The Canadian Cancer Research Conference

November 3–6 2013
Sheraton Centre Toronto Hotel

Program

Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

Thank you to all our supporters

Platinum

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Leukemia & Lymphoma Society Canada
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pCODR
Pan-Canadian Oncology Drug Review

Saskatchewan Cancer Agency

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EXECUTIVE PLANNING COMMITTEE

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McGill University & Cancer Research Society

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Genome Canada

Brian Bobechko, MSc
Canadian Breast Cancer Foundation

Stuart Edmonds, PhD
Prostate Cancer Canada

Elizabeth Eisenhauer, MD
Queen's University & Canadian Partnership Against Cancer/CCRA

Patricia Falzon
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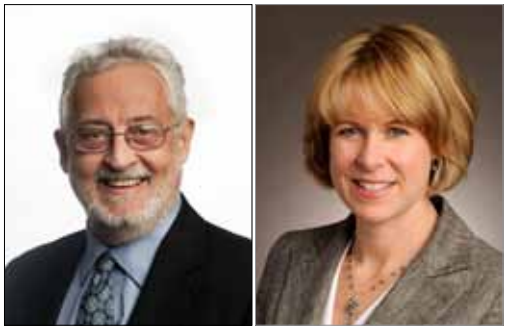
Alberta Cancer Foundation

Morag Park, PhD
McGill University

Stephen Robbins, PhD
University of Calgary & CIHR – Institute of Cancer Research

MESSAGE FROM THE MEETING CO-CHAIRS



On behalf of the Canadian Cancer Research Alliance (CCRA), welcome to the second Canadian Cancer Research Conference. The CCRA, whose membership comprises 31 cancer research funding agencies, was formed in 2004 to develop and facilitate large transformative cancer research initiatives, coordinate cancer research at a pan-Canadian level, and to document cancer research activity in Canada. In our inaugural pan-Canadian Cancer Research Strategy, a need was expressed by scientists from across the country for a national cancer research meeting. This meeting would showcase the breadth and excellence of Canadian cancer research and allow leading experts from across all areas of cancer research to exchange knowledge and share ideas to strengthen Canada's cancer research community. It was also felt that this could be an important showcase to the public of the continuing impact of cancer research on improving the health of our population. This 2013 meeting builds on the success of the inaugural Canadian Cancer Research Conference held in 2011.

We are proud of the work done by the Scientific Program Committee under the leadership of David Huntsman and Stephen Robbins in developing the meeting program to feature leading national and international researchers from across the cancer research spectrum. We anticipate that this meeting will provide networking opportunities to researchers at all stages of their careers while also providing a venue for developing collaborations on new projects. We encourage attendees to take advantage of this unique multi-disciplinary meeting and attend as many sessions as they can, including those outside of their area of scientific expertise.

We would like to take this opportunity to thank the important work of the Executive Planning Committee chaired by Mario Chevrette for their overall leadership. We also wish to thank Robin Harkness, Melissa Cheung, Kim Badovinac, and Pauline Walsh at the CCRA Executive Office, Patricia Falzon, Nicole Gleed, Ashley Colosimo, Christopher Needles, Hal Costie, Michael Giardino, and Stuart Lawler of the Ontario Institute for Cancer Research, and Tommi Laulajainen, Isabelle Jeanson, and Lenore Bromley at the Canadian Partnership Against Cancer who collectively were the key organizers of this event.

Finally, we thank our many supporters who have contributed their time, financial support, and ideas to ensure the success of this meeting.

Enjoy the conference!

Jacques Magnan, PhD
Canadian Cancer Research Alliance &
Canadian Partnership Against Cancer

Christine Williams, PhD
Canadian Cancer Research Alliance &
Canadian Cancer Society

MESSAGE DES COPRÉSIDENTS DE LA CONFÉRENCE

Au nom de l'Alliance canadienne pour la recherche sur le cancer (ACRC), nous vous souhaitons la bienvenue à la deuxième Conférence canadienne sur la recherche sur le cancer. L'ACRC, qui compte 31 organismes de financement de la recherche sur le cancer parmi ses membres, a été créée en 2004 pour élaborer et faciliter de grandes initiatives de transformation dans le domaine de la recherche sur le cancer, coordonner cette recherche à l'échelle pancanadienne et documenter l'activité dans ce domaine au Canada. Dans notre toute première stratégie pancanadienne de recherche sur le cancer, des spécialistes des quatre coins du pays exprimaient le besoin de se réunir dans le cadre d'un événement national consacré à la recherche sur le cancer. Cette réunion permettrait de démontrer l'envergure et l'excellence de la recherche canadienne sur le cancer et d'inciter les grands spécialistes de tous les domaines de recherche sur le cancer à échanger leurs connaissances et à trouver ensemble des solutions pour renforcer le milieu de la recherche sur le cancer au Canada. Les spécialistes étaient également d'avis qu'une telle réunion donnerait l'occasion de faire connaître au public toute l'importance que revêt la recherche sur le cancer pour améliorer la santé de la population. La réunion de 2013 prendra appui sur le succès de la première Conférence canadienne sur la recherche sur le cancer tenue en 2011.

Nous sommes fiers du travail accompli par le Comité du programme scientifique, sous la direction de David Huntsman et de Stephen Robbins, en vue d'élaborer le programme de la rencontre de façon à y accueillir des grands chercheurs du Canada et de l'étranger provenant de tout le continuum de recherche sur le cancer. Nous sommes convaincus que cette rencontre permettra aux chercheurs, où qu'ils en soient dans le cheminement de leur carrière, d'établir un réseau et de profiter de l'occasion pour élaborer des ententes de collaboration dans le cadre de nouveaux projets. Nous vous encourageons à tirer profit de votre participation à cette réunion multidisciplinaire sans pareille et à assister au plus grand nombre de séances possible, y compris celles qui portent sur un autre domaine d'expertise scientifique que le vôtre.

Nous tenons à souligner l'important travail du Comité de direction de la planification, dirigé par Mario Chevrette, et le remercier pour son grand leadership. Nous souhaitons également remercier Robin Harkness, Melissa Cheung, Kim Badovinac et Pauline Walsh du bureau administratif de l'ACRC, Patricia Falzon, Nicole Gleed, Ashley Colosimo, Christopher Needles, Hal Costie, Michael Giardino et Stuart Lawler de l'Institut ontarien de recherche sur le cancer, ainsi que Tommi Laulajainen, Isabelle Jeanson et Lenore Bromley du Partenariat canadien contre le cancer, qui sont conjointement les principaux organisateurs de cet événement.

Finalement, nous aimerions remercier nos nombreux partisans, qui ont consenti temps, argent et idées pour assurer le succès de cette rencontre.

Bonne conférence!

Jacques Magnan, Ph. D.
Alliance canadienne pour la recherche sur le cancer et Partenariat canadien contre le cancer

Christine Williams, Ph. D.
Alliance canadienne pour la recherche sur le cancer et Société canadienne du cancer

COMITÉ EXÉCUTIF DE PLANIFICATION

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Génome Canada

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Fondation canadienne du cancer du sein

Stuart Edmonds, PhD
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Morag Park, PhD
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Stephen Robbins, PhD
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University of British Columbia & BC Cancer Agency

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The Hospital for Sick Children

Morag Park, PhD
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Princess Margaret Cancer Centre

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Université Laval et Centre de recherche du Centre hospitalier universitaire de Québec

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Princess Margaret Cancer Centre

Poul Sorensen, MD, PhD, FRCPC
BC Cancer Agency

Josie Ursini-Siegel, PhD
Lady Davis Institute for Medical Research, McGill University

MESSAGE FROM THE SCIENTIFIC PROGRAM COMMITTEE CO-CHAIRS

On behalf of the Scientific Program Committee, we welcome you to the second Canadian Cancer Research Conference! The Committee has developed an exciting program through which attendees will be challenged to consider the problems they study from other perspectives. To facilitate this, we will address major themes in cancer research from different angles in the plenary sessions whilst the symposia provide more focused explorations of topics of interest.

The Committee has worked hard – inviting leading national and international cancer experts to speak at the plenary sessions and symposia and reviewing the more than 500 abstract submissions to create oral, poster, and poster discussion sessions. We hope these will provide opportunities for conference participants to meet each other, share ideas, and foster new collaborations within and between research disciplines.

While at the conference, we encourage you to take advantage of the many satellite meetings and the Careers in Cancer Research Development Program events. These will provide great opportunities to forge new collaborations and identify and recruit trainees while providing trainees and new investigators opportunities for scientific mentorship and career advice embedded into the program.

We hope you find this conference engaging and rewarding and that it will lead to new ideas and new collaborations!

David Huntsman, MD, FRCPC, FCCMG,
BC Cancer Agency

Stephen Robbins, PhD,
University of Calgary & CIHR Institute of Cancer Research

MESSAGE DES COPRÉSIDENTS DU COMITÉ DU PROGRAMME SCIENTIFIQUE

Au nom du Comité du programme scientifique, nous vous souhaitons la bienvenue à la deuxième Conférence canadienne sur la recherche sur le cancer! Le Comité a élaboré un programme fort intéressant qui mettra les participants au défi d'envisager les problèmes qu'ils étudient sous d'autres angles. Pour leur faciliter la tâche, nous aborderons les grands thèmes de la recherche sur le cancer selon diverses perspectives lors des séances plénières, alors que les symposiums permettront une exploration plus pointue de certains sujets d'intérêt.

Le Comité a travaillé d'arrache-pied pour inviter de grands spécialistes du pays et de l'étranger à prendre la parole lors des séances plénières et des symposiums. Nous avons examiné les quelque 500 résumés et plus qui nous ont été soumis afin de créer des présentations orales, des affiches et des séances de discussion. Nous espérons que tous ces moyens mis en œuvre permettront aux participants de la conférence de se rencontrer, d'échanger des idées et d'établir de nouvelles collaborations dans et entre les domaines de recherche.

Lors de la conférence, nous vous incitons à tirer profite des nombreuses réunions satellites et des activités du Programme de développement de carrière en recherche sur le cancer. Vous aurez ainsi une excellente occasion de nouer de nouveaux liens, ainsi que de dénicher et de recruter des stagiaires. Vous pourrez également offrir à vos stagiaires et nouveaux chercheurs les possibilités de mentorat scientifique et les conseils de cheminement de carrière qui sont prévus au programme.

Nous souhaitons que cette conférence soit inspirante et enrichissante et qu'elle vous apporte de nouvelles idées et de nouvelles collaborations!

David Huntsman, M.D.
BC Cancer Agency

Stephen Robbins, Ph. D.,
University of Calgary et IRSC – Institut du cancer

COMITÉ DU PROGRAMME SCIENTIFIQUE

David Huntsman, MD, FRCPC, FCCMG (Coprésident)
BC Cancer Agency

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Josie Ursini-Siegel, PhD
Institut Lady Davis de recherches médicales, Université McGill

Sunday, November 3

DAYTIME	Open and Closed Satellite Meetings (for details go to page 8)			
5:00 p.m.	Welcome Remarks			
5:30 p.m.	**Plenary Session: The Defining Features of Cancer: Cellular, Personal, and Societal**			
7:00 p.m.	Welcome Reception			

Monday, November 4

MORNING	Open and Closed Satellite Meetings (for details go to page 12)			
8:30 a.m.	**Plenary Session: Cancer and Age**			
10:00 a.m.	BREAK			
10:30 a.m. CONCURRENT	Improving Cancer Outcomes: Do We Have the Right Models?	The 3 C's of Prostate Cancer: Cure, Control, and Conundrums	Re-Engineering for Success in Clinical Cancer Research	Workplace and Environmental Risk Factors
12:00 p.m.	LUNCH Careers in Cancer Research Development Program (CCRDP): Lunch Lecture			
12:00 p.m.	Open and Closed Satellite Meetings (for details go to page 18)			
1:00 p.m.	**Plenary Session: Cancer Research in a Data Cloud**			
2:30 p.m.	BREAK			
3:00 p.m. CONCURRENT	Unravelling the Complexity of Basal Breast Cancer: The Road to Targeted Therapies in this Poor Outcome Subtype	Cancer Survivorship through the Life Cycle	Methodological Challenges in Interventional Research in Palliative Care	Inflammation and Cancer Prevention and Control
4:30 p.m.	Poster Sessions (A–K) Poster Discussion Sessions 1			
EVENING	Open and Closed Satellite Meetings (for details go to page 25)			

Tuesday, November 5

MORNING	Open and Closed Satellite Meetings (for details go to page 26)			
8:30 a.m.	Plenary Session: Ready, Set, Go: Implementation of Innovations into the Cancer System			
10:00 a.m.	BREAK			
10:30 a.m. CONCURRENT	Pediatric Oncology	Heterogeneity and Cancer	Personalized Adaptive Therapy Based on Multimodality Imaging	Hereditary Cancers: New Ways to Prevent Cancer Deaths
12:00 p.m.	LUNCH Careers in Cancer Research Development Program (CCRDP): Lunch Lecture			
12:00 p.m.	Open and Closed Satellite Meetings (for details go to page 33)			
1:00 p.m.	**Plenary Session: Cancer Metabolism from Prevention to Treatment**			
2:30 p.m.	BREAK			
3:00 p.m. CONCURRENT	Qualitative Research	Metastatic Microenvironment and Tumour Initiating Cells	Anti-Cancer Biotherapeutics	Cancer Informatics
4:30 p.m.	Poster Sessions (L-X) Poster Discussion Sessions 2			
6:30 p.m.	**CCRA Awards Presentation Dinner**			

Wednesday, November 6				
MORNING	Open and Closed Satellite Meetings (for details go to page 42)			
8:30 a.m. CONCURRENT	**Plenary Session: Shared Solutions for Today's Bioethical and Societal Research Challenges**		**Plenary Session: Rewiring the Cancer Epigenome**	
10:00 a.m.	BREAK			
10:30 a.m. CONCURRENT	Mechanisms of Therapeutic Resistance in Oncology: New Strategies for Intervention	Effective Biomarker Discovery, Validation, and Implementation	Cell Stress Adaptive Mechanisms and Implications for Cancer Progression	From Bench to Bedside: Approaches to Potholes and Pitfalls
12:00 p.m.	LUNCH Careers in Cancer Research Development Program (CCRDP): Lunch Lecture & Funders Exhibit			
1:00 p.m.	**Plenary Session: Future of Cancer Research: Standing on the Shoulders of Giants (A Tribute to Tony Pawson)**			
2:45 p.m.	Conference Closing Remarks			
AFTERNOON	Open and Closed Satellite Meetings (for details go to page 51)			

SUNDAY, NOVEMBER 3, 2013

EVENT LOCATIONS

8:00 a.m.	NCIC Clinical Trials Group Special Fall Meeting [CLOSED]	Sheraton Hall B
9:00 a.m.	Careers in Cancer Research Development Program: New Principal Investigators Meeting [CLOSED]	Civic Ballroom
9:00 a.m.	Cancer Data and its Analysis Workshop [PRE-REGISTRATION]	Dominion Ballroom
1:00 p.m.	CTRNet National Biobanking Workshop – 2013 [PRE-REGISTRATION]	Sheraton Hall A
1:00 p.m.	Canadian Cancer Research Conference Community Forum [OPEN, REGISTRATION ENCOURAGED]	Osgoode Ballroom
5:00 p.m.	Welcome Remarks	Grand Ballroom West/ Centre
5:30 p.m.	**Plenary Session: The Defining Features of Cancer: Cellular, Personal, and Societal**	Grand Ballroom West/ Centre
7:00 p.m.	Welcome Reception	Grand Ballroom Foyer

DETAILED AGENDA – SUNDAY, NOVEMBER 3, 2013

8:00 a.m. - 1:00 p.m.

NCIC CLINICAL TRIALS GROUP SPECIAL FALL MEETING

Sheraton Hall B

The general objective of this NCIC CTG Meeting is to bring together the leadership of the NCIC CTG community to discuss a number of developing opportunities.

This session is closed.

9:00 a.m. - 4:00 p.m.

CCRDP NEW PRINCIPAL INVESTIGATORS MEETING

Civic Ballroom

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). This meeting is targeted towards new investigators/ new faculty members (within their first 5 years of academic appointment) at Canadian universities, including new scientists and clinician scientists and senior post-docs (within 6 months of completing their training). Invited speakers to the New Principal Investigators Meeting will discuss work-life balance, career development, communication skills, and grant writing.

This session is closed (open to New Principal Investigators Meeting registrants only).

9:00 a.m. - 4:00 p.m.

CANCER DATA AND ITS ANALYSIS WORKSHOP

Dominion Ballroom

Cancer research has rapidly incorporated high-throughput technologies. As a result, large amounts of cancer genome data are becoming publically available through various portals (e.g., ICGC, TCGA, etc.). This workshop will focus on how to access cancer genome data, where the resources are and how to visualized and evaluate cancer genomic data sets. Participants will gain hands-on training on the databases, visualization and pathway analysis tools necessary to evaluate cancer genome data.

Registration for this workshop is now closed.

1:00 - 4:00 p.m.

CTRNET NATIONAL BIOBANKING WORKSHOP – 2013

Sheraton Hall A

The Key to Success in Cancer Research: Identifying and Accessing the Right Biospecimens

This workshop will provide participants with the information needed to answer two critical questions for their research program:
- What type of biospecimens do I need for my research?
- How can I acquire them most efficiently?

Registration for this workshop is required.

1:00 - 5:00 p.m.

CCRA COMMUNITY FORUM

Osgoode Ballroom

The Canadian Cancer Research Conference

community forum

An afternoon with Canada's leading cancer researchers

The CCRA Community Forum provides a unique opportunity for researchers and the general public to engage and interact through lectures intended for a lay audience. Presenters are experts from across Canada and will provide insights on latest advances in prevention, tackling viruses to prevent cancer, using viruses to treat cancer, and immunotherapy and personalized medicine. The event will conclude with an informal mixer.

Open to all. Registration is encouraged.

5:00 – 5:30 p.m.

WELCOME REMARKS

Grand Ballroom West/Centre

Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

5:00 p.m. **WELCOME AND INTRODUCTION TO THE MEETING**

Mario Chevrette
McGill University & Cancer Research Society, Montréal

Annette Cyr
Melanoma Network of Canada

5:10 p.m. **GREETINGS AND WELCOME FROM SOME KEY CONFERENCE SUPPORTERS**

Pamela Fralick
Canadian Cancer Society

Stephen Robbins
CIHR Institute of Cancer Research

Shelly Jamieson
Canadian Partnership Against Cancer

Thomas Hudson
Ontario Institute for Cancer Research

5:30 – 7:00 p.m.

PLENARY SESSION: THE DEFINING FEATURES OF CANCER: CELLULAR, PERSONAL, AND SOCIETAL

Grand Ballroom West/Centre

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Chair:
David Huntsman
BC Cancer Agency, Vancouver

The goal of this conference is to bring us together as cancer researchers so we can learn from each other's experiences and be inspired and informed through a broad range of educational and interactive opportunities. We hope that this plenary session will set the stage for this meeting by defining cancer in the broadest possible terms.

In the first presentation, **Carlos Caldas** (University of Cambridge, UK) will describe our evolving concept of cancer from clones of cancer cells identical mutations and perturbed signaling pathways in to a societal concept in which the heterogeneity of tumour cell populations can now be dissected. This appreciation of the potential clinical and biologic importance of intratumoural heterogeneity is not new, however, our emergent capacity to assess heterogeneity from both a genomic and functional perspective has profound implications for cancer care.

In the second presentation, **Karen Gelmon** (BC Cancer Agency, Vancouver) will discuss the impact of cancer on patients, with an emphasis on the physiological and psychological aspects. Although there are cardinal features of cancers such as invasion, metastasis, cancer associated pain, cachexia and paraneoplastic syndromes, the presentation and clinical behavior of cancers are often as individual as the genomic makeup of the tumours themselves. This brings further credence to the concept of more personalized approaches to controlling cancer.

In the last presentation, **Terrence Sullivan** (University of Toronto, Toronto) will describe the impact of cancer at a societal level through five epidemiological and health policy challenges within cancer services. These include meeting the growing burden of disease, its health economic impacts and modeling demand growth; renewed preventive efforts to deal with this growth; equity within cancer control systems; challenges in quality implementation of generic and growing personalized cancer control tools; an expanded focus of care from individual patients to caregivers; and expanded capture, public reporting and improvement cycles within cancer services. These five areas comprise some of the major social challenges faced in cancer health service research and delivery in our country and represent a call to re-focus our health service research and health policy efforts in a more purposive fashion. This presentation will focus on social issues in cancer research, which turn on a list of five key health policy and health service challenges associated with the emerging epidemiology and policy issues within cancer services. These issues begin with a portrait of the growing **burden** of cancer, evolving disease prevalence and cancer service obligations as well as the need for better direct and indirect estimates of costs associated with the disease. There are issues of equity in relation to burden and the social stratification of cancer within Canada alongside the need for more coordinated action and simple innovations to coordinate work between more developed and less developed regions locally and globally. In the second area of **prevention and screening** the focus will be on deepening traditional areas of promise and new opportunities as well as the need for precision in both authoritative guidance and the use of evidence in practice. The challenges of organization, financing and delivery of new **molecular and genomic diagnostics and treatments** will be highlighted as a third major challenge facing all advanced jurisdictions. The fourth area will focus on jurisdiction-wide **performance measurement, management and reporting** of cancer services and cancer outcomes within and across jurisdictions as central to future progress. Lastly, orienting towards **patient and family-centered care** will be highlighted with respect to the special challenges of designing services for patients rather than the convenience of institutions and providers as a way of improving value in cancer services. Taken together, these five areas comprise some of the major societal challenges faced in cancer research and services in our country, and represent a call to refocus our efforts in a more purposive fashion.

7:00 p.m.

WELCOME RECEPTION

Grand Ballroom Foyer

MONDAY, NOVEMBER 4, 2013

EVENT LOCATIONS

7:30 a.m.	Prostate Cancer Canada Meeting [OPEN]		Sheraton Hall B
8:30 a.m.	**Plenary Session: Cancer and Age**		Grand Ballroom West/Centre
10:00 a.m.	BREAK		Grand Ballroom Foyer, Sheraton Hall
10:30 a.m.	CONCURRENT SYMPOSIA A	Improving Cancer Outcomes: Do We Have the Right Models?	Grand Ballroom West
		The 3 C's of Prostate Cancer: Cure, Control, and Conundrums	Grand Ballroom Centre
		Re-Engineering for Success in Clinical Cancer Research	Grand Ballroom East
		Workplace and Environmental Risk Factors	Sheraton Hall E
12:00 p.m.	LUNCH		Grand Ballroom Foyer, Sheraton Hall D
12:00 p.m.	Careers in Cancer Research Development Program (CCRDP) Lunch Lecture [OPEN]		City Hall Room
12:00 p.m.	Prostate Cancer Canada Meeting [OPEN]		Sheraton Hall B
1:00 p.m.	Canadian Prostate Cancer Biomarker Network Update Meeting [CLOSED]		City Hall Room
1:00 p.m.	**Plenary Session: Cancer Research in a Data Cloud**		Grand Ballroom West/Centre
2:30 p.m.	BREAK		Grand Ballroom Foyer, Sheraton Hall D
3:00 p.m.	CONCURRENT SYMPOSIA B	Unravelling the Complexity of Basal Breast Cancer: The Road to Targeted Therapies in this Poor Outcome Subtype	Grand Ballroom West
		Cancer Survivorship through the Life Cycle	Grand Ballroom Centre
		Methodological Challenges in Interventional Research in Palliative Care	Grand Ballroom East
		Inflammation and Cancer Prevention and Control	Sheraton Hall E
4:30 p.m.	Poster Sessions (A-K)		Sheraton Hall C, Osgoode Ballroom
4:30 p.m.	POSTER DISCUSSION SESSIONS 1	DNA Repair and Genomic Instability	Grand Ballroom West
		Survivorship, Quality of Life, and Supportive Care	Grand Ballroom Centre
		Cancer Networks and Signalling	Grand Ballroom East
		Moving Drugs to the Clinic	Sheraton Hall E
6:00 p.m.	Robert A. Phillips Lecture [OPEN, REGISTRATION ENCOURAGED]		Grand Ballroom West/Centre
7:00 p.m.	Careers in Cancer Research Development Program (CCRDP) New Principal Investigators Meeting Dinner [CLOSED]		City Hall Room

DETAILED AGENDA – MONDAY, NOVEMBER 4, 2013

7:30 - 8:30 a.m.

PROSTATE CANCER CANADA MEETING

Sheraton Hall B

Prostate Cancer Canada

A progress report and data summary from the Canadian Prostate Cancer Genome Network (CPC-GENE) program.

Open to all.

8:30– 10:00 a.m.

PLENARY SESSION: CANCER AND AGE

Grand Ballroom West/Centre

Chairs:
Peter M. Lansdorp
European Research Institute for the Biology of Ageing, University of Groningen, Groningen, The Netherlands & BC Cancer Agency, Vancouver

Gary Rodin
Princess Margaret Cancer Centre, Toronto

Age is the largest single risk factor for cancer, although the pathways that link age and cancer risk have only begun to be defined. Increased age allows for an accumulation of cancer-producing genetic events, but recent research points to specific factors such as telomere length, mitochondrial deterioration, immunosenescence and chronic inflammation as potential contributors to both ageing and cancer. Age is also a significant factor in cancer treatment, due to the increased risk of toxicity and comorbidity. However, with the development of more targeted treatments, age criteria for treatment are increasingly being questioned. Age also affects adaption to cancer in terms social and family support, the capacity to find meaning and the acceptance of death. A systematic approach to the relationship between cancer and ageing may generate important insights regarding the etiology and treatment of cancer, the clinical management of the disease and the impact of life-threatening illness across the life cycle.

8:32 a.m.

TELOMERES, AGEING AND CANCER

Peter M. Lansdorp
European Research Institute for the Biology of Ageing, University of Groningen, Groningen, The Netherlands & BC Cancer Agency, Vancouver

We performed a detailed study of the telomere length in leukocyte subpopulations from 835 normal individuals and 89 patients with reduced telomerase activity resulting from haplo-insufficiency for either the telomerase RNA gene (hTERC) or the telomerase reverse transcriptase (hTERT) gene.

The median telomere lengths in leukocytes was found to vary over a broad range at any given age, was on average longer in females than in males and shortened with age in all cell types except memory B cells. The rate of telomere attrition varied with age and with cell type in line with differences in the turnover and/or telomere attrition rate between cell types.

Strikingly, patients that are haplo-insufficient for one of the telomerase genes showed very short telomeres at all ages. This finding strongly suggests that normal telomerase levels are essential to prevent catastrophic telomere loss in normal hematopoietic stem cells and lymphocytes. Reduced telomerase levels result in the onset of a wide spectrum diseases including dyskeratosis congenita, bone marrow failure, pulmonary fibrosis and, paradoxically, cancer.

These results point to a crucial, rate-limiting role for telomerase in the proliferation of normal cells. Telomere loss eventually results in cell death or senescence but also provides strong selection for very rare cells that are deficient in p53 or other components of the DNA damage response triggered by critically short telomeres. The combination of chromosome instability and defective DNA damage responses in such cells is particularly dangerous as the resulting genome instability allows for rapid evolution of abberant cells.

8:54 a.m.

PRESENTATION TITLE TO BE ANNOUNCED

Jan Van Deursen
Mayo Clinic, Rochester, USA

9:16 a.m.

CANCER & AGEING: PITFALLS AND PROMISES IN PERSONALIZED MEDICINE FOR OLD(ER) PEOPLE

Shabbir Alibhai
University Health Network & University of Toronto, Toronto

Cancer is a disease of the elderly, and the population of older adults continues to grow in all modern societies. Treatment of this population is complex given (a) physiologic changes of ageing; (b) increasing comorbidities; (c) reduced life expectancy; (d) the heterogeneity of ageing. All of these factors make clinical decision-making difficult. As a result, several international organizations such as the National Comprehensive Cancer Network (NCCN) and Society of Geriatric Oncology (SIOG) have called for comprehensive geriatric assessment (CGA) of all older cancer patients prior to treatment initiation. This talk will highlight whether age is an independent risk factor for increased treatment toxicity and disease-specific survival, will highlight physiologic changes associated with age, and will examine recent prognostic studies that attempt to better distinguish between fit and vulnerable older adults with cancer, thereby enhancing decision-making for clinicians. Finally, I will review the recent evidence supporting the value of CGA as an objective means of assessing the global health of the older patient and its role in unearthing undiagnosed medical conditions, aiding prognostication, and enhancing treatment decision-making.

9:38 a.m.

CANCER PAIN AND AGEING: TOWARDS IDENTIFYING AGE-RELATED PATTERNS IN ADJUSTMENT

Lucia Gagliese
York University & University Health Network, Toronto

Although many older people with cancer will experience pain, we know little about age-related patterns in cancer pain. This presentation will review evidence regarding age-related patterns in the prevalence, intensity and qualities of cancer pain. It will be shown that, even with comparable levels of pain, older people are at greater risk than younger people for inadequate pain management. The consequences of chronic cancer pain and inadequate pain management include impaired physical, psychological and social well-being. Many of these negative impacts do not differ across the adult life span. Although the prevalence and intensity of negative impacts such as depression and pain interference may not differ with age, evidence will be presented to suggest that the profile of adjustment may differ and that age-related factors, including health status (e.g. comorbidity, chronic nonmalignant pain) and social context, may play unique predictive roles at different life stages. Identification of age-related, biopsychosocial patterns of vulnerabilities and resiliencies is an important first step to improving the management of cancer pain across the adult life span.

10:00 - 10:30 a.m.

BREAK

10:30 a.m.

CONCURRENT SYMPOSIA – A

10:30 a.m.-12:00 p.m.

A1 – IMPROVING CANCER OUTCOMES: DO WE HAVE THE RIGHT MODELS?

Grand Ballroom West

Sunnybrook ODETTE CANCER CENTRE

Sunnybrook RESEARCH INSTITUTE

Chair:
Jason N. Berman
Dalhousie University & IWK Health Centre, Halifax

Cell lines have been instrumental in the identification of molecular pathways involved in cancer as well as in the discovery and testing of novel cancer therapies. However, in vitro studies do not provide the critical context of the tumour micro-environment, and thus cancer cell behaviour in patients. While the mouse has long been the traditional tool for in vivo mechanistic studies and preclinical testing, prohibitive costs for large scale high-throughput drug screens has resulted in the emergence of a number of promising vertebrate and invertebrate cancer model systems. Fish, worms and flies provide tremendous advantages over traditional murine models including rapid development, large numbers of offspring, real time imageing and cost-effectiveness. This symposium will highlight recent advances in using these diverse and innovative animal systems for cancer drug discovery and discuss collaborative efforts to combine the opportunities afforded by these different preclinical models to generate an efficient pipeline for drug evaluation and prioritization.

10:33 a.m.

PRECLINICAL MODELS: RECAPITULATING ADVANCED METASTATIC DISEASE THERAPY IN MICE AS A STRATEGY TO IMPROVE PREDICTING CLINICAL OUTCOMES

Robert Kerbel
Sunnybrook Research Institute & University of Toronto, Toronto

10:51 a.m. **WHAT CAN FRUIT FLIES TELL US ABOUT CANCER?**
Savraj S. Grewal
Clark H. Smith Brain Tumour Centre, Southern Alberta Cancer Research Institute & Department of Biochemistry and Molecular Biology, University of Calgary, Calgary

11:09 a.m. **IS *C. ELEGANS* A GOOD MODEL FOR STUDYING THE BIOLOGY OF CANCER?**
Brent Derry
The Hospital for Sick Children & University of Toronto, Toronto

11:27 a.m. **LIVING IN A FISHBOWL: EXPOSING UNIQUE OPPORTUNITIES AFFORDED BY THE ZEBRAFISH AS A HUMAN CANCER MODEL**
Jason N. Berman
Departments of Pediatrics, Microbiology and Immunology and Pathology, Dalhousie University & IWK Health Centre, Halifax

11:45 p.m. **ALTERNATIVE SPLICING OF A NOVEL HUMAN NODAL TRANSCRIPT**
Scott Findlay
University of Western Ontario, London

10:30 a.m. - 12:00 p.m.

A2 – THE 3 C'S OF PROSTATE CANCER: CURE, CONTROL, AND CONUNDRUMS

Grand Ballroom Centre

Prostate Cancer Canada

Chairs:
Robert Bristow
Princess Margaret Cancer Centre, Toronto

Anthony Joshua
Princess Margaret Cancer Centre, Toronto

Prostate cancer is the most common, non-cutaneous malignancy in men; yet, it remains a conundrum in terms of personalized clinical management. Although it is increasingly appreciated that some cancers can be completely indolent, more than 4000 deaths still occur annually in Canada due to castrate-resistant (CRPC), metastatic disease. What are the genetic and environmental factors that predict for indolent versus non-indolent cancers? How can we use this information to prevent the emergences of castrate-resistant clones? How can we better inform patients a priori as to the aggressiveness of their disease to provide individualized clinical management that reduces both mortality and morbidity?

This session will focus on the definition and biologic characteristics of indolent disease and castrate-resistant disease. It will highlight emerging approaches to active surveillance versus local treatment and systemic approaches based on biologic-profiling of androgen receptor signaling and genomic/proteomic profiling of prostate cancers.

10:30 a.m. **ACTIVE SURVEILLANCE FOR PROSTATE CANCER SAVES LIVES!**
Laurence Klotz
University of Toronto & Sunnybrook Health Sciences Centre, Toronto

10:47 a.m. **PROSTATE CANCER TREATMENT INTENSIFICATION AND DE-INTENSIFICATION BASED ON PRECISION CANCER GENOMICS**
Robert Bristow
Princess Margaret Cancer Centre, Toronto

11:04 a.m. **CURRENT STRATEGIES IN SYSTEMIC THERAPY FOR PROSTATE CANCER – BEYOND CASTRATION**
Anthony Joshua
Princess Margaret Cancer Centre, Toronto

11:21 a.m. **BIOMARKER DRIVEN PROSTATE CANCER TRIALS**
Johann de Bono
Institute of Cancer Research & Royal Marsden NHS Foundation Trust, Sutton, Surrey, UK

11:46 a.m. **PANEL DISCUSSION**
All speakers

10:30 a.m. - 12:00 p.m.

A3 – RE-ENGINEERING FOR SUCCESS IN CLINICAL CANCER RESEARCH

Grand Ballroom East

Chair:
Lillian L. Siu
Princess Margaret Cancer Centre, Toronto

The current clinical cancer research enterprise faces tremendous challenges leading to high failure rates of oncology drugs in attaining regulatory approval. The culture and system of clinical trials, interface with the pharmaceutical industry, infrastructure and patient resources, researcher training and retention, as well as trial design and methodology, represent key barriers that must be overcome to maintain a strong clinical research environment in Canada. Perspectives on these challenges and solutions to prepare the Canadian clinical cancer community as we enter the personalized medicine era will be sought from key stakeholders including clinical trialists, regulatory agency representatives, pharmaceutical leaders and patient advocates.

10:32 a.m. **WHAT LESSONS HAVE WE LEARNED TO HELP PLAN THE NEXT GENERATION OF SUCCESSFUL CLINICAL TRIALS?**
Philippe Bedard
Division of Medical Oncology & Hematology, Princess Margaret Cancer Centre & Department of Medicine, University of Toronto, Toronto

10:47 p.m. **RE-ENGINEERING THE CLINICAL RESEARCH ENTERPRISE**
Bernhard Eigl
BC Cancer Agency & University of British Columbia, Vancouver

11:02 a.m. **ENHANCING CANADA'S COMPETITIVENESS IN GLOBAL CLINICAL RESEARCH: A PERSPECTIVE FROM THE BIOPHARMACEUTICAL INDUSTRY**
Clive Ward-Able
Amgen Canada, Mississauga

11:17 a.m. **WHAT IS NEW IN THE REGULATORY WORLD?**
Agnes V. Klein
Health Canada, Ottawa

11:32 a.m. **PANEL DISCUSSION**
All speakers

10:30 a.m. - 12:00 p.m.

A4 – WORKPLACE AND ENVIRONMENTAL RISK FACTORS

Sheraton Hall E

Chair:
Jack Siemiatycki
École de santé publique de l'Université de Montréal et Centre de recherche du Centre hospitalier de l'Université de Montréal, Montréal

Historically, studies of occupational groups and occupational circumstances have been one of the most fruitful avenues for discovering human carcinogens. Indeed about one third of known risk factors for cancer were discovered as a result of studies of occupational groups. Changing industrial patterns in the world have led to changes in the nature of possible hazards and in the way such studies can be conducted. Increasingly, epidemiological studies of carcinogens have been conducted in developing countries, where exposure concentration in environmental or occupational settings may be much higher than in contemporary developed countries. This symposium will spotlight epidemiologic research to identify selected occupational and environmental risk factors for cancer in both developed and developing countries.

10:36 a.m. **ARSENIC IN DRINKING WATER AND RENAL CANCERS IN RURAL BANGLADESH**
Nicola Cherry
University of Alberta, Edmonton

10:57 a.m. **WORKPLACE LEAD EXPOSURE AND CANCER RISK**
Marie-Claude Rousseau
INRS-Institut Armand-Frappier, Laval

11:18 a.m. **LONG-TERM EXPOSURE TO AIR POLLUTION AND CANCER: WHAT WE'VE LEARNED AND WHAT MORE DO WE NEED TO KNOW?**
Paul Villeneuve
Carleton University, Ottawa

11:39 a.m. **STRESS AT WORK AND CANCER**
Marie-Élise Parent
INRS-Institut Armand-Frappier, Laval

12:00 - 1:00 p.m.	LUNCH

12:00 - 1:00 p.m.

CCRDP LUNCH LECTURE

City Hall Room

Getting Started
(negotiating a start-up package, finding funding, seed money for pilot projects)

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). The first of three lunch lectures will discuss topics such as getting your research career started, negotiating a start-up package, finding funding, and seed money for pilot projects.

Open to all.

12:00 - 1:00 p.m.

PROSTATE CANCER CANADA MEETING

Sheraton Hall B

A discussion of opportunities for collaboration based on samples and data emerging from the CPC-GENE and other programs amongst the Canadian prostate cancer research community.

Open to all.

1:00 - 3:00 p.m.

CANADIAN PROSTATE CANCER BIOMARKER NETWORK UPDATE MEETING

City Hall Room

The CPCBN is a program that regroups several researchers from four different Canadian provinces. The main objective of the CPCBN is to address important issues dealing with prostate cancer diagnosis and management. The CPCBN has assembled a cohort of 1500 radical prostatectomy specimens arrayed on tissue microarray (TMA). In addition, two different cohorts of 250 biopsy specimens were also assembled from an intermediate-risk group of patients treated by radiotherapy and from low-risk patients followed by active surveillance. All these patients' specimens are associated with diagnosis, treatment and clinical outcome data.

This project has two specific goals:

1. To develop a multi-parametric test on prostate biopsy to help stratify patients with apparently low-stage/low risk disease that will not progress and could be safely put on a surveillance protocol and avoid the risks of therapy from those whose disease will evolve and require active treatment.
2. To define a set of prognostic markers on radical prostatectomy specimens or biopsies from radiotherapy treated patients that will add to the currently used clinical and pathological parameters, to identify patients at high-risk of cancer recurrence and or progression that may benefit from adjuvant or neo-adjuvant therapies.

This session is closed.

1:00 - 2:30 p.m.

PLENARY SESSION: CANCER RESEARCH IN A DATA CLOUD

Grand Ballroom West/Centre

OICR
Ontario Institute for Cancer Research

Chair:
Michael Hallett
McGill University, Montréal

The speakers of this session have been chosen to cover current cancer topics that require a high degree of informatics and statistical sophistication. This includes the problems and solutions related to patient stratification (also known as "subtyping") that are ubiquitous across many types of cancer, and how knowledge of subtypes influence, optimize and challenge decision making regarding therapeutics. The speakers chosen are actively working on comparisons across a wide range of cancer types at the (high-throughput) molecular level via international consortia (ICGC, TCGA, MetaBric) or alternative methods. Additional topics include the use of high-throughput profiling coupled with statistical classification techniques in the realm of chemical genomics applied to cancer. This area combines genomics, informatics, and chemical screening to identify the spectrum of drugs necessary to realize personalized medicine.

1:00 p.m.

MODELING TUMOUR EVOLUTION IN THE "BIG DATA" ERA OF CANCER GENOME SEQUENCING

Sohrab Shah
BC Cancer Agency & University of British Columbia, Vancouver

Cancer is a disease of the genome. Consequently, the development and progression of cancer has for decades been cast in a framework of evolutionary theory. As such, progressive accumulation of phenotype-altering mutations is thought to drive clonal expansions of potentially genetically distinct cell populations. How such cell populations evolve in the presence of therapeutic intervention and/or tumour micro-environments is the ultimate determinant of clinical endpoints. Thus, a fundamental knowledge of evolutionary processes will advance our understanding of drug resistance mechanisms and acquisition of metastatic potential. Until recently, direct measurement of evolution in cancer has been beyond scientific reach. However, the emergence of next generation sequencing has permitted unprecedented opportunities to study cancers according to their genome sequences by at once identifying the complete repertoire of mutations and determining underlying cell population structures of individual tumours. Datasets generated by NGS experiments are voluminous and complex. A single genome sequencing experiment from a patient tumour sample will generate several hundred billion datapoints. As such, studying how cancers evolve has entered the domain of "Big Data" science. In this talk, I will outline a series of novel statistical models and computational "machine learning" methods that overcome the challenges associated with evolutionary interpretation from cancer genome sequencing data. I will demonstrate how these approaches have underpinned our recent developments in the characterization of the evolutionary histories of breast cancers and high grade serous ovarian cancers and I will conclude by providing a forward look at how the cancer genomics field will leverage evolutionary inference for improved management of patient care.

1:30 p.m.

PRESENTATION TTILE TO BE DETERMINED

Chris Sander
Memorial Sloan-Kettering Cancer Center, New York, USA

2:00 p.m.

MEDBOOK: TOOLS FOR EXTRACTING ACTIONABLE MEDICAL KNOWLEDGE FROM GENOMIC BIG DATA

Theodore C. Goldstein
Centre for Biomolecular Science Engineering, University of California Santa Cruz, Howard Hughes Medical Institute, Santa Cruz, USA

Cancer is an ideal target for personal genomics-based medicine that uses high-throughput genome assays such as DNA sequencing, RNA sequencing, and expression analysis (collectively called omics); however, researchers and physicians are overwhelmed by the quantities of big data from these assays and cannot interpret this information accurately without specialized tools. To address this problem, we have created software methods and tools called OCCAM (OmiC data Cancer Analytic Model) and DIPSC (Differential Pathway Signature Correlation) for automatically extracting knowledge from this data and turning it into an actionable knowledge base called the activitome. An activitome signature measures a mutation's effect on the cellular molecular pathway. By comparing the vectors of activitome signatures of different mutations and clinical outcomes, intrinsic relationships between these events may be uncovered. OCCAM identifies activitome signatures from exomes that can be used to guide the development and application of therapies. In addition, to support the collection and utilization of big data we are developing MedBook, a federated open source distributed social network designed for a medical research and decision support system. OCCAM and DIPSC are two of the many apps that operate inside of MedBook. MedBook extends the Galaxy system with a signature database, an end-user oriented application platform, a rich data medical knowledge-publishing model, and the Biomedical Evidence Graph (BMEG). The goal of MedBook is to improve the outcomes by learning from every patient.

2:30 - 3:00 p.m.

BREAK

3:00 p.m.

CONCURRENT SYMPOSIA – B

3:00 - 4:30 p.m.

B1 – UNRAVELLING THE COMPLEXITY OF BASAL BREAST CANCER: THE ROAD TO TARGETED THERAPIES IN THIS POOR OUTCOME SUBTYPE

Grand Ballroom West

Canadian Breast Cancer Foundation | Fondation canadienne du cancer du sein

Chair:
Josie Ursini-Siegel
Lady Davis Institute for Medical Research, McGill University, Montréal

Major progress has been made since the recognition that breast cancer is a heterogeneous disease, which is molecularly defined by five subtypes and includes normal, luminal A, luminal B, HER2 and basal cancers. Since the original discovery of the basal subtype more than ten years ago, the cancer community has recognized the importance of identifying targeted therapies with which to specifically treat these patients. Despite this fact, the outcome of women with basal breast cancer remains poor and has not significantly improved over the past decade. This symposium session will explore some of recent advances made by the breast cancer research community that have increased our global understanding of the underlying complexity of basal breast cancer at the cellular and molecular levels. This will include discussion of how genetic alterations contribute to the emergence and heterogeneity of basal tumours. We will also explore whether novel targeted therapies have the potential to improve survival of basal breast cancer patients.

3:00 p.m. **PRESENTATION TITLE TO BE DETERMINED**
Carlos Caldas
Cancer Research UK Cambridge Institute, University of Cambridge, UK

3:20 p.m. **BASAL BREAST CANCER**
Morag Park
Goodman Cancer Research Centre, McGill University, Montréal

3:40 p.m. **TARGETING BASAL-LIKE BREAST CANCER THROUGH THE LENS OF THE INTRA-TUMOURAL IMMUNE RESPONSE**
Peter H. Watson
Deeley Research Centre, BC Cancer Agency, & Department of Biochemistry and Microbiology, University of Victoria, Victoria & Department of Pathology and Laboratory Medicine, University of British Columbia, Vancouver

4:00 p.m. **CANCER STEM CELL MARKER ALDH1A3 DETERMINES BREAST CANCER TUMOUR GROWTH AND METASTASIS VIA DIFFERENTIAL RETINOIC ACID SIGNALLING**
Paola Marcato
Dalhousie University, Halifax

4:15 p.m. **PROGESTERONE-DRIVEN RANK SIGNALING CONTROLS EXPANSION OF ADULT WNT-RESPONSIVE ER-ALVEOLAR PROGENITOR CELLS**
Purna Joshi
Ontario Cancer Institute, Toronto

3:00 - 4:30 p.m.

B2 – CANCER SURVIVORSHIP THROUGH THE LIFE CYCLE

Grand Ballroom Centre

POGO COLLABORATING FOR KIDS WITH CANCER SINCE 1983

Chairs:
Eva Grunfeld
Ontario Institute for Cancer Research & University of Toronto, Toronto

David Malkin
The Hospital for Sick Children, Toronto

Advances in early diagnosis and treatment have resulted in substantial improvements in survival such that the majority of individuals diagnosed with cancer will be long-term survivors. This creates the imperative to look beyond survival to the multifaceted outcomes of survivorship, which considers late and long-term effects of treatment, impact of cancer on quality of life and psychosocial well-being, and health services, amongst other things. This session will explore these issues from the perspective of the 'life cycle' considering what is unique to cancer survivors depending on the age at which they are diagnosed and treated, and what outcomes are common to all survivors.

3:03 p.m. **LATE EFFECTS IN SURVIVORS OF CHILDHOOD CANCER: AN OVERVIEW**
Paul Nathan
The Hospital for Sick Children & University of Toronto, Departments of Pediatrics and Health Policy, Management & Evaluation, Toronto

3:21 p.m. **TOWARDS INDIVIDUALIZED ESTIMATES OF LATE TOXICITY RISK: POTENTIAL IMPACT ON TREATMENT SELECTION AND SURVIVORSHIP CARE**
David Hodgson
Princess Margaret Cancer Centre, Toronto

3:39 p.m. **HEALTH, EDUCATION, AND ECONOMIC OUTCOMES FOR YOUNG PEOPLE SURVIVING CANCER: THE CHILDHOOD, ADOLESCENT, AND YOUNG ADULT CANCER SURVIVOR (CAYACS) PROGRAM**
Mary McBride
BC Cancer Agency & School of Population and Public Health, University of British Columbia, Vancouver

3:57 p.m. **A SOCIAL-ECOLOGICAL FRAMEWORK OF SECOND CANCER RISK AMONG CANCER SURVIVORS**
Krista Wilkins
University of New Brunswick, Fredericton

4:12 p.m. **ADULT CANCER SURVIVORS: RESTORING HEALTH AND WELL-BEING**
Jennifer Jones
Princess Margaret Cancer Centre & University of Toronto, Toronto

3:00 - 4:30 p.m.

B3 – METHODOLOGICAL CHALLENGES IN INTERVENTIONAL RESEARCH IN PALLIATIVE CARE

Grand Ballroom East

Ontario
Cancer Care Ontario
Action Cancer Ontario

Chair:
Gary Rodin
Princess Margaret Cancer Centre, Toronto

Maintaining physical and emotional well-being is an ongoing challenge for patients and families facing advanced and progressive disease and for their medical caregivers. Interventional strategies are emerging to mitigate distress and optimize quality of life in this population although the methodological challenge of demonstrating benefit within the context of worsening functional status and disease course is substantial. For researchers, a fluctuating and variable course of disease and symptoms makes it difficult to define baseline values or to make comparisons amongst research participants. Perhaps most fundamental is the problem of selecting meaningful outcomes for which there are reliable and valid measures within a cohort of patients moving towards death. This symposium will address each of these issues, inviting experienced researchers to share practical examples from their research studies and advice regarding how to address them in order to achieve excellence in palliative care research.

3:02 p.m. **METHODOLOGICAL CHALLENGES IN RANDOMIZED CONTROLLED TRIALS OF SPECIALIZED PALLIATIVE CARE**
Camilla Zimmermann
Princess Margaret Cancer Centre, University Health Network & University of Toronto, Toronto

3:22 p.m. **THE PATIENT DIGNITY QUESTION: A PRACTICAL MEANS OF PLACING PERSONHOOD ON THE CLINICAL RADAR**
Harvey Max Chochinov
University of Manitoba & Manitoba Palliative Care Research Unit, Winnipeg

3:42 p.m. **PALLIATIVE RADIOTHERAPY RESEARCH**
Edward Chow
Sunnybrook Health Sciences Centre & Odette Cancer Centre, Toronto

4:02 p.m. **METHODOLOGICAL CHALLENGES IN ASSESSING PRIMARY CAREGIVER'S BURDEN IN PALLIATIVE CARE**
Serge Dumont
Centre de Recherche en Cancérologie de l'Université Laval, Université Laval, Québec

4:22 p.m. **PANEL DISCUSSION**
All speakers

3:00 - 4:30 p.m.

B4 – INFLAMMATION AND CANCER PREVENTION AND CONTROL

Sheraton Hall E

Alberta CANCER FOUNDATION

Chair:
Stephen Robbins
University of Calgary, Calgary & CIHR Institute of Cancer Research

This symposium will explore the role of inflammation in cancer prevention and control. There is a growing body of evidence from epidemiological and infectious disease studies that supports the hypothesis that inflammation has a profound role in cancer initiation. In addition, the host inflammatory system can have direct roles in tumour progression by modulating the tumour microenvironment. We will explore the complex aspects of the host inflammatory system in cancer prevention and control across the cancer research continuum. This will include the epidemiological association of cancer and inflammation as well as the molecular and cellular mechanisms that mediate this association.

3:04 p.m. **WHAT CAN POPULATION STUDIES CONTRIBUTE TO UNDERSTANDING THE ROLE OF INFLAMMATION IN CANCER RISK?**
Louise Parker
Dalhousie University, Halifax

3:36 p.m. **ORGAN-SPECIFIC RECRUITMENT OF IMMUNE CELLS DURING BREAST CANCER METASTASIS**
Peter Siegel
McGill University, Montréal

3:53 p.m. **PUTTING MORE STING INTO TUMOUR-ASSOCIATED MACROPHAGES**
Frank R. Jirik
University of Calgary, Calgary

4:10 p.m. **VITAMIN D SIGNALING REGULATES TURNOVER OF TARGET PROTEINS OF THE E3 LIGASE TUMOUR SUPPRESSOR FBW7**
Reyhaneh Salehi-Tabar
Department of Medicine, McGill University, Montréal

4:20 p.m. **HIERARCHICAL MODELING IDENTIFIES NOVEL LUNG CANCER SUSCEPTIBILITY VARIANTS IN INFLAMMATION PATHWAYS AMONG 10,140 CASES AND 11,012 CONTROLS**
Darren Brenner
Samuel Lunenfeld Research Institute, Toronto & International Agency for Research on Cancer, Lyon, France

4:30 p.m.

POSTER SESSIONS (A–K)

4:30 - 5:00 p.m.

POSTER DISCUSSION SESSIONS 1*

DNA REPAIR AND GENOMIC INSTABILITY

Grand Ballroom West

Chair:
Graham Dellaire
Department of Pathology, Dalhousie University, Halifax

B-08
Nuclear PTEN Controls DNA Repair and Sensitivity to Genotoxic Stress
Christian Bassi
Department of Medical Biophysics, University of Toronto, Toronto

B-13
RAS Transformation Requires CUX1-Dependent Repair of Oxidative DNA Damage
Zubaidah M. Ramdzan
McGill University, Montréal

B-09
Prostate Cancer Precision Medicine: Biopsy-Driven Signatures of Genomic Instability Married to Microenvironmental Features Drives Individual Patient Outcome
Emilie Lalonde
Ontario Institute for Cancer Research & University of Toronto, Toronto

B-07
Meat-Derived Heterocyclic Aromatic Amines, DNA Repair Polymorphisms and Colorectal Adenoma Risk
Vikki Ho
Queen's University, Kingston

B-12
Therapeutic Approaches to BRCA-Associated Pancreatic Cancer
Zoe Andrei
Goodman Cancer Research Centre & McGill University Health Centre, Montréal

SURVIVORSHIP, QUALITY OF LIFE, AND SUPPORTIVE CARE

Grand Ballroom Centre

Chair:
Camilla Zimmermann
Princess Margaret Cancer Centre, University Health Network & University of Toronto, Toronto

D-02
Examining Predictors of Self-Management Skills in Teenaged Survivors of Childhood and Adolescent Cancer
Iqra Syed
McMaster University, Hamilton

D-11
The Relationship of Self-Rated Health with Measures of Functional Status and Mortality: Results of a Prospective Pilot Study with Older Newly-Diagnosed Cancer Patients
Martine Puts
University of Toronto, Toronto

D-21
Experimental Fertility Preservation Interventions in Pre-Pubertal Boys with Cancer: A Report on Preferences of Teenage Cancer Survivors, Parents, and Providers
Abha Gupta
The Hospital for Sick Children, Toronto

D-24
Physical Inactivity Isn't the Only Challenge! Advancing Knowledge on Sedentary Behaviours among Breast Cancer Survivors
Jason Lacombe
University of Toronto, Toronto

CANCER NETWORKS AND SIGNALLING

Grand Ballroom East

Chair:
Jeff Wrana
Lunenfeld-Tanenbaum Research Institute, Toronto

H-16
Regulation of MYC-Dependent Transformation by the SWI/SNF Chromatin Remodeling Complex
William Tu
Department of Medical Biophysics, Faculty of Medicine, University of Toronto & Ontario Cancer Institute, Princess Margaret Cancer Centre, University Health Network, Toronto

H-01
Differential Subcellular Localization and Trafficking of RET Isoforms
Mathieu Crupi
Queen's University, Kingston

H-05
p66ShcA is a Molecular Driver of Basal Breast Cancer by Promoting an Epithelial to Mesenchymal Transition
Jesse Hudson
Lady Davis Institute, McGill University, Montréal

H-10
Biomarkers Identification of CK2 Inhibition: Comparative Evaluation of CK2 Inhibitors in Living Cells
Laszlo Gyenis
University of Western Ontario, Department of Biochemistry, London

H-02
Exploring the Landscape of Kinase Rewiring Events in Cancer
Omar Wagih
Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Toronto

MOVING DRUGS TO THE CLINIC

Sheraton Hall E

Chair:
Robert Kerbel
Sunnybrook Research Institute & University of Toronto, Toronto

J-02
Testing Devices or Experimental Systems? Cancer Clinical Trials Take the Genomic Turn
Nicole Nelson
McGill University, Montréal

J-08
Designing a Platform for Correlative Biomarker Acquisition in Lymphoma Clinical Trials
Koren Mann
Lady Davis Institute, McGill University, Montréal

J-13
Canadian Cancer Clinical Trials Network: The Creation of a Pan-Canadian Network to Increase Capacity and Capability of Academic-Led Cancer Trials
Kay Friel
Ontario Institute for Cancer Research, Toronto

*Alphanumerics denote poster codes as referenced in the Abstract Book.

6:00 - 7:00 p.m.

ROBERT A. PHILLIPS LECTURE

Grand Ballroom West/Centre

The Robert A. Phillips Lecture is a scientific lecture on cancer stem cells entitled *Starting and Stopping Cancer in Stem Cells*. The lecture is open to all conference attendees but free registration is required.

About the speaker, Dr. Owen Witte

Dr. Owen N. Witte is the Director of the Broad Stem Cell Research Center, Distinguished Professor of Microbiology, Immunology and Molecular Genetics and President's Chair in Developmental Immunology as well as Investigator, Howard Hughes Medical Institute at the University of California, Los Angeles. He holds a BS from Cornell University and an MD from Stanford University. He completed postdoctoral research at MIT prior to joining the faculty at UCLA.

Dr. Witte discovered tyrosine kinase activity for the ABL gene and first demonstrated the BCR-ABL oncoproteins in human leukemias, which helped lead to the development of kinase targeted therapy. His group also discovered Bruton's tyrosine kinase which is required for normal B-lymphocyte development, and when mutated leads to an immune deficiency. Inhibitors of this kinase have recently entered clinical practice to combat lymphoid leukemias and lymphomas. Recent work on stem cells for epithelial cancers of the prostate have defined potential new therapies for this disease.

Dr. Witte is a member of the National Academy of Sciences, the Institute of Medicine and the American Academy of Arts and Sciences. His many honours include the Milken Foundation Award, the Rosenthal Award, and the Alpert Foundation Prize. Dr. Witte currently serves on the Board of Directors for AACR and the President's Cancer Panel.

Open to all. Registration is encouraged.

7:00 - 9:00 p.m.

CCRDP NEW PRINCIPAL INVESTIGATORS MEETING DINNER

City Hall Room

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). During the dinner, CIHR-ICR will present its CIHR-ICR Early Career Award. There will be prizes for best poster presentation, and table discussions will be led by invited cancer researchers on various topics such as communication and presentation skills, grant writing and management skills.

This session is closed (open to New Principal Investigators meeting registrants only).

TUESDAY, NOVEMBER 5, 2013

EVENT LOCATIONS

7:30 a.m.	CCRA Prevention Research Framework Meeting [OPEN]		Sheraton Hall A
7:30 a.m.	CCRA Strategic Planning Meeting [OPEN]		Sheraton Hall B
7:30 a.m.	CIHR Cancer STIHR Meeting [CLOSED]		City Hall Room
8:30 a.m.	**Plenary Session: Ready, Set, Go: Implementation of Innovations into the Cancer System**		Grand Ballroom West/ Centre
10:00 a.m.	BREAK		Grand Ballroom Foyer, Sheraton Hall
10:30 a.m.	CONCURRENT SYMPOSIA C	Pediatric Oncology	Grand Ballroom West
		Heterogeneity and Cancer	Grand Ballroom Centre
		Personalized Adaptive Therapy Based on Multimodality Imaging	Grand Ballroom East
		Hereditary Cancers: New Ways to Prevent Cancer Deaths	Sheraton Hall E
12:00 p.m.	LUNCH		Sheraton Hall D
12:00 p.m.	Careers in Cancer Research Development Program (CCRDP) Lunch Lecture [OPEN]		City Hall Room
12:00 p.m.	CTRNet: Biobanking tools, resources, and initiatives to fuel Canadian cancer research [OPEN]		Sheraton Hall A
1:00 p.m.	**Plenary Session: Cancer Metabolism from Prevention to Treatment**		Grand Ballroom West/ Centre
2:30 p.m.	BREAK		Grand Ballroom Foyer, Sheraton Hall
3:00 p.m.	CONCURRENT SYMPOSIA D	Qualitative Research	Grand Ballroom West
		Metastatic Microenvironment and Tumour Initiating Cells	Grand Ballroom Centre
		Anti-Cancer Biotherapeutics	Grand Ballroom East
		Cancer Informatics	Sheraton Hall E
4:30 p.m.	Poster Sessions (L–X)		Sheraton Hall C, Osgoode Ballroom
4:30 p.m.	POSTER DISCUSSION SESSIONS 2	Disease Reservoirs and Therapeutic Resistance	Sheraton Hall A
		Applied Research in Cancer Control	Sheraton Hall B
		Surrogate Biomarkers and Cancer Monitoring	Grand Ballroom East
		Cancer Prevention and Predisposition	Sheraton Hall E
6:30 p.m.	CCRA Awards Presentation Dinner		Grand Ballroom West/Centre/East

DETAILED AGENDA – TUESDAY, NOVEMBER 5, 2013

7:30 - 8:30 a.m.

CCRA PREVENTION RESEARCH FRAMEWORK MEETING

Sheraton Hall A

Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

Canadian Cancer Society / Société canadienne du cancer

Expanding capacity to conduct intervention research targeting workplace carcinogens has been identified as a priority area. At this point relatively little research in this area has been conducted in Canada. In this session we will explore both the unique barriers and the opportunities in this occupational intervention research. Three speakers will each focus on specific, relatively non-traditional workplace carcinogens; occupational exposure to UV radiation, exposure to anti-neoplastic drugs among healthcare workers, and disruption of circadian rhythms due to night shift work. Each of these exposures has its own challenges, but they also have similar issues in regards to recruitment of study populations, follow-up, and evaluation.

Open to all.

7:30 - 8:30 a.m.

CCRA STRATEGIC PLANNING MEETING

Sheraton Hall B

Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

In 2010, the CCRA launched the Pan-Canadian Cancer Research Strategy, a plan for collaborative action by Canada's cancer research funders. This marked the first time Canadian cancer research funding agencies rallied together to develop and implement a shared strategic plan. To view the plan and progress update, visit the CCRA website at http://www.ccra-acrc.ca/index.php/publications-en/strategy. The Pan-Canadian Cancer Research Strategy has contributed to moving a number of large initiatives forward and was in fact the genesis of this conference. With this plan coming to an end, the CCRA members have embarked on an exercise to develop a new strategic plan for Canada's cancer research funders. The satellite meetings on Tuesday, November 5 and Wednesday, November 6 provide an opportunity for the Canadian cancer research community to engage in the development of the new plan. During these interactive sessions, an update on the evolving plan will be presented and attendees will be consulted for their insights and perspectives on the developing plan.

Open to all.

7:30 - 8:30 a.m.

CIHR CANCER STIHR MEETING

City Hall Room

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

The Strategic Training Initiative in Health Research (STIHR) was implemented by CIHR as a way for Canada to increase its competitiveness internationally in attracting new, bright, creative research talent and to ensure innovation and excellence in the next generation of Canadian health research training programs. The CIHR Institute of Cancer Research is proud to support a networking breakfast session for the cancer relevant STIHRs to continue discussions on networking, branding, and the development of an evaluation framework.

This session is closed.

8:30 - 10:00 a.m.

PLENARY SESSION: READY, SET, GO: IMPLEMENTATION OF INNOVATIONS INTO THE CANCER SYSTEM

Grand Ballroom West/Centre

CANADIAN PARTNERSHIP AGAINST CANCER / PARTENARIAT CANADIEN CONTRE LE CANCER

Chair:
Eva Grunfeld
Ontario Institute for Cancer Research & University of Toronto, Toronto

Canadians identify their healthcare system as the exemplar of the most important values of Canadian society. With respect to cancer care, Canada's survival rates are amongst the best in the world. However, Canadian healthcare ranks poorly on dimensions such as access, timeliness, and efficiency. For the Canadian population to benefit from scientific discoveries in cancer prevention, screening, diagnosis, and treatment, there must be a healthcare system that is able to adopt, implement and sustain those innovations. This session will examine the current state and future capacity of Canada's healthcare system to respond to the challenges of scientific discoveries in cancer control.

8:35 a.m.

HOW ARE WE SCORING ON THE 3 'E'S: EFFECTIVENESS, EFFICIENCY, AND EQUITY?

Craig Earle
Ontario Institute for Cancer Research & Cancer Care Ontario, Toronto

International comparisons consistently show that cancer survival rates in Canada are generally at or above the average of those achieved in other OECD countries. Moreover, Canadians report few financial barriers to accessing medical care. However, we rank poorly on measures of efficiency and equity. Next to the US, Canada has the highest per capita health care costs, including the highest prices for prescription drugs. We have the longest wait times, and rank near the bottom on measures related to information technology, coordination of care, and patient-centeredness. Our fifth-place ranking out of seven countries for equity mostly stems from the things not covered well by our universal health care system: oral medications, dental care, and home care services. However, we also rank low because of disparities in care based on socioeconomic status, with our low income earners reporting longer wait times, poorer ratings of their physicians, and being less likely to visit a doctor when needed than high income earners. So, while we are doing well on what is arguably the most important 'E', effectiveness of cancer care, there are clear policy opportunities to improve our overall scorecard.

8:55 a.m.

BREAST CANCER CARE FOR RURAL, NORTHERN AND ABORIGINAL CANADIANS: ONE PERSPECTIVE ON INNOVATION

Nadine R. Caron
Department of Surgery, University of British Columbia, University of Northern British Columbia, Johns Hopkins University Bloomberg School of Public Health & BC Cancer Agency Genome Sciences Centre, Prince George

As the most common cancer in Canadian woman, it is not surprising that breast cancer is a primary focus of oncology care and the pillars of research that drive it. With this attention comes increasing knowledge, understanding, and innovations applicable to the spectrum of cancer care, including prevention, screening, diagnosis, treatment, survivorship, and palliative care.

Implementing the spectrum of breast cancer care is accompanied with guidelines and goals that will inevitably be modified with the next generation of innovations. The expectations follow that these innovations will trump what was before them in multiple measures such as increased sensitivity, enhanced specificity, less invasiveness, more accuracy and ultimately, improved patient outcomes. With Canada's health care falling primarily under provincial jurisdiction, it seems fitting that access to these innovations would have a sense of equity on a provincial level. For the majority of Canadians, this perception of access to such innovation is true. But the voice of Canada's marginalized populations, such as our rural, northern and Aboriginal populations, may share a different perspective.

Three common goals commonly articulated within Canada's health care system and the policies that drive it are, 1) "decreasing disparities", 2) "eliminating gaps" and, 3) "achieving equality" in health care and health status. While these pervasive goals are admirable targets, they may carry different connotations when looking through the marginalized lens. Within the spectrum of breast cancer care lie examples of each of these goals and questions follow in their footsteps regarding whether they are adequate, accurate, and/or fair.

The voice of the marginalized can be challenging to hear across Canada's vast geography and cultural landscape. Perhaps one of the greatest challenges that lie ahead when implementing innovations is ensuring that these voices are heard.

9:15 a.m.

EXPLORING OUR CAPACITY TO ADOPT, IMPLEMENT, AND SUSTAIN INNOVATIONS IN PERSONALIZED MEDICINE

Elizabeth Eisenhauer
Queen's University, Kingston

The topic of personalized cancer medicine, also called stratified (UK) or precision medicine (US), has garnered substantial attention by researchers, clinicians, pharmaceutical/diagnostic industries and policy makers over the past decade. The increasing ease with which molecular genetic changes in individual cancers and cancer patients can be identified with current genetic sequencing technologies, and the fact that the costs of this technology have fallen substantially have led to the prediction that future cancer care will be based on identification of the molecular changes of each patient's cancer followed by prescription of individualized cocktails of targeted therapeutics. In anticipation of these predictions, some countries have invested heavily in networks of diagnostic facilities with mutational analysis capabilities; others are conducting large scale "real world" evaluation of new technologies and many have developed national and regional advisory structures.

There are however, some issues to be tackled if a vision of effective personalized care is to be realized. Substantial challenges exist in analysis and storage of the data emerging from gene sequencing. The track record of targeted therapy to date, with a few exceptions, has been modest at best with "positive" results in metastatic cancer often consisting of only a few weeks or months survival gains. Finally, discussions around cost-effectiveness and affordability have been sobering.

This lecture will offer a review of the potential of personalized cancer medicine and those aspects of cancer research, practice and policy that will need to be addressed if there is to be a paradigm shift in cancer care.

9:35 a.m.

IMPLEMENTING CANCER INNOVATIONS IN CANADA: CAN WE DO IT?

Geoff Porter
Dalhousie University, Halifax & Canadian Partnership Against Cancer

In addition to the geographic, socioeconomic, and cultural diversity that exists throughout Canada, the organization of cancer services within this country is also disparate. Despite such diversity, some domains of cancer care have seen, and indeed benefited from, a pan-Canadian approach: established and developing cancer screening programs are such examples. On the other hand, the implementation of specific advances within the domains of cancer diagnosis and treatment in an equitable and efficient fashion has been more challenging, owing in part to inter- and intra- provincial heterogeneity of Canadian cancer care delivery.

This lecture will review some of the successes and challenges related to the implementation of cancer innovations in Canada. In doing so, the impact of past and current policy will be examined. Finally, future strategies aimed at accelerating cancer control in Canada through thoughtful innovation implementation will be explored.

10:00 - 10:30 a.m.

BREAK

10:30 a.m.

CONCURRENT SYMPOSIA – C

10:30 a.m. – 12:00 p.m.

C1 – PEDIATRIC ONCOLOGY
Grand Ballroom West

SickKids® RESEARCH INSTITUTE

SickKids® THE HOSPITAL FOR SICK CHILDREN
Garron Family Cancer Centre

Chairs:
Jason N. Berman
Dalhousie University & IWK Health Centre, Halifax

Nada Jabado
McGill University & McGill University Health Centre, Montréal

Due to the rarity of childhood cancer, cooperative clinical trial networks have evolved to address biologic and therapeutic questions with uniform approaches in order to have adequate sample sizes to inform future management decisions. Almost half of all children with cancer who enter a pediatric institution are enrolled on a clinical trial. The success of these coordinated efforts is exemplified by the significant advances made in the outcomes of a number of pediatric malignancies, most notably acute lymphoblastic leukemia, which currently carries a cure rate of upwards of 90%. Pediatric oncology has lead the way in using genetic and molecular markers to risk stratify patient treatment, thereby improving survival and reducing toxicity. In addition, with a recent focus on adolescent and young adult tumours, a number of studies have highlighted a superior prognosis for this population when treated in a pediatric vs. adult setting. This symposium will shed light on differences in the approach and management of pediatric and adult oncology patients with an emphasis on elements that may be transferrable to benefit the provision of adult cancer care.

10:33 a.m. **CLINICAL TRIALS FOR CHILDHOOD CANCER: FACT AND FICTION**
Paul Grundy
CancerControl Alberta, Alberta Health Services, Edmonton

10:51 a.m. **ADOLESCENT AND YOUNG ADULT ONCOLOGY: A UNIQUE SPECTRUM OF DISEASES AND PATIENTS**
Mark L. Bernstein
Department of Pediatrics, IWK Health Center & Dalhousie University, Halifax

11:09 a.m. **PEDIATRIC DEVELOPMENTAL THERAPEUTICS FROM KIDS TO ADULTS AND BACK**
Sylvain Baruchel
Department of Pediatrics, The Hospital for Sick Children & University of Toronto, Toronto

11:27 a.m. **NEUROBLASTOMA: PEDIATRIC PARADIGM FOR PRECISION MEDICINE**
Meredith Irwin
Division of Hematology-Oncology, The Hospital for Sick Children, Toronto

11:45 a.m. **A NOVEL MOSAIC MOUSE MODEL OF RHABDOMYOSARCOMA**
Rosemarie Venier
Lunenfeld-Tanenbaum Research Institute, Toronto

10:30 a.m. – 12:00 p.m.

C2 – HETEROGENEITY AND CANCER
Grand Ballroom Centre

Canadian Breast Cancer Foundation | Fondation canadienne du cancer du sein

Chair:
David Huntsman
BC Cancer Agency, Vancouver

The fact that cancer is a heterogeneous disease both in terms of inter- and intratumoural heterogeneity is not news. What has changed is our ability to dissect and understand heterogeneity from both a genomic and functional perspective. This session will begin with a presentation on how intratumoural heterogeneity, once recognized, can be used to stratify the care of pediatric brain cancers. This will be followed by a presentation of new data on functional heterogeneity of ovarian cancer cells and lastly a presentation on how these concepts can be bought together to improve the care of cancer patients.

10:30 a.m. **HETEROGENEITY THROUGH SPACE AND TIME DRIVES THE CLINICAL BEHAVIOR OF CHILDHOOD BRAIN TUMOURS IN THE CLINIC**
Michael D. Taylor
The Hospital for Sick Children, Toronto

10:50 a.m. **ANALYZING THE CELLULAR BASIS FOR HETEROGENEITY IN SERIOUS OVARIAN CARCINOMA**
Benjamin Neel
University Health Network – Ontario Cancer Institute, Toronto

11:10 a.m. EMBRACING HETEROGENEITY TO SUPPORT PERSONALIZED ONCOLOGY CARE
David Huntsman
BC Cancer Agency, Vancouver

11:30 a.m. DIFFERENTIAL ONCOLYTIC EFFICACY IS IMPACTED BY TUMOUR HETEROGENEITY USING A THREE-DIMENSIONAL MODEL OF OVARIAN CANCER METASTASIS
Trevor Shepherd
University of Western Ontario & Translational Ovarian Cancer Research Program, London

11:45 a.m. DISTINCT PATTERNS OF GENOMIC CLONAL EVOLUTION IN BREAST CANCER PATIENT XENOGRAFTS
Peter Eirew
BC Cancer Agency & University of British Columbia, Vancouver

10:30 a.m. – 12:00 p.m.

C3 – PERSONALIZED ADAPTIVE THERAPY BASED ON MULTIMODALITY IMAGING

Grand Ballroom East

Alberta Innovates Health Solutions

Chair:
Robert Bristow
Princess Margaret Cancer Centre, Toronto

The tumour microenvironment is heterogeneous with respect to both genomic and metabolic features. These features can be important for deciding on initial cancer treatments (surgery, radiotherapy or systemic therapy) and overall prognosis. Using novel probes and multimodal approaches, oncologic imaging techniques can interrogate the microenvironment and track its response to therapy to help individualize treatment a priori and also alter treatment midway during therapy based on response and nonresponse indices.

This session will describe the important features of the microenvironment that should be imaged and use examples from surgical, radiotherapeutic and systemic targeting to show how different imaging modalities (CT, MRI, SPECT, PET and molecular imaging) can be merged to gain both granular and dynamic information on treatment response. Specific clinical scenarios will be described in which precision imaging and biology are married to personalize cancer medicine.

10:33 a.m. PHENOTYPIC DIVERSITY IN THE TUMOUR MICROENVIRONMENT
Bradly Wouters
Princess Margaret Cancer Centre, Toronto

10:48 a.m. IMAGING TOOLS TO PROBE CANCER BIOLOGY AND HETEROGENEITY IN VIVO
François Bénard
University of British Columbia & BC Cancer Agency, Vancouver

11:03 a.m. PRESENTATION TITLE TO BE ANNOUNCED
David Jaffray
Princess Margaret Cancer Centre, Toronto

11:18 a.m. IMAGING THE TUMOUR MICROENVIRONMENT AND TUMOUR HETEROGENEITY WITH PET
Wolfgang Weber
Memorial Sloan-Kettering, New York, USA

11:33 a.m. IN VIVO MRI CHARACTERIZATION OF TUMOUR RESPONSE TO RADIOTHERAPY IN A MOUSE MODEL OF BRAIN METASTASIS
Donna Murrell
Department of Medical Biophysics, University of Western Ontario, London

11:43 a.m. PANEL DISCUSSION
All speakers

10:30 a.m.-12:00 p.m.

C4 – HEREDITARY CANCERS: NEW WAYS TO PREVENT CANCER DEATHS

Sheraton Hall E

Chairs:
David Malkin
The Hospital for Sick Children, Toronto

Jacques Simard
Université Laval et Centre de recherche du Centre hospitalier universitaire de Québec, Québec

While the majority of cancers have been considered sporadic, emerging evidence suggests that within both adult and pediatric oncology populations, a genetic basis underlies the etiology of many human cancers – extending well beyond the traditional focus on hereditary breast/ovarian cancer, hereditary colon cancer which have garnered most attention over the previous two decades. The advent of whole genome sequencing, improved ascertainment and follow-up evaluation of family cancer histories, and characterization of patterns of cancer incidence that fit conventional modes of inheritance has led to a recognition that important biological and clinical lessons can be learned from the study of hereditary cancer syndromes that have direct diagnostic and therapeutic relevance to all cancers.

This session will focus on the emerging genetic and biologic basis of a wide spectrum of heritable cancers, characterization of genotype:phenotype correlations in these cancer predisposition syndromes, and the complex psychosocial and ethical issues that emerge from the identification of genetic risk for cancer.

10:33 a.m. **GENOTYPE:PHENOTYPE CORRELATIONS IN EMERGING HEREDITARY CANCER SYNDROMES**
David Malkin
The Hospital for Sick Children, Toronto

10:51 a.m. **DICER1: GETTING TO THE EDGES OF THE PHENOTYPE**
William Foulkes
McGill University & Lady Davis Institute, Montréal

11:09 a.m. **TOWARDS A COMPREHENSIVE UNDERSTANDING OF THE INHERITED GENETIC SUSCEPTIBILITY TO BREAST CANCER**
Jacques Simard
Université Laval et Centre de recherche du Centre hospitalier universitaire de Québec, Québec

11:27 a.m. **NEW STATEGIES TO PREVENT CANCER IN RB+/- FAMILIES**
Rod Bremner
Samuel Lunefeld Research Institute, Toronto

11:42 a.m. **PSYCHOSOCIAL SCREENING IN CANCER GENETICS CLINICS: A PATIENT ADMINISTERED TOOL TO GUIDE PSYCHOLOGICAL RESOURCES AND APPROACHES TO INTERVENTION**
Mary Jane Esplen
University Health Network & University of Toronto, Toronto

12:00 p.m.

LUNCH

12:00 – 1:00 p.m.

CCRDP LUNCH LECTURE

City Hall Room

Your Findings on the Front Page: Translating Your Research for the Public through the Media

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). As the media turn to the health research community to understand and interpret research outcomes and their impact on public health, the second of three lunch lectures will focus on how to work with the media. Facilitated by CIHR's Media Specialist, David Coulombe, this media training session will provide researchers and trainees with advice on: 1) Laying the foundation: preparing for a radio, television, print, or telephone interview; 2) Media requests: maximizing your media opportunities and communicating effectively with journalists; 3) Turning your research results into great media opportunities; 4) CIHR: understand how our communication team can help you.

Open to all.

12:00 - 1:00 p.m.

CTRNET: BIOBANKING TOOLS, RESOURCES AND INITIATIVES TO FUEL CANADIAN CANCER RESEARCH

Sheraton Hall A

CANADIAN TUMOUR REPOSITORY NETWORK
RÉSEAU CANADIEN DE BANQUE DE TUMEURS

The Canadian Tumour Repository Network (CTRNet) (www.ctrnet.ca) is a consortium of leading provincial tumour biorepositories formed with funding from the Institute for Cancer Research, Canadian Institutes for Health Research (ICR-CIHR). It aims to support cancer research using human biospecimens by enhancing biobanking capacity and improving product quality through standardization.

The purpose of this session is to describe the tools and resources that CTRNet has developed to support cancer research, including: an open access, web-based catalogue of over 75,000 biospecimens; Standard Operating Procedures to control pre-analytical variability; programs to ensure that biospecimens are of the high quality required to support research needs; and an education-based certification process to help researchers improve and qualify their biobanking methods and processes. Particular emphasis will be placed on how to access these resources through CTRNet.

Open to all.

1:00 - 2:30 p.m.

PLENARY SESSION: CANCER METABOLISM FROM PREVENTION TO TREATMENT

Grand Ballroom West/Centre

Chair:
Stephen Robbins
University of Calgary, Calgary & CIHR Institute of Cancer Research

This plenary session is designed to discuss various aspects of cancer metabolism both with respect to the tumour as well as the host in cancer prevention and control. Cancer metabolism was originally described by Otto Warburg more than 70 years ago when he discovered that malignant cells generally have altered metabolism with high rates of glucose uptake and increased glycolysis, even under aerobic conditions. This theory suggests that cancer is a disease of energy metabolism and this plenary will expand this concept to suggest that cancer is primarily a metabolic disease requiring metabolic solutions for its management and prevention. In addition to discussing new methods to detect and attack the metabolic vulnerabilities of cancer we will focus on the evidence that metabolic syndromes such as in obesity, hyperglycemia and hyperinsulinemia have a role in cancer development, progression and prognosis and discuss strategies to mitigate these risks.

1:00 p.m.

PHYSICAL ACTIVITY AND CANCER SURVIVORSHIP: IMPLICATIONS FOR QUALITY OF LIFE AND SURVIVAL

Kerry Courneya
University of Alberta, Edmonton

The purpose of my talk is to provide an overview of the latest research on the role of physical activity in cancer survivorship. Specifically, I will review studies that have examined the link between exercise and disease outcomes in cancer survivors including a recent phase II randomized controlled trial completed by our research group. In the Supervised Trial of Aerobic versus Resistance Training (START), we reported the first randomized data to suggest that adding exercise to standard chemotherapy for breast cancer may improve outcomes. I will also provide an overview of the ongoing Colon Health and Life-Long Exercise Change (CHALLENGE) Trial being led by the NCIC Clinical Trials Group. To the best of our knowledge, the CHALLENGE Trial is the first phase III randomized exercise trial to examine the effects of exercise on disease-free survival in colon cancer survivors. I will then review the role of exercise in managing symptoms and improving quality of life both during and after cancer treatments. Specifically, I will present recent data from our Combined Aerobic and Resistance Exercise (CARE) Trial which compared two different doses and types of exercise in breast cancer patients receiving chemotherapy. The CARE Trial showed that higher doses of aerobic or combined exercise improved aerobic fitness, muscular strength, physical functioning, bodily pain, and endocrine symptoms during breast cancer chemotherapy. I will end by summarizing the most recent exercise guidelines for cancer survivors from the American Cancer Society and the American College of Sports Medicine.

1:30 p.m.

METABOLIC STRATEGIES FOR CANCER PREVENTION AND TREATMENT

Michael Pollak
McGill University, Montréal

Classic therapies for cancer include cytotoxic chemotherapies, hormonal therapies, and radiotherapies. Some of these act in part by impacting on the energy metabolism of cell, but much ongoing research now is exploring the possibility that depriving cancer cells of the ability to maintain energetic balance may be therapeutically useful.

One example relates to the possibility that a class of antidiabetic drugs that influences energetics may be 'repurposed' to become useful in oncology. Metformin is widely prescribed for the treatment of type II diabetes. Recently, it has been proposed that this compound or related biguanides may have antineoplastic activity. Biguanides may exploit specific metabolic vulnerabilities of transformed cells by acting on them directly, or may act by indirect mechanisms that involve alterations of the host environment. Preclinical data suggest that drug exposure levels are a key determinant of proposed direct actions, which involve inhibition of oxidative phosphorylation via a recently clarified mechanism. With respect to indirect actions, it will be important to determine whether recently demonstrated metformin-induced changes in levels of candidate systemic mediators such as insulin or inflammatory cytokines are of sufficient magnitude to achieve therapeutic benefit. Results of the first generation of clinical trials now in progress are eagerly anticipated. Ongoing investigations may justify a second generation of trials that explore pharmacokinetic optimization, rational drug combinations, synthetic lethality strategies, novel biguanides, and the use of predictive biomarkers.

2:00 p.m.

THE RELATIONSHIP BETWEEN OBESITY AND CANCER: THE INSULIN CONNECTION

Vuk Stambolic
Princess Margaret Cancer Centre, University Health Network & Department of Medical Biophysics, University of Toronto, Toronto

Obesity amongst the general population has been on a steady rise for the past 40 years. While it has been long recognized that obesity is a key risk factor in the etiology of type 2 diabetes and cardiovascular diseases, emerging evidence indicates that obesity and the associated increase in circulating insulin levels are major adverse factors in the development and severity of a variety of human cancers. Moreover, the use of insulin-lowering drugs is linked to the lowered incidence and severity of cancer in type 2 diabetics. Certain human cancers ectopically express the insulin receptor (IR) and feature activation of signaling pathways downstream of the IR. One such pathway is the PI3K signaling cascade, which is deregulated in as many as half of all human cancers and includes products of several oncogenes, such as the PIK3CA and PKB/Akt and the tumour suppressor PTEN.

Our work aims to understand the molecular mechanism(s) of the influence of obesity to cancer. Using genetics in the fly and the mouse, we are modelling the relationship between obesity and cancer. Moreover, through the conduct of "window of opportunity" clinical trials, we are interrogating the influence of metabolic drugs on the biology of cancers.

2:30–3:00 p.m.

BREAK

3:00 p.m.

CONCURRENT SYMPOSIA – D

3:00- 4:30 p.m.

D1 – QUALITATIVE RESEARCH
Grand Ballroom West

Chair:
Karen Fergus
York University & Sunnybrook Odette Cancer Centre, Toronto

Qualitative methods are uniquely valuable to understand the attitudes, beliefs and experience of cancer patients and the impact of cultural and environmental factors on subjective experience. Qualitative research can be used to develop explanatory models, to generate quantitative measures and to assess outcomes in both feasibility studies and randomized controlled trials. However, uncertainty and debate continues regaining the validity and generalizability of qualitative data, the role of theory and the optimal approach to integrating qualitative and quantitative methodology and data. This symposium will address these issues and illustrate, in specific research studies, the benefits and challenges of qualitative and mixed methods research.

3:03 p.m. **GETTING HELP FOR MY HEALTH: NARRATIVES OF ADULT SURVIVORS OF CHILDHOOD CANCER**
Fuchsia Howard
University of British Columbia & BC Cancer Agency, Vancouver

3:21 p.m. **MAPPING THE MORAL LANDSCAPE OF END-OF-LIFE CARE IN CANADA: A DISCOURSE ANALYSIS**
Mary Ellen Macdonald
McGill University, Montréal

3:39 p.m. **INTEGRATING QUANTITATIVE AND QUALITATIVE METHODS IN PSYCHOSOCIAL ONCOLOGY RESEARCH: A CASE STUDY**
Rinat Nissim
Princess Margaret Cancer Centre, Toronto

3:57 p.m. **CREATING UNDERSTANDING WITH COLLAGES: QUALITATIVE RESEARCH ON SECONDARY LYMPHEDEMA AFTER CANCER**
Roanne Thomas
University of Ottawa, Ottawa

4:15 p.m. **OBJECTIVE AND SUBJECTIVE MEASURES OF BREAST CANCER RISK IN ADULT WOMEN**
Carolyn Gotay
University of British Columbia, Vancouver

3:00- 4:30 p.m.

D2 – METASTATIC MICROENVIRONMENT AND TUMOUR INITIATING CELLS
Grand Ballroom Centre

Chair:
Morag Park
Goodman Cancer Research Centre, McGill University, Montréal

3:00 p.m. **ALL STEM CELLS ARE NOT CREATED EQUAL: IMPLICATIONS FOR CANCER**
Connie Eaves
Terry Fox Laboratory, BC Cancer Agency, Vancouver

3:20 p.m. **NOVEL TARGETING STRATEGIES FOR LEUKEMIA-INITIATING CELLS IN MYELOID NEOPLASMS**
Guy Sauvageau
Institut de recherche en immunologie et cancérologie/Université de Montréal et Hôpital Maisonneuve-Rosemont, Montréal

3:40 p.m. **PHOSPHOPROTEOMIC AND TRANSCRIPTIONAL BIOMARKERS PREDICT RESPONSE TO SAR302503, A JAK2 INHIBITOR, IN PRIMARY HUMAN ACUTE MYELOID LEUKEMIA (AML) XENOGRAFTS**
Jean C. Y. Wang
Princess Margaret Cancer Centre, Toronto

3:55 p.m. **PRESENTATION TITLE TO BE ANNOUNCED**
Jeff Wrana
Lunenfeld-Tanenbaum Research Institute, Toronto

4:15 p.m. **RNA-BINDING PROTEIN REGULATION OF CELLULAR MIGRATION AND ADHESION DURING CANCER CELL DISSEMINATION AND METASTASES FORMATION**
Marc-Étienne Huot
Centre de recherche en cancérologie de l'Université Laval et CRCHU de Québec, Québec

3:00 - 4:30 p.m.

D3 – ANTI-CANCER BIOTHERAPEUTICS
Grand Ballroom East

The Princess Margaret Cancer Foundation UHN

Chair:
John Bell
Ottawa Hospital Research Institute, University of Ottawa & Ontario Institute of Cancer Research, Ottawa

Biotherapeutics are important, emerging agents for the treatment of cancer. Antibody mediated therapies are at the leading edge of the biotherapeutic revolution but complex biologicals like immune cell or virally based therapeutics are gaining momentum. This session will focus on the innovations in antibody engineering, immune cell based therapeutic approaches and oncolytic viruses being developed by Canadian research groups. Combination approaches that combine two or more of these platforms will be discussed.

3:03 p.m. **RHABDOVIRUS ONCOLYTIC PLATFORMS FOR THE TREATMENT OF DISSEMINATED SOLID TUMOURS IN ADULTS AND KIDS**
David Stojdl
CHEO Research Institute, Ottawa

3:21 p.m. **B7-H4 IS CRITICAL FOR ANTI-TUMOUR IMMUNITY**
Pamela S. Ohashi
Campbell Family Institute, Princess Margaret Cancer Centre, University Health Network & Department of Immunology, University of Toronto, Toronto

3:39 p.m. **MULTIFACETED T CELL RESPONSES PRODUCED BY A COMBINATION DPX-SURVIVAC AND IMMUNE MODULATOR THERAPY IN OVARIAN CANCER PATIENTS**
Marc Mansour
Immunovaccine, Inc., Halifax

3:57 p.m. **SYNTHETIC PROTEINS FOR MODULATION OF CELL SIGNALLING**
Sachdev Sidhu
University of Toronto, Toronto

4:15 p.m. **SURVEILLANCE OF THE TUMOUR MUTANOME BY CD8+ T CELLS DURING PROGRESSION FROM PRIMARY TO RECURRENT OVARIAN CANCER**
Brad H. Nelson
Deeley Research Centre, BC Cancer Agency, Victoria & Department of Medical Genetics, University of British Columbia, Vancouver

3:00 - 4:30 p.m.

D4 – CANCER INFORMATICS
Sheraton Hall E

GenomeCanada

Chair:
Michael Hallett
McGill University, Montréal

The cancer informatics symposium will present speakers that develop and use informatics and statistical approaches to further our understanding of cancer. In particular, speakers will be chosen to cover topics such as modern biomarkers where the expression of several genes, gene products or genomic loci are used simultaneously to classify clinical end points (patient prognosis, response to therapy, progression), network approaches that describe how genes and gene products are related and co-modulated en masse across cancer types, and approaches that estimate tumour evolution with the promise of addressing issues of progenitor genomic aberrations responsible for tumourigenesis and progression and for addressing issues of tumour colonal heterogeneity and its role with respect to resistance to therapy.

3:04 p.m. **NETWORK-BASED IDENTIFICATION OF PROGNOSTIC SIGNATURES AND DRUG MECHANISM OF ACTION**
Igor Jurisica
Princess Margaret Cancer Centre, Toronto

3:29 p.m. **RANDOM PROGNOSTIC AND PREDICTIVE BIOMARKERS IN CANCER**
Benjamin Haibe-Kains
Institut de recherches cliniques de Montréal, Université de Montréal et McGill University, Montréal

3:54 p.m. **THE MUTATIONAL LANDSCAPE OF PHOSPHORYLATION SIGNALING IN CANCER**
Jüri Reimand
The Donnelly Centre, University of Toronto, Toronto

4:12 p.m. **REACTOME KNOWLEDGEBASE: A PLATFORM FOR PATHWAY AND NETWORK ANALYSIS**
Lincoln Stein
Ontario Institute for Cancer Research, Toronto

4:30 p.m. **POSTER SESSIONS (L–X)**

4:30 - 5:00 p.m.

POSTER DISCUSSION SESSIONS 2*

DISEASE RESERVOIRS AND THERAPEUTIC RESISTANCE

Sheraton Hall A

Chair:
Gerald Batist
McGill University, Segal Cancer Centre of the Jewish General Hospital, Montréal & Quebec-Consortium de Recherche clinique en Oncologie (Q-CROC)

O-04
Targeting Tumour Initiating Cells in Patient-Derived Pancreatic Xenograft Models Using the Hypoxia-Activated Prodrug TH-302
Ines Lohse
Ontario Cancer Institute & Campbell Family Cancer Research Institute, Princess Margaret Cancer Centre, University Health Network, Toronto

O-28
Discovery of Agents that Target Breast Cancer Stem Cells
Robin Hallett
McMaster University, Hamilton

O-25
A New Class of Highly Selective Inhibitors Against Class III Receptor Tyrosine Kinases
Desmond Pink
University of Alberta, Edmonton & Innovascreen, Inc, Halifax

O-09
Colorectal Cancer Cells Require Folic Acid to Maintain DNMT1 Protein Expression, DNA Methylation Patterns, and Cancer Stem Cell Phenotype *in vitro*
Nathan Farias
University of Guelph, Guelph

APPLIED RESEARCH IN CANCER CONTROL

Sheraton Hall B

Chair:
Stuart Peacock
Canadian Centre for Applied Research in Cancer Control (ARCC), Vancouver

Q-01
The Impact of Wait Times on Survival for Women with Uterine Cancer
Laurie Elit
McMaster University & Escarpment Research Institute, Hamilton

Q-19
Modelling Cost Effectiveness and Optimal Delivery of Mammography Screening
Martin Yaffe
Sunnybrook Research Institute & Departments of Medical Biophysics and Medical Imaging, University of Toronto, Toronto

Q-13
Development of a Knowledge Translation Plan for Childhood, Adolescent, and Young Adult Cancer Survivor Care and Support in British Columbia
Mary McBride
BC Cancer Agency & University of British Columbia, Vancouver

Q-10
A Population-Based Study Examining the Impact of a Multidisciplinary Rapid Access Clinic on Utilization of Initial Treatment Options for Patients with Localized Prostate Cancer
Clement Ho
Tom Baker Cancer Centre & University of Calgary, Calgary

Q-14
Collaboration + Research = Action! Uncovering the Story of Cancer in the First Nations Peoples of Manitoba
Donna Turner
CancerCare Manitoba & University of Manitoba, Winnipeg

Q-24
Addressing Fear of Cancer Recurrence Among Women with Cancer: A Pilot Study of a 6-Week Group Cognitive-Existential Intervention
Christine Maheu
University Health Network, Toronto

SURROGATE BIOMARKERS AND CANCER MONITORING

Grand Ballroom East

Chair:
Vanessa Dumeaux
Department of Oncology, McGill University, Montréal & Institute of Community Medicine, UiT The Arctic University of Norway, Norway

U-01
Correlation of Serum Protein Levels with Tumour Burden in the Development of Human Breast Cancer in a Mouse Model Using Snap-Chip
Huiyan Li
Biomedical Engineering Department, McGill University, Montréal

U-05
Integrating High-Throughput Technologies for the Identification and Validation of Ovarian Cancer Biomarkers
Felix Leung
University of Toronto & Mount Sinai Hospital, Toronto

U-02
Investigating the Role of Protein S as a Pro-Survival Factor during Prostate Cancer Progression
Punit Saraon
University of Toronto & Mount Sinai Hospital, Toronto

U-09
Role of Epithelial-to-Mesenchymal (EMT) Transition on Circulating Tumour Cell (CTC) Generation and Metastasis in Prostate Cancer
Lori Lowes
London Health Sciences Centre & University of Western Ontario, London

U-06
Mutational Analysis in the Non-Hodgkin Lymphomas and Development of Minimally Invasive Biomarkers for Monitoring Disease Progression
Ryan Morin
Simon Fraser University, Burnaby & BC Cancer Agency, Vancouver

CANCER PREVENTION AND PREDISPOSITION

Sheraton Hall E

Chair:
William Foulkes
McGill University & Lady Davis Institute, Montréal

W-01
Referral of Women with Serous Ovarian Cancer, Fallopian Tube Cancer and Primary Peritoneal Cancer for *BRCA 1/2* Genetic Testing
Michael Scott
Michael G. DeGroote School of Medicine, McMaster University, Hamilton

W-02
Contralateral Mastectomy and Survival after Breast Cancer in BRCA1 and BRCA2 Mutation Carriers
Kelly Metcalfe
University of Toronto & Women's College Research Institute, Toronto

W-05
Creation of New Sun Safety Messages for Ontario, Canada
Loraine Marrett
Cancer Care Ontario & University of Toronto, Toronto

W-13
Multiplexed Next Generation Sequencing Approach to Identify Novel Genetic Susceptibilities to Hereditary Diffuse Gastric Cancer
Samantha Hansford
University of British Columbia & BC Cancer Agency, Vancouver

*Alphanumerics denote poster codes as referenced in the Abstract Book.

6:30 - 9:00 p.m.

CCRA AWARDS PRESENTATION DINNER

Grand Ballroom West/Centre/East

6:30 p.m. **WELCOME AND THANK YOU TO SUPPORTERS**

Dr. Jacques Magnan & Dr. Christine Williams
Co-Chairs, Canadian Cancer Research Alliance

PRESENTATION OF 2013 CCRA AWARD FOR EXCEPTIONAL LEADERSHIP IN CANCER RESEARCH – DR. VICTOR LING

Introduction to the award by Dr. Philip Branton

Dr. Victor Ling

Dr. Ling is the founding President and Scientific Director of the Canada-wide Terry Fox Research Institute, an institute that involves more than 50 cancer research institutes, hospitals, and universities across Canada (http://www.tfri.ca). He is a Distinguished Scientist at the BC Cancer Agency (BCCA), Professor of Pathology, and Professor of Biochemistry at the University of British Columbia (UBC). He served previously as Vice President of Research at the BCCA and Assistant Dean at UBC. In that capacity he was instrumental in launching in 1998 the Genome Sciences Centre in Vancouver that was the first to decode the SARS virus. He headed the CFI application that resulted in the construction of the $90 million BC Cancer Research Centre opened in 2005 that currently is home to over 650 research staff including over 200 trainees. He served on many national and international boards and committees for cancer research. Notably, he chaired the working group that produced the "Ling report" on cancer research for the Canadian Strategy for Cancer Control (CSCC). CSCC ultimately led to the formation of the Canadian Partnership Against Cancer.

As a scientist, Dr. Ling is best known for his discovery of P-glycoprotein (MDR) associated with multiple drug resistance in cancer, for the sister of P-glycoprotein (BSEP), the bile acid transporter in liver and for the superfamily of ABC transporters. He has been honored by the General Motors Kettering Prize, the Dr. Josef Steiner Cancer Research Award, the Gairdner Foundation International Award, the Terry Fox Gold Medal, Robert L. Noble Prize, NCI Canada 60th Anniversary Diamond Jubilee Award, a Michael Smith Foundation Distinguished Scholar Award and many others. He has received honorary degrees from four different Canadian universities, the Order of British Columbia, the Order of Canada, the Queen Elizabeth ll Diamond Jubilee medal and is a fellow of the Royal Society of Canada.

PRESENTATION OF 2013 CCRA AWARD FOR OUTSTANDING ACHIEVEMENTS IN CANCER RESEARCH – DR. JOHN E. DICK

Introduction to the award by Dr. Alan Bernstein

Dr. John E. Dick

Dr. Dick is a Senior Scientist at the Princess Margaret Cancer Centre and the McEwen Centre for Regenerative Medicine of the University Health Network and Professor of Molecular Genetics at the University of Toronto. Dr. Dick is also Director of the Program in Cancer Stem Cells at the Ontario Institute of Cancer Research (OICR).

Dr. Dick's research has revolutionized the study of normal and leukemic human stem cells. Two of the most important achievements were developing a system for transplanting normal and malignant human hematopoietic cells into immune-deficient mice and using this method to identify and characterize both normal and leukemic human stem cells. His lab established that only a small proportion of human leukemic cells were capable of initiating human leukemia within the immune-deficient mice. Purifying these leukemia-initiating cells provided direct evidence for the cancer stem cell hypothesis.

Dr. Dick's seminal contributions to the fields of molecular hematology, stem cell biology and oncology have been recognized by numerous prestigious awards at the provincial, national and international levels including the W. Dameshek Prize (2005) and E. Donnall Thomas Prize (2009) from the American Society of Hematology; the G.H.A Clowes Memorial Award from American Association for Cancer Research (2008); the Clifford Prize for Cancer Research (2009) from Australia, and Noble Prize from National Cancer Institute of Canada (2000) and the Diamond Jubilee Award (2007) (with Drs. J.E. Till and E.A. McCulloch) from the National Cancer Institute of Canada. Dr. Dick was elected to the Royal Society of Canada in 2004.

Dr. Dick has achieved groundbreaking findings in the areas of hematopoiesis and cancer. Through his work, he has pioneered the field of cancer stem cell biology, transformed our views of the origin and nature of cancer, and laid the foundation for new approaches to cancer therapy.

CCRA AWARD FOR DISTINGUISHED SERVICE TO CANCER RESEARCH – MR. BOB MCDONALD

Introduction to the award by Dr. David Malkin

Mr. Bob McDonald

One of Canada's best known science journalists, Mr. McDonald has been presenting the *Quirks and Quarks* program since 1992. Mr. McDonald is also a regular science commentator on *CBC News Network*, and science correspondent for CBC TV's *The National*. Before joining *Quirks & Quarks*, Mr. McDonald was the host of CBC Television's children's science program *Wonderstruck*. He is also the author of two books based on the program, W*onderstruck I* and *II*. Mr. McDonald also hosted and wrote a children's TV science series, *Heads Up!*, which ran for 3 seasons on TVO and the Knowledge Network. In addition, he is Chairman of the Board for Geospace Planetarium. Fall 2000 saw the release of Mr. McDonald's book, *Measuring the Earth with a Stick: Science as I've Seen it*. The book, which was short-listed for the Canadian Science Writers Association Book Award, is a collection of essays reflecting on his 25 years as a science journalist.

Mr. McDonald has been personally honoured for his contributions to the public awareness of science with the 2001 Michael Smith Award for Science Promotion, from NSERC; the 2002 Sandford Fleming Medal from The Royal Canadian Institute; and in 2005, the McNeil Medal for the Public Awareness of Science from the Royal Society of Canada – completing the 'triple crown' of medals for science communication in Canada. In 2010, Mr. McDonald was named as an honorary life member of the Sigma Xi Society, the first Canadian to be so honoured by America's oldest scientific body. In November 2011, Mr. McDonald was made an Officer of the Order of Canada.

Mr. McDonald has been awarded 8 honorary degrees – the most recent being an Honorary Doctor of Science degree from Athabasca University in Alberta, and an Honorary Doctor of Laws degree from the University of Western Ontario in London, Ontario – both in June 2013. Previously, Mr. McDonald received an honorary Doctor of Laws degree from the University of Calgary and an honorary Doctor of Science degree from the University of Winnipeg – both awarded in June 2010; an honorary Doctorate of Science from McMaster University in June 2008 and a Doctorate of Letters from Laurentian University in Sudbury in October 2007. In 2005, Mr. McDonald received an honorary degree from Carleton University. The university awarded him a Doctor of Laws, *honoris causa*, "In recognition of his outstanding contribution to helping the public understand and appreciate science". Mr. McDonald was also recognised by The University of Guelph in 2003, with an honorary Doctorate of Letters.

WEDNESDAY, NOVEMBER 6, 2013

EVENT LOCATIONS

7:30 a.m.	Cancer-STIHR Program in Molecular Oncologic Pathology [CLOSED]		Sheraton Hall A
7:30 a.m.	CCRA Strategic Planning Meeting [OPEN]		Sheraton Hall B
7:30 a.m.	CSCC Working Group Meeting [CLOSED]		City Hall Room
8:30 a.m.	**CONCURRENT PLENARY SESSIONS P**	**Plenary Session: Shared Solutions for Today's Bioethical and Societal Challenges**	Osgoode Ballroom
		Plenary Session: Rewiring the Cancer Epigenome	Grand Ballroom West/Centre
9:00 a.m.	Careers in Cancer Research Development Program (CCRDP) Funders Exhibit [OPEN]		Foyer outside City Hall Room
10:00 a.m.	BREAK		Sheraton Hall D
10:30 a.m.	CONCURRENT SYMPOSIA E	Mechanisms of Therapeutic Resistance in Oncology: New Strategies for Intervention	Grand Ballroom West
		Effective Biomarker Discovery, Validation, and Implementation	Grand Ballroom Centre
		Cell Stress Adaptive Mechanisms and Implications for Cancer Progression	Grand Ballroom East
		From Bench to Bedside: Approaches to Pitfalls and Potholes	Sheraton Hall E
12:00 p.m.	LUNCH		Grand Ballroom foyer, Sheraton Hall D
12:00 p.m.	Careers in Cancer Research Development Program (CCRDP) Lunch Lecture [OPEN]		City Hall Room
1:00 p.m.	**Plenary Session: Future of Cancer Research: Standing on the Shoulders of Giants (A Tribute to Tony Pawson)**		Grand Ballroom West/Centre
2:45 p.m.	Conference Closing Remarks		Grand Ballroom West/Centre
3:00 p.m.	Canadian Breast Cancer Research Collaborative Satellite Symposium [CLOSED]		Dominion Ballroom

DETAILED AGENDA – WEDNESDAY, NOVEMBER 6, 2013

7:30 - 8:30 a.m.

CANCER-STIHR PROGRAM IN MOLECULAR ONCOLOGIC PATHOLOGY

Sheraton Hall A

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

This session is closed.

7:30 - 8:30 a.m.

CCRA STRATEGIC PLANNING MEETING

Sheraton Hall B

CCRA ACRC
Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

In 2010, the CCRA launched the Pan-Canadian Cancer Research Strategy, a plan for collaborative action by Canada's cancer research funders. This marked the first time Canadian cancer research funding agencies rallied together to develop and implement a shared strategic plan. To view the plan and progress update, visit the CCRA website at http://www.ccra-acrc.ca/index.php/publications-en/strategy. The Pan-Canadian Cancer Research Strategy has contributed to moving a number of large initiatives forward and was in fact the genesis of this conference. With this plan coming to an end, the CCRA members have embarked on an exercise to develop a new strategic plan for Canada's cancer research funders. The satellite meetings on Tuesday, November 5, and Wednesday, November 6, provide an opportunity for the Canadian cancer research community to engage in the development of the new plan. During these interactive sessions, an update on the evolving plan will be presented and attendees will be consulted for their insights and perspectives on the developing plan.

Open to all.

7:30 - 8:30 a.m.

CSCC WORKING GROUP MEETING

City Hall Room

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

Following the September 22-23 2013 Cancer Stem Cell Consortium (CSCC) Stakeholders Workshop, a working group was put into place to develop a partnering model to support the CSCC plan forward. The CIHR Institute of Cancer Research is proud to support a working group meeting to continue discussions on a collaborative funding approach for cancer stem cell research.

This session is closed.

8:30 a.m.

CONCURRENT PLENARY SESSIONS – P

8:30 - 10:00 a.m.

P1 – SHARED SOLUTIONS FOR TODAY'S BIOETHICAL AND SOCIETAL RESEARCH CHALLENGES

Osgoode Ballroom

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

Chair:
Thomas Hudson
Ontario Institute for Cancer Research, Toronto

There is sometimes a creative tension between researchers attempting to improve cancer control and management and the bioethicists who work to minimize potential harms from research. This can lead to an adversarial relationship that does not engender the dialogue required to tackle challenging research questions with potential bioethical or legal repercussions. In this session, we will tackle three major bioethical challenges in research head on: the use of tissue blocks and other residual pathology materials in research, the potential reporting of incidental findings from genomics and other studies, and the potential insurance and other risks that patients can accrue through participation in epidemiologic and cancer prevention research. For each of these challenges, a leading Canadian researcher will voice the concerns of the community to frame the challenge which will be addressed by a bioethical and/or legal scholar. We have set aside considerable time for discussions of each challenge and hope that this session will lead to breakthroughs in how we as a community can work together to maximize our ability to find better solutions to the cancer problem and meet the highest possible ethical standards.

8:32 a.m.

THE USE OF TISSUE BLOCKS AND OTHER RESIDUAL PATHOLOGY MATERIALS IN RESEARCH: THE ISSUES OF OWNERSHIP, STEWARDSHIP, AND APPROPRIATE ACCESS IN THE CANADIAN SCENE

Lois Shepherd
Queen's University, Kingston

Ubaka Ogbogu
University of Alberta, Edmonton

There is immense value in research uses of tumour tissues and accompanying clinical data collected from patients enrolled in clinical trials. The assurance of consent and the complexity of collecting a sample of this material have been well worked out by multiple organizations. However, there is growing reluctance to release excess tissues to tumour biobanks for eventual research purposes. There are multiple legal, ethical and practical reasons for this, including confusion around ownership, ongoing clinical management decisions, privacy, and evolving technology related to the processing and use of the samples. Short of some guidance from the Tri-council Policy Statement regarding consent and circumstances where samples could be released, there is presently no clarity around many of these questions. In this panel, these topics will be posed as questions and addressed in the context of current knowledge in Canada today. Panelists will also argue that patients must have a voice in decision-making and policy development around access to and use of excised and archived material.

8:45 a.m.

THE POTENTIAL REPORTING OF INCIDENTAL FINDINGS FROM GENOMICS AND OTHER STUDIES

Thomas Hudson
Ontario Institute for Cancer Research, Toronto

Susan Zimmerman
Tri-Agency Secretariat on Responsible Conduct of Research, Ottawa

Developments in genome technologies are being applied both in large-scale discovery projects aimed at identifying new cancer mutations and in clinical studies trying to match mutation profiles with available cancer therapies. In all studies doing extensive genome sequencing from human tissues, there is a potential to identify inherited mutations that may have clinical consequences to patients and their family members.

How researchers should handle the incidental findings inherent in these studies is a complex challenge involving scientific, ethical and human considerations, particularly in studies where participants face significant health challenges, such as end-stage cancer.

The guidelines for one large project, the International Cancer Genome Consortium (ICGC), state: "Provided it is agreed at recruitment, if clinically important and validated findings emerge during the initial recruitment and screening phase, or in the early research, attempts will be made to pass this information back via the clinician, by whatever mechanism may be agreed at the local level".

In Canada, the current consultation on revisions to TCPS 2 includes proposed new guidance on incidental findings. The proposal states, in part, that in considering when findings are material and should be shared with participants, researchers and Research Ethics Boards (REBs) should consider the significance and immediacy of the harm, and the strength of the evidence provided. REBs **should assess the harm from the perspective of the participant to the extent possible. This assessment includes determining whether the disclosure of findings to the participant will allow the participant to take action to avoid or ameliorate a disease, condition or situation.**

8:30 - 10:00 a.m.

8:58 a.m.

CANCER GENOMICS: ACCESS TO GENETIC INFORMATION BY LIFE INSURERS

Jacques Simard
Université Laval et Centre de recherche du Centre hospitalier universitaire de Québec, Québec

Yann Joly
Centre of Genomics and Policy, Department of Human Genetics, McGill University, Montréal

With the development and increasing accessibility of new cancer genomic tools such as next generation sequencing, genome wide association studies and genomic stratification models, access to genetic information by life insurers has come back to the forefront of the bioethics and policy debate in Canada. In the past three years, The Centre of Genomics and Policy (lead: Prof. Yann Joly) in the context of the CIHR Team on Familial Risks of Breast Cancer (lead: Prof. Jacques Simard) has undertaken substantial research on the social, ethical and legal issues relating to cancer genomics and access to insurance in Canada based on both quantitative and qualitative social science research methods. The proposed discussion using this research will cover the following three questions: 1) What legal protection is currently available for genetic information in Canada? 2) Is there evidence of systematic practice of genetic discrimination by Canadian life insurers? 3) What are the possible avenues to resolve the current debate on genetic discrimination in Canada? Although the discussion will focus on cancer genomics in Canada, we will also consider the larger reality of genetic discrimination in the current increasingly field of collaborative international large-scale genomics research.

9:11 a.m.

PANEL DISCUSSION

All speakers

P2 – REWIRING THE CANCER EPIGENOME

Grand Ballroom West/Centre

OICR
Ontario Institute for Cancer Research

Chair:
Nada Jabado
McGill University & McGill University Health Centre, Montréal

Epigenetics is one of the most rapidly expanding fields in biology. Epigenetic changes regulate normal development and their role in human disease is becoming increasingly clear. A unifying theme of disease epigenetics is defects in phenotypic plasticity. The recent unveiling of a complex "histone code", the characterization of a human DNA methylome at single nucleotide resolution, the discovery of the CpG island shores, the identification of novel histone variants and mutations in core histones as well as in enzymes affecting their function, loading and posttranslational modifications, and the unveiling of genome-wide nucleosome positioning maps are providing us with increased knowledge of the role of epigenetics in human disease. This session will establish what is the epigenome and the role of the environment, will review of the technological breakthroughs that now make it possible to undertake large-scale epigenomic studies and how aberrant placement of these epigenetic marks and mutations in the epigenetic machinery is involved in disease. This will serve to show that a comprehensive understanding of epigenetic mechanisms, their interactions and alterations in health and disease, has become a priority in biomedical research.

8:36 a.m.

THE CANCER EPIGENOME

Peter Jones
University of Southern California Norris Comprehensive Cancer Center, Los Angeles, USA

Epigenetic processes are reinforced by interactions between covalent chromatin marks such as DNA methylation, histone modifications and variants. These marks ultimately specify the locations of nucleosomes particularly with respect to transcriptional start sites and other regulatory regions. We have developed a new methodology to simultaneously map nucleosomal positioning and DNA methylation on individual molecules of DNA and show that the methylation of CpG islands at the transcriptional start sites of key tumour suppressor genes results in the stable placement of nucleosomes at the transcription start site. Inhibition of DNA methylation by 5-azanucleoside treatment results in an immediate inhibition of DNA methylation and a sequence of downstream events ultimately resulting in the eviction of the nucleosomes from the transcription start site and the activation of gene expression.

9:04 a.m.

LARGE SCALE CANCER GENOME ANALYSIS EXPOSES SIGNIFICANT ROLES FOR THE EPIGENOME IN CANCER PROGRESSION

Marco Marra
BC Cancer Agency, Vancouver

Transcriptome and genome sequencing studies are being used in large scale efforts to identify the targets of somatic mutation in cancers, and to study the evolutionary dynamics that occur during cancer progression. At our Genome Centre, particularly heavy emphasis has been placed on genome scale analysis of lymphomas, leukemias, breast cancers and ovarian cancers. Other groups around the globe are conducting similar analyses, including the International Cancer Genome Consortium (ICGC) and The Cancer Genome Atlas (TCGA), the latter having amassed a significant data set consisting of 8,755 cases spanning 27 cancer types. While genome scale analyses of data from such efforts are still underway, early results reveal significant somatic disruption of proteins involved in reading, writing, erasing and maintaining the epigenetic code. I will present an overview of the results of selected large scale cancer genomics studies with a particular emphasis on how these have informed our view of the role of the epigenome in cancer biology.

9:32 a.m.

EPIGENOME IN HUMAN DISORDERS – PEDIATRIC BRAIN TUMOURS AS EXAMPLES OF CHROMATIN REMODELING DEFECTS

Nada Jabado
McGill University & McGill University Health Centre, Montréal

The histone code regulates virtually all processes that act on or depend on DNA, including replication and repair, regulation of gene expression, and maintenance of centromeres and telomeres. Accordingly, mutations in genes affecting histone post-translational modifications (PTMs) are increasingly described in cancer. A unifying theme of disease epigenetics is defects in phenotypic plasticity.

Primary brain tumours account for ~30% of all childhood cancers and are the leading cause of cancer death in children. For high-risk patients, cure is a rare exception and survivors carry severe late effects from disease and treatment, making the development of more effective and less toxic treatments imperative. Cutting-edge genetic and epigenetic technologies have revolutionized our understanding of these brain tumours. Large consortia studies revealed multiple subtypes within each tumour-type, each with unique molecular profile, clinical behavior, and response to therapy. Importantly, they indicate somatic mutations to be rare in pediatric cancer and that driver somatic mutations in chromatin-associated proteins are more commonly altered than any other class of oncoprotein in childhood brain tumours. These alterations **occur in remodelers, writers, readers, erasers of the epigenome and in transcription factors involved in pluripotency, reprogramming the tumour epigenome.**

We will provide general insights into how specific alterations including mutations in histone 3 variants and in isocitrate dehydrogenase affect the chromatin machinery to modify downstream epigenetic signatures and drive transformation. We will also provide current strategies aiming to target this genetic/epigenetic interface. New insights into the epigenetic consequences of chromatin modifier mutations will enable needed effective therapeutics.

9:00 a.m. - 1:00 p.m.

CCRDP FUNDERS EXHIBIT

Foyer outside City Hall Room

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). The CCRDP Funders Exhibit will showcase current funding opportunities, research programs, training programs, and strategic initiatives. Representatives will be available from 12:00 p.m. until 1:00 p.m. to answer any questions.

Open to all.

10:00 - 10:30 a.m.

BREAK

10:30 a.m.

CONCURRENT SYMPOSIA – E

10:30 a.m. – 12:00 p.m.

E1 – MECHANISMS OF THERAPEUTIC RESISTANCE IN ONCOLOGY: NEW STRATEGIES FOR INTERVENTION

Grand Ballroom West

Chair:
Lillian L. Siu
Princess Margaret Cancer Centre, Toronto

Resistance to cancer therapy remains one of the most powerful predictors of poor outcome in clinical oncology. This session will explore biological mechanisms of drug and radiation resistance, as well as clinical parameters used to monitor such resistance in current standard-of-care therapies. Exciting recent progress has been made in uncovering molecular mechanisms of drug resistance, including the roles of cell plasticity, intratumoural heterogeneity, and clonal selection in this process. Novel preclinical models now allow for the detailed dissection of the different steps a tumour cell takes to attain therapeutic resistance, including emerging roles of the microenvironment. Through this new knowledge, the hope is that the research community can design strategies to overcome therapeutic resistance. This must be linked to new molecularly-guided clinical trials which incorporate new sampling schedules such as the inclusion of sequential biopsies to monitor and target resistance. This session will describe our current understanding of how some cancers evade therapy, and how to use this information to uncover new opportunities for clinical intervention.

10:33 a.m. **TARGETING HYPOXIA INDUCED DRUG RESISTANCE BY INHIBITING CARBONIC ANHYDRASE IX**
Shoukat Dedhar
BC Cancer Research Centre, Vancouver

10:51 a.m. **MECHANISMS OF CASTRATE-RESISTANT PROSTATE CANCER AND RATIONAL OF CO-TARGETING THERAPY**
Amina Zoubeidi
The Vancouver Prostate Centre, Department of Urologic Sciences, University of British Columbia, Vancouver

11:09 a.m. ***FAS* MUTATIONS INDUCE THERAPEUTIC RESISTANCE IN NON-HODGKIN LYMPHOMAS**
Nathalie Johnson
Jewish General Hospital, McGill University, Montréal

11:27 a.m. **USING HUMAN-DERIVED PRIMARY XENOGRAFT MODELS TO UNDERSTAND DRUG RESISTANCE**
Geoffrey Liu
Princess Margaret Cancer Centre, University Health Network & University of Toronto, Toronto

11:45 a.m. **BIOPSY-DRIVEN TRIALS AND NEXT GENERATION BIOBANKING TO IDENTIFY SIGNATURES OF THERAPEUTIC RESISTANCE AND EXAMINE TUMOUR HETEROGENEITY**
Gerald Batist
McGill University, Segal Cancer Centre of the Jewish General Hospital, Montréal & Quebec-Consortium de Recherche clinique en Oncologie (Q-CROC)

10:30 a.m. - 12:00 p.m.

E2 – EFFECTIVE BIOMARKER DISCOVERY, VALIDATION, AND IMPLEMENTATION

Grand Ballroom Centre

The Terry Fox Research Institute
L'Institut de recherche Terry Fox

Chairs:
David Huntsman
BC Cancer Agency, Vancouver

Nada Jabado
McGill University & McGill University Health Centre, Montréal

A large portion of today's cancer research activity is aimed towards the discovery, validation, and implementation of biomarkers. This work is needed if we are to successfully stratify and ultimately personalize cancer care. Sadly, the massive volume of published biomarker studies compares poorly to minute number of biomarkers which are clinically used. This session will focus on the discovery, development, validation, and implementation of biomarkers. Bringing a biomarker from bench through to regulatory approval and clinical implementation is difficult but possible if studies are appropriately designed and a roadmap is followed. This symposium will use examples of breast cancer, lymphoma, and non-tissue based biomarkers as examples of successful discovery, validation, and implementation efforts.

10:33 a.m. **TAKING CANCER SIGNATURES FROM DISCOVERY, TO CLINICAL AND ANALYTICAL VALIDATION, TO REGULATORY APPROVAL: THE BREAST CANCER INTRINSIC SUBTYPING STORY**
Torsten O. Nielsen
BC Cancer Agency, Vancouver

10:56 a.m. **REMOTE MONITORING OF ONCOGENIC PATHWAYS AND DRUG TARGETS THROUGH ANALYSIS OF TUMOUR-DERIVED EXTRACELLULAR VESICLES – OPPORTUNITIES AND CHALLENGES**
Janusz Rak
McGill University, Research Institute of the McGill University Health Centre, Montreal Children's Hospital, Montréal

11:19 a.m. **OUTCOME PREDICTION IN HODGKIN LYMPHOMA – FROM DISCOVERY TO CLINICAL TRANSLATION**
Christian Steidl
Centre for Lymphoid Cancer, Department of Experimental Therapeutics, BC Cancer Agency & Department of Pathology, University of British Columbia, Vancouver

11:42 a.m. **MOLECULAR CHARACTERISATION OF MELANOMA PATIENTS WITH IN-TRANSIT DISEASE TREATED WITH INTRALESIONAL INTERLEUKIN-2 USING TARGETED NEXT-GENERATION SEQUENCING (NGS)**
Saima Hassan
Sunnybrook Health Sciences Centre, Toronto

10:30 a.m. - 12:00 p.m.

E3 – CELL STRESS ADAPTIVE MECHANISMS AND IMPLICATIONS FOR CANCER PROGRESSION

Grand Ballroom East

Chair:
Nahum Sonenberg
Department of Biochemistry, McGill University & Rosalind & Morris Goodman Cancer Research Centre, Montréal

Emerging evidence indicates that under diverse forms of cell stress, such as nutrient deprivation, hypoxia, oxidative stress, genotoxic stress, or the unfolded protein response induced by endoplasmic reticulum (ER) stress, tumour cells must undergo acute reprogramming in order to adapt and survive these stressors. For example, mRNA translation is dramatically altered under cell stress, with increased Cap-independent translation of specific stress-related mRNAs that permit cell survival and metastatic spread. This has led to the hypothesis that stressed cancer cells maintain translation of specific transcripts that allow them to withstand and adapt to cell stress, and repression of pro-apoptotic transcripts, and that this leads to the emergence of aggressive disease. A detailed understanding of stress-activated signaling should thus provide novel targets for therapy, since inactivating such pathways will block tumour cell survival and spread, and render cells more chemosensitive. The goal of this session is to highlight new findings in cell stress signaling and how this information may identify novel cancer therapeutics for aggressive disease.

10:33 a.m. **REGULATION OF PROTEIN FOLDING IN THE HYPOXIC TUMOUR MICROENVIRONMENT**
Marianne Koritzinsky
Princess Margaret Cancer Centre & University of Toronto, Toronto

10:51 a.m. **THE TRANSLATION ELONGATION FACTOR 2 KINASE (EEF2K) MEDIATES THE SURVIVAL RESPONSE TO NUTRIENT STARVATION**
Gabriel Leprivier
BC Cancer Research Centre & University of British Columbia, Vancouver

11:09 a.m. **TRANSLATIONAL CONTROL OF CANCER: EIF4E PHOSPHORYLATION IN TUMOUR DEVELOPMENT AND PROGRESSION**
Nahum Sonenberg
Department of Biochemistry, McGill University & Rosalind & Morris Goodman Cancer Research Centre, Montréal

11:27 a.m. **CANCER CELLS EXPLOIT EIF4E2-DIRECTED HYPOXIC PROTEIN SYNTHESIS FOR TUMOURIGENESIS**
Jim Uniacke
University of Guelph, Guelph & University of Ottawa, Ottawa

11:45 a.m. **TRANSLATIONAL CONTROL OF ENERGY PRODUCTION**
Ivan Topisirovic
Lady Davis Institute & McGill University, Montréal

10:30 a.m. - 12:00 p.m.

E4 – FROM BENCH TO BEDSIDE: APPROACHES TO PITFALLS AND POTHOLES

Sheraton Hall E

Chair:
Terrence Sullivan
Institute of Health Policy, Management & Evaluation, University of Toronto, Toronto

We will focus on areas where promising innovations get lost on their journey from bench to bedside. Thinking of novel ways of fighting cancer, we will explore:

- How to get evidence of effectiveness in a clinical setting?
- How to get a pan-Canadian cancer drug funding recommendation, and how to get payers to pay?
- How to get MDs to agree to and follow guidelines?

10:32 a.m. **PRESENTATION TITLE TO BE ANNOUNCED**
Janet Dancey
Ontario Institute for Cancer Research, Toronto & NCIC Clinical Trials Group, Queen's University, Kingston

10:47 a.m. **ECONOMIC EVIDENCE FOR POLICY DECISIONS**
Stuart Peacock
Canadian Centre for Applied Research in Cancer Control (ARCC), Vancouver

11:02 a.m. **THE PAN-CANADIAN ONCOLOGY DRUG REVIEW: HEALTH TECHNOLOGY ASSESSMENT LINKING EVIDENCE TO PUBLIC FUNDING**
Mona Sabharwal
pan-Canadian Oncology Drug Review, Toronto

11:17 a.m. **MOVING KNOWLEDGE TO ACTION – STRATEGIES AND CHALLENGES**
Anna Gagliardi
University Health Network & University of Toronto, Toronto

11:32 a.m. **PANEL DISCUSSION**
All speakers

12:00 - 1:00 p.m.

LUNCH

12:00 - 1:00 p.m.

CCRDP LUNCH LECTURE
City Hall Room

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

Canadian Cancer Society | Société canadienne du cancer

Cancer Research Funding Opportunities in Canada

The CIHR Institute of Cancer Research (CIHR-ICR) and the Canadian Cancer Society Research Institute (CCSRI) are pleased to support the Careers in Cancer Research Development Program (CCRDP). The last of a series of lunch lectures will focus on cancer research opportunities, including funding opportunities, and will occur in conjunction with the CCRDP Funders Exhibit that will showcase current funding opportunities, research programs, training programs, and strategic initiatives.

Open to all.

1:00 – 2:45 p.m.

PLENARY SESSION: FUTURE OF CANCER RESEARCH: STANDING ON THE SHOULDERS OF GIANTS (A TRIBUTE TO TONY PAWSON)

Grand Ballroom West/Centre

CANADIAN PARTNERSHIP AGAINST CANCER / PARTENARIAT CANADIEN CONTRE LE CANCER

Chair:
David Malkin
The Hospital for Sick Children, Toronto

In the last few years, advances in understanding basic genetics and biology of human cancer have generated great excitement among cancer researchers, clinicians, patients and the public. Large-scale multi-disciplinary and multi-sector partnerships have emerged to tackle complex problems ranging from interrogation of cancer genomes in search of actionable targets, through to public health policy to reduce environmental risk factors. While the overall survival of cancer patients continues to increase, the long-term effects of therapies on survivors leads to new challenges facing the cancer research community. The speakers in this session will explore the challenges and opportunities facing the Canadian and international community and offer their insights and 'predictions' of where the future of cancer research will take us.

1:05 p.m.

RESEARCH AND THE FUTURE OF CANCER CONTROL

Heather Bryant
Canadian Partnership Against Cancer & Department of Community Health Sciences, University of Calgary

The Canadian strategy for cancer control was developed with the vision of reducing the incidence and mortality of cancer and improving the quality of life for all of those affected by cancer. The strategy includes all elements of the cancer control continuum, from prevention through survivorship and end-of-life care, and sees research as a thread that runs through much of the continuum. Since 2007, the Canadian Partnership Against Cancer has been the organization funded by Health Canada to implement the national cancer control strategy. There are several ways in which research has been incorporated to date; the most visible of these is the investment in the Canadian Partnership for Tomorrow Project, a national cohort study that has currently enrolled over 280,000 Canadians aged 35 to 69, and which is being developed as a population laboratory of significance for cancer and chronic disease research benefitting Canadians for years in the future. In addition, there are many questions of great import for the future of cancer control that could be seen as priority issues for future research. Some of these will be outlined, along with their potential impact on the future goals of the cancer control strategy.

1:25 p.m.

THE EXPANDING ROLE OF GERMLINE GENETICS IN CANCER CARE

Judy Garber
Dana-Farber Cancer Institute, Boston, USA

Germline genetic testing has generally been practiced by recognition of patients and families by phenotype based on cancer history, then analysis of specific candidate genes to distinguish carriers of predisposing mutations from non-carriers. The field developed in order to identify individuals at high risk of developing cancer in order to help to manage that risk. Increasingly, individuals with cancer are undergoing expanded genetic analysis at diagnosis, sometimes in association with tumour sequencing. The specific biology of hereditary tumours is beginning to guide targeted therapies. Pharmacogenomic information is predicting therapeutic response. In addition, healthy individuals are undergoing comprehensive germline genetic analysis in which mutations in cancer susceptibility genes are being identified. There is an urgent need for rapid accumulation of information on penetrance and biology to ensure that germline genetic information reaches its full potential.

1:45 p.m.

CLINICAL TRIALS OF 2033: LOOKING INTO THE CRYSTAL BALL OF CANCER RESEARCH

Lillian L. Siu
Princess Margaret Cancer Centre, Toronto

Oncotherapeutic clinical trials in the present era have led to the regulatory approval of many anticancer drugs including molecularly targeted agents. However, many large phase III clinical trials have failed to reach their primary endpoint despite substantial expenditure of patients and financial resources. Clearly the current paradigm is not sustainable and new strategies must be implemented to improve success rates in drug development. Clinical trials in unselected patient populations that aim to achieve small incremental benefits require large sample sizes and should be discouraged. The future clinical trials should seek large and meaningful clinical benefits in highly selected patients chosen based on a strong scientific rationale. In the cancer genomics era, it seems likely that evaluating drug efficacy against tumours defined by a combination of histopathology and molecular genetic profiles will result in a greater therapeutic gain. Given that the definition of molecular subsets will stratify tumour types into smaller subgroups, and that the same or related genomic aberrations can exist in multiple tumour types, innovation and transformation in clinical trial designs are necessary to help address this shift in cancer treatment decisions. Current clinical trial designs are focused largely on tumour genotype variations between patients that predict for response to targeted treatments (interpatient heterogeneity). Increasing attention is being paid to subpopulations of cancer cells with unique genomes in the same patient (intratumour heterogeneity) that may exist across different geographic locations of a tumour (geographic or spatial heterogeneity) or evolve over time (clonal evolution).

2:05 p.m.

THE BENEFITS OF PRECISION MEDICINE WILL REQUIRE US TO EXAMINE WHAT WE DO AND HOW WE DO IT

Stephen H. Friend
Sage Bionetworks, Seattle, USA

Scientific approaches used to solve biomedical problems that worked well for hypothesis driven questions may not work for the new data driven approaches required to define precision medicine. Similarly, the ways that data generators have usually been the data analysers may also not apply. Furthermore, the communication and recognition systems enabling current university based research may not be most useful as larger and more diverse teams tackle complex problems. I will focus on the need to solve problems in different ways that include the use of provenance, leaderboards, and efforts to set up open challenges with full transparency, and accountability as an alternate to exiting methods.

2:25 p.m.

CANADIAN CANCER RESEARCH: STANDING ON THE SHOULDERS OF GIANTS

Alan Bernstein
Canadian Institute for Advanced Research, Toronto

Canada boasts a rich history in basic cancer research. In the fields of cancer stem cell biology, cancer genomics, oncolytic viruses and cancer cell signaling, Canadian scientists have consistently made their mark on the international stage. This session celebrates the life and career of Tony Pawson, one of Canada's most prolific and innovative cancer biologists. His seminal contributions to the field will be highlighted and will form the foundation for a discussion of the legacy of basic research on which we must build to the future. A fundamental understanding of the unique biological and genetic features of the cancer cell is critical to any hope to eventually eradicate this disease. In this talk, a vision will be presented of how Canada's reputation for collaborative, innovative and transformative science can be harnessed to make major contributions to realize this hope. This vision will be presented in the context of the speaker's experience and perspective from a career in both the academic and public sectors of cancer and health research.

2:45 - 3:00 p.m.

CLOSING REMARKS

Grand Ballroom West/Centre

Canadian Cancer Research Alliance • Alliance canadienne pour la recherche sur le cancer

Annette Cyr
Melanoma Network of Canada

David Huntsman
BC Cancer Agency, Vancouver

Stephen Robbins
University of Calgary, Calgary & CIHR Institute of Cancer Research

3:00 - 6:00 p.m.

CANADIAN BREAST CANCER RESEARCH COLLABORATIVE SATELLITE SYMPOSIUM

Dominion Ballroom

The CBCRC: Going After the Grand Challenges in Breast Cancer

Overview

The Canadian Breast Cancer Research Collaborative (CBCRC) is an inclusive collaboration between the leading Canadian funders of breast cancer research. The CBCRC aims to steward the evolution and maintenance of the National Breast Cancer Research Framework by providing a process and resources for the coordination of breast cancer research in Canada, creating a forum to promote, encourage and coordinate cooperative research funding initiatives and facilitating ongoing sector communication and collaboration.

This satellite meeting will provide an introduction to the CBCRC, an opportunity to hear from scientific leaders in key theme areas of the National Breast Cancer Research Framework, and to renew the discussion on addressing the 'grand challenges' in breast cancer research in Canada today.

The theme of this symposium is The CBCRC: Going After the Grand Challenges in Breast Cancer. During this Satellite Symposium we aim to:

1. Introduce the CBCRC and discuss implementing the National Breast Cancer Research Framework.
2. Hear from scientific experts on topics related to the themes of the National Breast Cancer Research Framework as they discuss cutting edge research on applying risk factors and risk stratification, using gene signatures in the clinic and determining progression indicators, communicating with patients in the age of genomics and personalized medicine, and changing behaviour while keeping pace with the growing volume of new knowledge.
3. Collect thoughts and opinions from the research community on the 'grand challenges' in breast cancer as they may relate to future funding opportunities.

Contact Information

Questions pertaining to the meeting, please contact Stefanie Cara at scara@cbcf.org.

This session is closed.

2ND FLOOR

MEZZANINE

LOBBY

CONCOURSE

LOWER CONCOURSE

The Canadian Cancer Research Alliance is supported by the Canadian Partnership Against Cancer through a financial contribution from Health Canada.

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