

Celebrating 10 Years of Excellence in Cancer Prevention Research

Carolyn Gotay, PhD

Affiliations

Dr. Carolyn Gotay is a Professor and Canadian Cancer Society (CCS) Chair in Cancer Primary Prevention at the University of British Columbia (UBC), where she serves as Director of the Centre of Excellence in Cancer Prevention. She also holds an appointment at the BC Cancer Agency.

January 2018

Centre of Excellence in Cancer Prevention
UBC School of Population and Public Health
138-2206 East Mall
Vancouver, BC V6T 1Z3
Telephone: 604 827 4022
Email: carolyn.gotay@ubc.ca



CENTRE OF
EXCELLENCE
IN **CANCER**
PREVENTION

A partnership between the
Canadian Cancer Society and
The University of British Columbia



THE UNIVERSITY OF BRITISH COLUMBIA



Faculty, staff, and students of the CoECP, December 2017

Cancer is one of the leading threats to health in Canada and the world. While a large proportion of cancer can be prevented – 30-50% or even more - cancer prevention research has been under-studied, under-funded and under-applied.

In recognition of the potential of cancer prevention research, and the need for directed resources, the Canadian Cancer Society British Columbia Yukon (CCS BCY) endowed a permanent Chair in Cancer Primary Prevention at The University of British Columbia (UBC) in 2008, with Dr. Carolyn Gotay as the inaugural Chair holder.

The next step was to establish the Centre of Excellence in Cancer Prevention (CoECP), to build infrastructure and address some of the research gaps. The CoECP has been developed in a partnership between Dr. Carolyn Gotay at UBC, and the CCS BCY. The goals of the CoECP are to reduce cancer incidence and risk factors through new research, dissemination of existing knowledge, and by increasing connections among and between researchers, practitioners, policy makers, and the public.

The CoECP has collaborated to develop programs in research, education, and knowledge exchange, all of which contribute to its potential to increase the scope, salience, and impact of cancer prevention research, and play a significant role in decreasing cancer incidence in Canada.



L to R: Dr. David Patrick, Ms. Barbara Kaminsky, Dr. Carolyn Gotay, and Dr. Gavin Stuart at the 2015 Centre of Excellence announcement

SELECTED KEY EVENTS IN THE HISTORY OF THE CENTRE OF EXCELLENCE IN CANCER PREVENTION

- 2005-07 - CCS BCY and the BC Government endows \$5 million to establish the Chair in Cancer Primary Prevention UBC.
- 2008 - Dr. Gotay assumes the newly-created endowed position of the CCS Chair in Cancer Primary Prevention.
 - Cancer Prevention Centre established.
 - Dr. Kristin Campbell, physical therapist and cancer prevention researcher, joins the Centre as Assistant Professor.
- 2010 - Dr. Gotay, PI, receives her 1st national peer-reviewed grant as CCS Chair for the Worksite Wellness Program, a research collaboration between the Centre and the CCS BCY.
- 2009-12 - CCS BCY provides an additional \$4.54 million to the Centre.
- 2013 - Dr. Gotay receives Queen Elizabeth II Diamond Jubilee Award for work with the CCS.
- 2014 - Dr. Dummer, health geographer and cancer prevention researcher, joins the Centre as Associate Professor.
- 2015 - Dr. Murphy, nutritional epidemiologist and cancer prevention researcher, joins the Centre as Assistant Professor.
 - Centre designated a "Centre of Excellence" by UBC Faculty of Medicine, in recognition of its accomplishments.
- 2016 - Dr. Murphy receives a Career Development Award in Prevention from the CCS.
 - Dr. Dummer, Co-PI, receives two grants, each for almost \$2 million, from the Canadian Institutes for Health Research and the Terry Fox Research Institute.
 - Dr. Gotay receives Distinguished Achievement Award for Service to the University and Community, Faculty of Medicine, UBC.
- 2017 - Dr. Murphy, PI, receives Prevention Innovation award from the CCS.

Snapshots of our Core Faculty's Research Programs



Dr. Carolyn Gotay

ADVOCATING FOR “HANDS ON” APPROACHES TO CANCER PREVENTION

Cancer is one of the greatest health threats faced by our country today. About one in two of us will be diagnosed with cancer in our lifetime. This year, more than 80,000 Canadians will lose their lives to cancer. We know that about half of cancer cases could be prevented through lifestyle changes – that is to say; not smoking, maintaining a healthy body weight, keeping physically active, eating better, drinking within guidelines (if at all), and getting enough sleep.

Our research at the Centre of Excellence in Cancer Prevention has shown that a variety of strategies can lead to positive changes to reduce cancer risk: “new technologies” incorporating computer-generated, tailored messages; “hands on” approaches such as cooking classes for prostate cancer patients and their spouses; and a personal touch, like an individual sleep coach. **Much of cancer is preventable, and our research works toward making that possibility a reality.**



Dr. Kristin Campbell

THE WHY AND HOW OF CANCER PREVENTION AND SURVIVORSHIP

Half of cancer cases could be prevented, and the health of cancer survivors improved, through lifestyle changes, including keeping physically active and maintaining a healthy body weight. My research at the Centre of Excellence in Cancer Prevention has focused on understanding the “why” – the biology behind these recommendations.

My goal is to use this information to continue to improve the recommendations provided to Canadians to reduce cancer risk and improve health after a cancer diagnosis. I also focus on “how” to best deliver programming to help Canadians make these lifestyle changes, such as increasing physical activity when time is short, if you work shiftwork, or when you are experiencing the side effects of cancer treatment. Lifestyle change can be challenging. **By understanding the biology behind the recommendations and making lifestyle changes, Canadians can reduce their cancer risk and improve the experience of cancer survivorship.**



Dr. Trevor Dummer

PREVENTING CANCER 300,000 PEOPLE AT A TIME

My research integrates health geography with epidemiology and public health to ensure that context and setting is central to cancer prevention. Specifically, my focus intersects three themes: quantifying and preventing environmental and built environment cancer risks; assessing biomarkers of environmental and lifestyle cancer risks; understanding gene by environment interactions in cancer and chronic disease.

I am Co-PI of BC Generations, the British Columbia arm of the Canadian Partnership for Tomorrow Project (CPTP), Canada's largest cancer cohort of over 300,000 participants. This pan-Canadian resource provides the basis for assessing the lifestyle, environmental and genetic causes of cancer, developed as a unique population health laboratory for quantifying cancer risks and evaluating cancer prevention activities. As one of the CPTP scientific leaders, I have supported the creation and ongoing enhancement of this research platform.

Understanding the interaction between lifestyle, environment and genetics is essential for precision cancer prevention in the 21st century.



Dr. Rachel Murphy

YOU ARE WHAT YOU EAT -- BETTER NUTRITION FOR PREVENTING CANCER

Less than 1 in 3 Canadians eat the recommended daily serving of fruits and vegetables per day. Poor nutrition can have long-standing negative effects on health, contributing to as much as 30% of all cancer cases in addition to other chronic diseases. My research aims to understand how nutrition and other healthy lifestyle behaviours can prevent cancer, and to develop solutions to encourage healthy eating.

My population health research has identified biological markers that may help to understand the mechanisms through which healthier dietary patterns affect cancer. I am also studying programs that address healthy eating. This includes a school-based program to encourage healthy eating patterns early on, and a program that teaches food skills in communities to make healthy eating the easy choice. **Understanding the importance of nutrition is key to ensuring good health. Our research will provide relevant information that could prevent many cancers from occurring.**

Training New Researchers

Over the last 10 years, we have trained and mentored 44 graduate students (MSc = 28; PhD = 16) who are pursuing their research interests in cancer prevention.

We have also mentored undergraduates, summer students, MPH (Public Health), MPT (Physical Therapy), MHA (Health Administration), and postdoctoral fellows.

Our MSc and PhD students have undertaken research projects in a diverse range of cancer prevention topics, such as:

- Physical activity and sleep in night shift workers
- Nutrition and secondary cancer prevention
- Diet and healthy aging
- Increasing colon cancer screening and prevention behaviours
- Attitudes and behaviours toward prevention in naturopath and medical students
- Variations in cancer screening uptake in immigrant populations
- Discovering modifiable risks for breast cancer in young women
- Understanding cancer risk factors and barriers to screening in LGTQ populations



L to R: Christina Gu (MSc student) and Dr. Murphy

Key Research Accomplishments

223 peer-reviewed publications

(including high impact journals, such as the *Lancet*, *Nature*, and the *Canadian Medical Association Journal*)

\$21.08 million in total funding

(not including CCS infrastructure or Chair funding)

193 presentations

Funding from:

43 committees/advisory roles

- Canadian Cancer Society
- Canadian Institutes for Health Research
- Canadian Partnership Against Cancer
- Canadian Breast Cancer Foundation
- Terry Fox Research Institute
- Mitacs
- Alberta Innovates, Health Solutions
- Michael Smith Foundation for Health Research
- Other agencies and organizations

13 honours and awards

414 media mentions

PARTICIPATION IN SELECTED KEY NATIONAL AND PROVINCIAL COMMITTEES

- Alberta Science Advisory Committee on Artificial Tanning
- British Columbia Provincial Working Group on Breast Cancer Prevention and Screening
- British Columbia Sugary Drinks Coalition
- Canadian Cancer Society Research Institute: Advisory Council on Research, National Advisory Committee on Research in Prevention/End 1 Development Committee
- Canadian Cancer Trials Group: Quality of Life Committee, Symptom Control Committee
- Canadian Nutrition Society: Revising Canada's Food Guide Consultation
- Canadian Partnership Against Cancer: Primary Prevention Action Group, Primary Prevention Advisory Committee, Population Health Advisory Committee
- Canada's Tobacco Endgame Initiative: Cessation and Prevention Action Groups
- CAREX Canada: Pesticide Advisory Committee
- Prostate Cancer Canada: Research Advisory Board

SELECTED HONOURS AND AWARDS

- Dr. Gotay receives Distinguished Achievement Award for Service to the University and Community, Faculty of Medicine, University of British Columbia (2016)
- Dr. Murphy awarded Canadian Cancer Society Career Development award in Prevention (2016)
- Dr. Campbell receives the Killam Research Fellowship Award, University of British Columbia (2015)
- Dr. Dummer named as Co-Principal Investigator of the Atlantic Partnership for Tomorrow's Health (PATH) (2015)
- Dr. Gotay elected as a Fellow, Canadian Academy of Health Sciences (2013)
- Dr. Gotay receives the Queen Elizabeth II Diamond Jubilee Award for work with the Canadian Cancer Society (2013)
- Dr. Gotay and the CoECP team named as Canadian Cancer Society "Top Research Stories of 2013" for Gotay, et al., Canadian Journal of Public Health 2013 paper (2013)
- Dr. Campbell receives an award for Best Poster by a New Investigator, Institute of Cancer Research, CIHR (2011)
- Dr. Gotay receives the President's Award, International Society for Quality of Life Research (2011)

Selected Accomplishments in Mobilizing Knowledge



L to R: Amina Moustaqim-Barrette (MSc student) and Dr. Dummer

- Oral and written testimony regarding the scientific evidence about the Canadian obesity epidemic before the Standing Senate Committee on Social Affairs, Science and Technology, Ottawa, 2015.
- Community forums to disseminate research findings to the broader community:
 - Worker Protection from Carcinogenic Exposures, Vancouver (2012)
 - Worksite Wellness, Vancouver (2014)
 - Men's Health Works, Vancouver (2015)
 - Men's Health Works, Prince George (2015).
- Translation of findings from a CCS-funded research project into a multi-part sleep hygiene module used in 13 worksites in BC and NWT: <http://www.bchealthyliving.ca/what-we-do/working-on-wellness/sleep-well/> (2016).
- Breast Cancer Clinics that translate research on primary prevention of breast cancer into action for more than 4,000 people in BC and nationwide, including women from South Asian, Filipino, Chinese, Ismaili, and First Nations communities, breast cancer survivors, and more than 1500 high school students in 12 secondary schools (2011-2016).
- Commentary in the Canadian Medical Association Journal urging Canada to lobby for a global ban on asbestos import and use that preceded a federal government plan to ban asbestos in Canada, and create a new set of regulations to better protect workers from asbestos exposure (2015).
- Developed Cancer Prevention 101, a free and interactive online resource that provides tailored advice, tips and resources, for nearly 60,000 students across all of UBC's campuses. The goal of this evidence-based resource is to help students identify lifestyle changes they can make to reduce their risks for cancer (2016).
- With support from the Canadian Men's Health Foundation and Sunlife, developed an assessment tool to provide estimates of women's risk for 10 chronic diseases.



Tracey Mager, Lifestyle Counselor, presenting a Breast Cancer Clinic to women in Vancouver's South Asian community



Dr. Gotay gives an oral presentation about the online risk assessment at the CDPAC conference in Toronto (2016)

Conclusion

In almost ten years, cancer prevention research has grown exponentially at the University of British Columbia, benefiting considerably from the Canadian Cancer Society's initial and continued support.

This growth began with the establishment of an endowed chair position. An international search resulted in the recruitment of Dr. Carolyn Gotay, a faculty member with a distinguished record of achievement in cancer control research. Dr. Gotay left a position as Director of the Cancer Prevention and Control Program at the University of Hawai'i Cancer Centre to take on a new challenge: growing a cancer prevention research program based at the University of British Columbia.

When Dr. Gotay arrived in 2008, there was very little cancer prevention research at UBC. She was successful in establishing her own research program and developing a centre, now known as the Centre of Excellence in Cancer Prevention. Three outstanding faculty members with specific expertise in cancer prevention research have been recruited to the Centre, and they are assisted by a team of dedicated staff members.

Centre accomplishments are impressive: more than \$20 million in grant funding, more than 200 peer-reviewed publications, and leadership in the leading cancer organizations in Canada. Not surprisingly, Centre members have been recognized with prestigious university, national, and international awards. Students have come from around the world to be supervised by Centre faculty, providing a strong underpinning for the next generation of cancer prevention researchers.

The Canadian Cancer Society has been a supportive partner throughout this journey, and CCS staff have been active in our research agenda in many different ways: identifying priority research questions, collaborating in research activities, and providing access to their networks for recruitment and knowledge translation and dissemination. At the same time, Centre faculty have provided critical summaries of recent research for the CCS, served on CCS committees, reviewed CCS materials, and participated in CCS fundraising and community events.

As a new decade beckons, the achievements of the past ten years provide a strong foundation to build on. With the numbers of cancer cases still rising in Canada, the need for more cancer prevention research and knowledge mobilization has never been more urgent. We look forward to continuing to contribute to cancer prevention research and programs in the years to come.

Centre of Excellence in Cancer Prevention
 UBC School of Population and Public Health
 138-2206 East Mall
 Vancouver, BC V6T 1Z3
 Telephone: 604 827 4022
 Email: carolyn.gotay@ubc.ca



**CENTRE OF
 EXCELLENCE
 IN CANCER
 PREVENTION**

A partnership between the
 Canadian Cancer Society and
 The University of British Columbia



THE UNIVERSITY OF BRITISH COLUMBIA