15:00-16:30

D6 – MARATHON OF HOPE LECTURES TERRY FOX RESEARCH INSTITUTE: CELEBRATING 10 YEARS!

Chair:
Victor Ling
Terry Fox Research Institute, Vancouver

In 1980 Terry Fox ran a marathon a day for 143 days to raise funds for cancer research with a single purpose: to reduce and eliminate the suffering cancer causes. It is in this spirit that we have invited four outstanding TFRI-funded scientists to present "Marathon of Hope" lectures on their vision of how their research may transform outcomes for cancer patients and bring us closer to achieving Terry's dream.

Learning Objectives:

- To acquaint participants with important research topics whose impact on our understanding of cancer and its treatment will be profound; and
- To discuss the steps that will be required to achieve the impact on cancer outcomes.

15:00 IS STEMNESS THE BIOMARKER AND THERAPEUTIC TARGET WE HAVE BEEN MISSING?
John Dick
Princess Margaret Cancer Centre, Toronto

15:20 USING VIRUSES TO STIMULATE THE BODY'S FIGHT AGAINST CANCER CELLS
John Bell
Ottawa Hospital Research Institute, Ottawa

15:40 LUNG CANCER SCREENING – OPPORTUNITY TO IMPROVE HEALTH CARE DELIVERY
Stephen Lam
University of British Columbia, Vancouver

	16:00	GENOMIC APPROACHES TO CANCER OUTCOMES Marco Marra BC Cancer Agency, Vancouver	
16:30-17:30	POSTER SESSION 2 & EXHIBITS		
17:30-19:00	PUBLIC LECTURE: CELEBRATION OF SCIENCE	Chairs: [To be announced] [To be announced]	
		[To be announced] [To be announced]	

TUESDAY, NOVEMBER 7, 2017

EVENT LOCATIONS

07:00	Supporters Recognition Breakfast [CLOSED]	
07:30	Breakfast	
08:30	Concurrent Sessions: E	E1 – Celebration of Science E2 – Decision Making in Cancer: Evolving Perspectives E3 – Regulation of Signalling Pathways in Cancer
10:00	Break	
10:30	**Plenary Session: Metabolism and Cancer**	
12:00	Closing Remarks • Observations finales	
12:30	Patient Involvement Program: Science Q&A, Program Debrief, and Program Closure [CLOSED]	

DETAILED AGENDA – TUESDAY, NOVEMBER 7, 2017

07:00-08:30 SUPPORTERS RECOGNITION BREAKFAST

This session is closed (by invitation only).

07:30-08:30 BREAKFAST

08:30

CONCURRENT SESSIONS: E

08:30-10:00

E1 – CELEBRATION OF SCIENCE

Chair:
Connie Eaves
BC Cancer Agency, Vancouver

Advances in genomics, cell cytometry, and imaging have revolutionized our ability to characterize cells at the single cell as well as a population or tissue level. Advances in gene manipulation/gene editing and methods to elicit and track the clonal growth of primary human cells *in vitro* and *in vivo* have also now made it possible to connect linked molecular and biological data at unprecedented resolution on rare subsets of cells from normal and malignant human tissues. These methods are being further developed, but already have revealed unanticipated heterogeneity among both normal and malignant cell populations previously thought to be similar. This heterogeneity is posing new and exciting challenges to the goals of personalized medicine. In this session, the presentations will illustrate how awareness of this heterogeneity is being incorporated into the leading edge of cancer research through the development of new approaches to define and overcome it.

Learning Objectives:

- To acquaint participants with new technologies applicable to cancer cell characterization;
- To demonstrate the importance of continued interrogation of the process of tumour development and progression; and
- To discuss with the audience the implications of emerging results from the cancer biology field.

8:00 Introduction

8:35 REPLICATION TIMING SIGNATURES AS TOOLS FOR DISCOVERY IN CANCER
David Gilbert
Florida State University, Tallahassee, USA

8:59 HUMAN HAEMATOPOIETIC STEM CELLS: NEW INSIGHTS FROM SINGLE CELL ANALYSES
David Knapp
University of Oxford, Oxford, UK

9:23 NEW DRUG TARGETS AND TREATMENT APPROACHES TO TARGET DRUG-INSENSITIVE LEUKEMIC STEM CELLS
Xiaoyan Jiang
BC Cancer Agency, Vancouver

9:47 CIRCULATING TUMOR DNA IS DETECTABLE IN ALL PATIENTS WITH EARLY TRIPLE NEGATIVE BREAST CANCER AND MAY REFLECT TUMOR RESPONSE TO NEOADJUVANT CHEMOTHERAPY
Luca Cavallone
Jewish General Hospital, Montreal

08:30-10:00

E2 – DECISION MAKING IN CANCER: EVOLVING PERSPECTIVES

Chair:
Carmen G. Loiselle
McGill University, Montreal

With the advent of more complex and targeted cancer therapies, attention is increasingly placed on understanding the multidimensional factors that affect decision making in cancer control. Current efforts focus on understanding the interplay among the various stakeholders involved in these decisions, including policy makers, national and provincial cancer agencies, academics, health care institutions, the private sector, as well as patient representative groups and coalitions. Ultimately, compromises that integrate population, caregiver, and patient perspectives must be negotiated to optimize resource allocation for ongoing health care innovations that improve cancer control. In this session, evolving perspectives pertaining to decision making in cancer will be presented and discussed.

Learning Objectives:

- To acquaint participants with multidimensional issues in cancer-related decision making, attending to the role of evidence, economics, and accountability;
- To consider the decision processes that structure cancer control systems and move treatments from research to policy to patients;
- To provide examples of dilemmas in decision making from the perspectives of researchers, policy makers, clinicians, and patients; and
- To open up the discussion to the audience to explore future priorities in policy and research.

8:30 EMERGING CHALLENGES TO EVIDENCE-BASED DECISION MAKING: TIME FOR A METHODOLOGIC PIVOT?
George Browman
McMaster University, Hamilton and University of British Columbia, Vancouver

8:45 THE ROLE OF HEALTH TECHNOLOGY ASSESSMENT IN SUPPORTING DECISION-MAKING
Brian O'Rourke
Canadian Agency for Drugs and Technologies in Health, Ottawa

9:00 SETTING PRIORITIES IN CANCER CARE – USING EVIDENCE TO SUPPORT REAL WORLD DECISIONS
Craig Mitton
The University of British Columbia, Vancouver

9:15 PATIENT VALUES IN HEALTH TECHNOLOGY ASSESSMENT (HTA)
Barry Stein
Colorectal Cancer Association of Canada, Montreal

9:30 CHOOSING TO TRUST: PATIENT PERSPECTIVES AND DYNAMICS OF CHOICE IN COLORECTAL CANCER TREATMENT
Fay Strohschein
McGill University, Montreal

9:45 Panel Discussion

08:30-10:00

E3 – REGULATION OF SIGNALLING PATHWAYS IN CANCER

Chair:
Anne-Claude Gingras
Lunenfeld-Tanenbaum Research Institute, Toronto

Since the discovery of the first confirmed oncogene and tyrosine kinase Src more than 40 years ago, it has been well appreciated that signalling molecules including multiple kinases and other signalling pathway components have oncogenic potential and can often be therapeutically targeted. The Ras GTPase that regulates a critical kinase cascade was first identified as a retroviral oncogene in the 70s, and this discovery was followed by the realization in the 80's that activating mutations in Ras genes were particularly prevalent in human tumors. Yet, while inhibitors of other Ras pathway components have been successfully generated, no Ras inhibitors have been clinically approved. In this session, we will revisit the potential for therapeutically targeting Ras activation, as well as explore new regulatory mechanisms of regulation within the Ras-ERK pathway. A discussion of epigenetic signalling in the context of transcription factor motifs will complete this session.

Learning Objectives:

- To discuss the importance of Ras GTPases and signalling pathways in cancer;
- To provide strategies to therapeutically prevent Ras hyper-activation in cancer; and
- To describe how computational approaches to the study of epigenetic mechanisms can facilitate investigation of dysregulated oncogenic pathways.

8:30 MOLECULAR CHARACTERIZATION AND PHARMACOLOGIC INACTIVATION OF RAS
Michael Ohh
University of Toronto, Toronto

8:55 THE ONCOGENE RAS – IS IT REALLY UNDRUGGABLE?
Mitsu Ikura
Princess Margaret Cancer Centre, Toronto

9:20 REGULATION OF ERK SIGNALLING PATHWAY THROUGH TRANSLATIONAL SILENCING OF THE DUSP6 PHOSPHATASE
Seyed Mehdi Jafarnejad
McGill University, Montreal

9:40 MODELING METHYL-SENSITIVE TRANSCRIPTION FACTOR MOTIFS WITH AN EXPANDED EPIGENETIC ALPHABET
Michael Hoffman
Princess Margaret Cancer Centre, Toronto

10:00-10:30

BREAK

10:30-12:00

PLENARY SESSION: METABOLISM AND CANCER

Chair:
Michael Pollak
McGill University, Montreal

In order to behave aggressively, cancers need to alter aspects of cellular metabolism to meet their energetic and anabolic needs. This may lead to specific vulnerabilities that can be therapeutically targeted. Initial observations showed increased glucose uptake and glycolysis in transformed cells compared to normal cells. This has been confirmed and of course forms the basis for FDG -PET scanning. However, more recent work shows additional alterations in amino acid metabolism and lipid metabolism associated with transformation. Furthermore, there are complex metabolic interactions between the host and the tumor that appear to be clinically significant. For example, hyperinsulinemia secondary to hyperglycemia caused by insulin resistance can increase the probability of survival of cells during step-wise carcinogenesis and neoplastic progression, thereby increasing risk and/or worsening the prognosis of certain cancers, and may explain how obesity influences cancer burden at the population level. This session will review examples for research progress in each of these areas.

Learning Objectives:
- Understand examples of host metabolic factors that influence cancer risk and/or cancer prognosis;
- Understand metabolic adaptations at the cellular level that are required for aggressive neoplastic behavior; and
- Understand the clinical implications of research in this area for cancer risk reduction and cancer treatment.

10:30 Introduction

10:40 CANCER AS A METABOLIC DISEASE
David Wishart
University of Alberta, Edmonton

Most people view cancer as a genetic disease and certainly the underlying cause for many cancers is genetic. However, the common theme to almost all cancer-causing mutations is a fundamental change to cellular metabolism. In this regard, while cancer is often viewed, genetically, as an incredibly complex disease -- metabolically it is quite simple. The field of metabolomics has done much to elucidate the key metabolic changes that occur in cancers. It is also pointing to new metabolite biomarkers for detecting early stage cancer, identifying new metabolites that cause cancer and discovering new metabolite-based therapies to treat cancer. In this presentation I will provide a brief synopsis of what has been found and why looking at cancer as a metabolic disease may open new doors to its treatment and prevention.

11:05 METABOLIC ADAPTATION DURING BREAST CANCER METASTASIS

Julie St-Pierre
McGill University, Montreal

A pressing inquiry in cancer research is to reveal the metabolic regulatory networks of cancer cells as they evolve from primary site cancer cells to metastatic cells and ultimately therapeutic resistant cells. This line of investigation will reveal whether for a given cancer type, the metabolic state of cancer cells is constant throughout disease progression or whether each cancer stage has a specific metabolic signature. Our laboratory focuses on the role of the metabolic regulator PGC-1alpha in breast cancer. We discovered that PGC-1alpha controls key metabolic programs that fuel primary breast tumor growth and metastasis. Importantly, these PGC-1alpha regulated metabolic programs also impact the response of cancer cells to metabolic drugs. This knowledge may help design metabolic therapies for cancer treatment.

11:30 EFFECTS OF WEIGHT LOSS ON CANCER BIOMARKERS

Anne McTiernan
Fred Hutchinson Cancer Center, Seattle, USA

The International Agency for Research on Cancer estimates that 25% of cancer cases worldwide are due to overweight/obesity and a sedentary lifestyle. This talk will review human data on the effects of weight loss on cancer-related biomarkers in humans, and provide specific examples from randomized controlled trials. Weight loss in overweight or obese individuals may lower cancer risk by several mechanisms. Our randomized clinical trials have shown that as little as 5-10% weight loss over 12 months lowers estrogens, testosterone, insulin and insulin resistance, inflammation-related biomarkers, angiogenesis, and leptin, while increasing adiponectin and sex hormone binding globulin. Results from several 12-months trials with weight loss through diet, exercise, and both combined will be presented, as well as data on long-term maintenance of weight loss-induced biomarker changes.

12:00-12:30 CLOSING REMARKS

12:30-14:00 PATIENT INVOLVEMENT PROGRAM: SCIENCE Q&A, PROGRAM DEBRIEF, AND PROGRAM CLOSURE

This session is closed (by invitation only).

VENUE INFORMATION