EIF CANADA
2015 / 2016 ANNUAL REPORT
BACKGROUND AND
PROGRAMMES OF EIF CANADA

STAND UP TO CANCER
standup2cancer.ca
Mission

Stand Up To Cancer Canada’s (SU2C) mission is to raise funds to accelerate the pace of groundbreaking translational research that can get new therapies to patients quickly and save lives now.

SU2C Canada brings together the best and the brightest researchers and mandates collaboration among the cancer community. By galvanizing the entertainment industry, SU2C Canada has set out to generate awareness, educate the public on cancer prevention and help more people diagnosed with cancer become long-term survivors.

History

EIF Canada, founded in 2013, is a Canadian registered charity (Reg. # 80550 6730 RR0001). EIF Canada operates a programme in Canada called “Stand Up To Cancer Canada,” under which it funds and conducts new and innovative research into the prevention, treatment and cure of cancer. EIF Canada also conducts cancer-related education. It enters into research agreements with selected health institutions to carry out specific research projects.

EIF Canada was founded with assistance from the US-based Entertainment Industry Foundation (EIF), a multifaceted organisation that occupies a unique place in the world of philanthropy, first founded in 1942. By mobilising and leveraging the powerful voice and creative talents of the entertainment community, as well as cultivating the support of organisations (public and private) and philanthropists committed to social responsibility, EIF builds awareness and raises funds, developing and enhancing programmes on the local, national and global level that facilitate positive social change. The Foundation supports and encourages the philanthropic efforts of all members of the entertainment community.

EIF Canada also mobilises and leverages the powerful voice and creative talents of the Canadian entertainment community, from broadcasters to performers to media platforms including TV, radio, print, online and out-of-home. The work is overseen by the EIF Canada Board of Trustees, with members from EIF, and from Canadian broadcasters:
EIF Canada Board of Trustees

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DAVE PURDY
CHIEF INTERNATIONAL GROWTH OFFICER
VICE MEDIA
ABOUT STAND UP TO CANCER CANADA

The purpose of Stand Up To Cancer (SU2C) Canada is to promote health by conducting and supporting new innovative research into cures, prevention and treatment of cancer, and provides education and awareness to the public on issues related to cancer treatment, prevention and awareness. SU2C Canada raises funds to support collaborative research teams and these education and awareness programmes conducted in Canada.

Collaborating organisations involved in the inaugural SU2C Canada research Dream Teams include the Canadian Breast Cancer Foundation, with support from CIBC; the Cancer Stem Cell Consortium, with funding from Genome Canada and the Canadian Institutes of Health Research; and the Ontario Institute for Cancer Research. AstraZeneca and MasterCard are the first Canadian corporate supporters of SU2C Canada.

THE PROBLEM

Two out of five Canadians are expected to develop cancer in their lifetimes. Each day, over 500 new cases of cancer are diagnosed in Canada, about 22 people each hour. Each year, about 78,000 Canadians die of cancer, making it the country’s leading cause of death.

OUR APPROACH

Stand Up To Cancer Canada’s goal is to end cancer’s reign as the leading cause of death in Canada by building awareness and educating the public about cancer prevention and by raising funds to accelerate research that will transform cancer from a disease that takes far too many lives to one that many more people can manage and survive.

The Stand Up To Cancer (SU2C) research model is founded on the belief that there is now sufficient knowledge of the basic science of cancer and that technologies are available to allow the focused, practical application and rapid translation of even more basic science knowledge to patients with cancer. Furthermore, the successful application of this knowledge will result in faster advances in the treatment of patients and the prevention of cancer in those who are at risk. The purpose of SU2C Canada is to establish and support a focused and intense effort to put advances in the treatment and prevention of cancer into effect as rapidly as possible. SU2C Canada
believes that it can benefit the most patients by accelerating the course of cancer research through raising philanthropic funds and utilising its unique mechanisms to support cancer research. This novel approach funds innovative ideas in a streamlined, expedited manner.

COLLABORATION TO ACCELERATE SCIENCE

SU2C Canada fosters collaboration among the most talented and promising researchers across institutions, across the country; a multi-disciplinary team-oriented approach that promotes the sharing of information rather than competition; and a goal-oriented focus on key problems in cancer designed with measurable milestones of progress.

SU2C Canada-supported researchers benefit from collaboration with the community of SU2C-supported researchers from six other countries. This includes participation in the annual SU2C Scientific Summit, where the latest findings are presented. It also includes the opportunity to compete for Phillip A. Sharp Awards in Innovation and Collaboration, which provide support for collaboration across Dream Teams and with Innovative Research Grant awardees. These opportunities help to elevate collaboration and innovation beyond the scope of the individual SU2C Canada Dream Teams.

RIGOROUS OVERSIGHT BY WORLD-CLASS SCIENTIFIC LEADERS

SU2C Canada is committed to transparency and high-quality science in its funding activities and believes that this can be accomplished within the framework of its truly innovative approach to supporting cancer research.

“Cancer is an international problem. Science is an international enterprise. We share information so we can advance treatment of patients. Canada is a leader now and it will be a greater leader in the future because of Stand Up To Cancer in Canada.”

Phillip A. Sharp, Ph.D.
Nobel Laureate and co-chair of SU2C Canada Scientific Advisory Committee
“In my lifetime we are going to have effective treatments against cancer. As a proud Canadian, I think Canadian scientists and clinicians have a lot to offer in making this happen”

Alan Bernstein, OC, Ph.D., RRSC
co-chair of SU2C Canada Scientific Advisory Committee

The SU2C Canada Scientific Advisory Committee (CSAC) oversees the SU2C Canada research portfolio. Members of the CSAC and additional CSAC members, specific to each Dream Team, review proposals to select the Dream Teams that offer the most promising science and will most likely achieve patient benefits in the four-year research funding period. After the teams are selected, members of the CSAC monitor the research progress, participating in formal Dream Team reviews, including onsite visits that happen twice each year:

Members of the SU2C Canada Scientific Advisory Committee include:

- Phillip A. Sharp, Ph.D., Co-Chairperson
- Alan Bernstein, O.C., Ph.D., Co-Chairperson
- Carlos Arteaga, M.D.
- Jenny Chang, M.D.
- Carol L. Prives, M.D.
- Sheila Toews, M.Ed. (Patient Advocate)

**SU2C Canada SAC Review Team - Breast Cancer Dream Team**

- Carlos L. Arteaga, M.D.
- Cecil B. Pickett, Ph.D.
- Carol L. Prives, Ph.D.

**SU2C Canada SAC Review Team – Cancer Stem Cell Dream Team**

- Jeffrey M. Trent, Ph.D.
- Eric C. Holland, M.D.
- Stacey L. Berg, M.D.

**AACR International – Canada** serves the Canadian cancer research community, in coordination with the American Association for Cancer Research (AACR). As the Scientific Partner to Stand Up To Cancer Canada, AACR International – Canada provides scientific oversight and conducts expert peer review and research administration. For more
THE IMPACT OF STAND UP TO CANCER CANADA

Stand Up To Cancer Canada has moved swiftly from its public launch in July 2014, through the selection and award of the two inaugural SU2C Canada Dream Teams, and the initiation of SU2C Canada research, as detailed below:

- July 9, 2014: launch of SU2C Canada announced at MaRS
- September 5, 2014: First Canada-inclusive SU2C Telecast
- Week of October 6, 2014: Launch of the Call for Ideas
- December 8, 2014: Deadline for Idea submission
- February 16, 2015, Finalists invited to submit full proposals
- April 27, 2015: Deadline for submission
- June 29, 2015: In-person selection meeting
- September 30, 2015: SU2C Canada-CBCF Breast Cancer Dream Team announced
- January 26-29, 2016: SU2C Canada Dream Team Leaders/Co-Leaders present and participate at the SU2C Annual Scientific Summit
- February 4, 2016: SU2C Canada Cancer Stem Cell Dream Team announced
- May 2016: SU2C Canada-CBCF Breast Cancer Dream Team initiates clinical trial
- July 2016: first semi-annual Dream Team reviews conducted

THE INAUGURAL SU2C CANADA DREAM TEAMS

The two inaugural SU2C Canada Dream Teams involve 56 researchers from 16 institutions in 5 provinces across the country. In the first six months, one clinical trial has been launched and cooperation established with a second clinical trial.
SU2C Canada – CBCF Breast Cancer Dream Team
“Translational Development of Novel Drugs Targeting Tumour Vulnerabilities”

Funding Awarded: January 2016
Funding: $9,000,000 CAD

Dream Team Members

Dream Team Leader:
- Tak W. Mak, Ph.D., University Health Network, Toronto, Ontario

Dream Team Co-leader:
- Samuel Aparicio, Ph.D., University of British Columbia, Vancouver, British Columbia

Principals:
- Morag Park, Ph.D., Rosalind and Morris Goodman Cancer Centre, Montreal, Quebec
- Kathleen Pritchard, M.D., Odette Cancer Centre, Toronto, Ontario
- Karen Gelmon, M.D., British Columbia Cancer Agency, Vancouver, British Columbia

Advocates:
- Randy Mellon, Toronto, Ontario
- Wendie den Brok, M.D., University of British Columbia, Vancouver, British Columbia

Fast Facts on Breast Cancer

- Breast cancer is the second most common cancer in the world and by far the most frequent cancer among women.
- Women who have a mother, sister, or daughter with a history of breast cancer are about twice as likely to develop breast cancer as women who do not have this family history.
- Breast cancer death rates have declined in the last 20 years due to improvements in early detection and treatment.
- Triple-negative breast cancer tends to be more aggressive, growing and spreading more quickly than most other types of breast cancer.

Summary of the research project

With advances in early detection and treatment, more women are surviving breast cancer. However, this disease remains the second leading cause of cancer death in women in Canada and the United States, exceeded only by
lung cancer. Breast cancer comes in many different forms with very different treatment options. The most successful drugs block cancer cell growth fueled by the female hormones estrogen or progesterone, or by a substance called human epidermal growth factor. Tumours that don’t rely on any of these three for growth are termed **triple-negative breast cancer (TNBC)**. For this, and other aggressive forms of breast cancer, treatment options are limited, and even when chemotherapy works, relapse and rapid progression commonly follow.

The Stand Up To Cancer Canada-Canadian Breast Cancer Foundation Breast Cancer Dream Team brings together a group of outstanding laboratory researchers, clinical experts, and breast cancer patient advocates from across Canada to address this problem by accelerating the development of **three promising agents as new drugs for TNBC** and other aggressive forms of breast cancer. The Dream Team’s approach, called “targeted therapy,” is to identify differences in the cancer cells that distinguish them from normal body cells, find out how those differences make the cancer cells vulnerable, and then target drugs to those points of vulnerability in order to kill the cancer cells. Their studies have identified three new approaches to target such vulnerabilities in aggressive breast cancer.

The hope is that by exploiting differences that separate cancer cells from the body’s normal noncancerous cells, these targeted therapies will be more effective and have fewer side effects than conventional chemotherapy. **Two of the compounds that the team has developed are already in early clinical trials.** This Dream Team will accelerate development of all three potential treatments first by using state-of-the-art laboratory approaches to understand how the agents can be used most effectively against breast cancer, and then testing them in clinical trials of patients with advanced breast cancer across Canada. In the laboratory phase of drug development they will study how breast cancer cells and tumours respond to the drug. Further, they will identify specific changes in genes (mutations) or other biological molecules in the cancer cells or in the tumour microenvironment (the cells and substances that surround and support the tumours) that predict which tumours are more or less likely to respond positively during treatment. The mutations and other biological molecules that best predict response, termed biomarkers, will be measured in patients involved in clinical trials to help identify those women most likely to respond to the new drugs.

**The Dream Team’s goal is to pave the way for larger trials that will establish these targeted agents as new standard breast cancer treatments and to help women with TNBC** and other aggressive breast cancers in the near future. By developing not only effective cancer cell-targeted therapies, but also the biomarkers that can be used to identify patients most likely to respond, the team hopes to improve survival while avoiding unnecessary toxicities, ensuring that each woman receives the best treatment possible.
**Status update as of mid-2016** (This report reflects 3 months of research from January – March 2016.)

The SU2C Canada – Canadian Breast Cancer Foundation Dream Team’s research has the potential to help women with TNBC and other aggressive breast cancers by providing new treatment options in the near future. In the first three months, the Team has made significant progress in advancing their planned studies in the laboratory as well as their clinical trials:

- The Team has tested their three new agents individually using 50 different types of breast cancer cells grown in the laboratory.
- They have confirmed the effect of one of their new drugs using patient-derived tumours grown in laboratory mice.
- The Team has validated drug combinations and is now evaluating the most promising drug combinations in their laboratory mouse models.
- The Team is continuing their efforts to identify molecular biomarkers (e.g. particular gene changes) of drug response in their laboratory mouse models.
- Using genomic strategies that delete specific genes while leaving others intact, the Team is working to identify which particular genes contribute to drug response and drug resistance.
- The Phase 1 clinical trial of the first drug, CFI-400945, is active and moving to establish the best dose to use in the Phase II study.
- The Phase 2 clinical trial of the second drug, CX5461, is pending approval.
- The Phase 1 clinical trial of the third drug, CFI-402257, has been approved and is planned to launch in August 2016.
SU2C Canada Cancer Stem Cell Dream Team
“Targeting Brain Tumour Stem Cell Epigenetic and Molecular Networks”

Funding Awarded: October 2015
Funding: $11,790,000 CAD

Dream Team Members

Dream Team Leader:
- Peter B. Dirks, M.D., Ph.D., The Hospital for Sick Children, Toronto, Ontario

Dream Team Co-leader:
- Samuel Weiss, Ph.D., Hotchkiss Brain Institute, Calgary, Alberta

Principals:
- Michael D. Taylor, M.D, Ph.D., The Hospital for Sick Children, Toronto, Ontario
- Nada Jabado, Ph.D., Research Institute of the McGill University Health Centre, Montreal, Quebec
- Cheryl H. Arrowsmith, Ph.D., University of Toronto, Toronto, Ontario
- Michael Salter, M.D., Ph.D., The Hospital for Sick Children, Toronto, Ontario
- Marco A. Marra, Ph.D., BC Cancer Agency, Vancouver, British Columbia
- Mathieu Lupien, Ph.D., Princess Margaret Cancer Centre, Toronto, Ontario
- Amy A. Caudy, Ph.D., University of Toronto, Toronto, Ontario
- Trevor J. Pugh, Ph.D., Princess Margaret Cancer Centre, Toronto, Ontario
- Gary D. Bader, Ph.D., University of Toronto, Toronto, Ontario
- Michael D. Tyers, Ph.D., University of Montreal, Montreal, Quebec

Advocates:
- Wendy Marie Durigon, Guelph, Ontario

Fast Facts on Brain and Central Nervous System Tumours

- There are nearly 100 different types of brain tumours and most are not linked with any known risk factor and have no obvious cause.
- Brain and central nervous system tumours are the most common cancer-related cause of death in children.
- Approximately three of four children with brain tumours survive at least five years after being diagnosed.
- In adults, the five-year survival rate varies depending on the type of brain tumour and the age of the patient.
Summary

Malignant brain tumours remain deadly, incurable diseases. Recent biomedical advances have identified some driving mutations and epigenetic alterations. Although targeted therapies have been promising, there is a lack of translational efficacy and the standard of care remains the same: post-surgery chemotherapy and radiation. To address this barrier in bench-to-bedside translation, the SU2C Canada Cancer Stem Cell Dream Team will study the brain tumours of and develop new treatments for adults diagnosed with glioblastoma and for children diagnosed with pediatric glioblastoma and the posterior fossa subtype A of ependymoma. Members of this Dream Team previously discovered that at the root of these brain tumours lies a relatively small population of cells that are uniquely able to grow the whole tumour, and these cancer cells are especially skilled at evading therapy. When patients undergo surgery and chemotherapy/radiation to treat their tumours, this tumour subpopulation, known as brain tumour cancer stem cells, survives the therapy and regrows the tumour causing a relapse in the patient.

The overall goal of the pan-Canadian team of experts is to understand the special characteristics of these cells, in terms of identity and behavior. To accomplish this, the Team is taking a three-tiered approach: 1) cancer stem cells from the tumours of 70 patients will be studied to dissect the properties of the cancer stem cells that are shared and those that are unique to the individual patient tumours; 2) a panel of drugs will be tested on these tumours to find promising candidates and understand the mechanisms by which they effectively target these cells and their molecular programmes; and 3) drug testing will also be performed in pre-clinical mouse models to predict efficacy in human patients.

Taking a multi-disciplinary approach, this Dream Team will provide new biological insights into brain tumour stem cell biology, providing a promising avenue to solving a problem that has been long enough without a solution.

Status update as of mid-2016

In the first six months of this contract, the Team has made considerable progress in all aspects of the project.

- The Team has nominated the first 20 of 70 patient tumours to undergo all brain tumour stem cell characterisation.
  - They have started to investigate the genetic and functional characteristics of these cells across tumours and have identified key commonalities of the brain tumour stem cell state.
- Drug screening efforts have already led to the identification of two promising drugs, which are now being studied by Team members in unique experimental models.
- The Team has formed an academic-industry partnership with eight top pharmaceutical companies.
- The clinical trial protocol is underway and they have secured free drug (Vidaza) from CelGene.
SU2C CANADA EDUCATION AND PUBLIC AWARENESS CAMPAIGNS

Public awareness and education is one of the goals of SU2C Canada. Since inception, SU2C Canada has engaged in several public awareness campaigns in donated media across the country.

SU2C Canada “Act Now” PSA Campaign

“Act Now” was a general awareness campaign to inform the Canadian public on the scope of cancer across the country, that 2 in 5 Canadians will receive a cancer diagnosis in their lifetimes.

From January through September 2015, SU2C Canada aired the ACT NOW TV Public Service Announcement (PSA), nationally in top markets throughout Canada, including Toronto, Vancouver, Calgary and Montreal. The Act Now PSA reached an audience of nearly 24.5MM in donated media totaling more than $851,000.

PSA Campaign With CBCF

Stand Up To Cancer Canada (SU2C Canada) and the Canadian Breast Cancer Foundation (CBCF) teamed up on a public service announcement (PSA) campaign featuring actress Kim Cattrall.

The PSA, entitled “Surviving Looks A Lot Like Thriving,” is designed to raise awareness about progress that is being made through research and the ongoing need for innovative breast cancer research. While highlighting opportunities to get involved in creating a future without breast cancer, the PSA also emphasises how, thanks to research advances, Canadian breast cancer mortality rates have fallen and survivors are leading longer, more active and fulfilling lives.

The campaign is linked to the website standup2cancer.ca/breast cancer, providing information about research and clinical trials for breast cancer patients and the community.

The PSA Campaign launched on October 20, 2015, and as of end of June 2016, has garnered nearly 917.3MM impressions and more than
SU2C CANADA TO PRESENT CANADA-INCLUSIVE 2016 SU2C TELECAST

Stand Up To Cancer Canada will again provide Canada-inclusive content on the upcoming Stand Up To Cancer biennial telecast. This fifth televised fundraising special from SU2C will air on Friday, Sept. 9 (8:00 – 9:00 PM ET/PT / 7:00 PM CT). Bradley Cooper, Academy Award-nominated actor and founder of the Charles J. Cooper Patient Support Fund, will serve as executive producer along with renowned live, large-scale event producers Done + Dusted, working with Stand Up To Cancer’s production team. Stand Up To Cancer Canada will simultaneously broadcast the Canadian-inclusive telecast, featuring SU2C Canada collaborators and Dream Teams, as well as Canadian talent across all four major English-language broadcasters: CBC, City, CTV, and Global. Additionally, Canadian services AMI, Bloomberg TV Canada, CHCH, CHEK, Fight Network, Hollywood Suite, Joytv, NTV and TLN will also air the telecast.