PROJET DE PROGRAMME DE

Maîtrise ès sciences en oncologie (sans mémoire)

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Faculté de médecine
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PROPOSAL FOR THE CREATION OF AN

M.Sc. in Oncology; Non-Thesis

Gerald Bronfman Department of Oncology
Faculty of Medicine
September 2017
PROPOSAL

FOR THE CREATION OF A NEW PROGRAM

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EXECUTIVE SUMMARY

The proposed Integrated Graduate Program in Oncology will allow students to obtain a M.Sc. in Oncology; Non-Thesis, in one of four streams as follows: (i) Population and Global Cancer Control; (ii) Psychosocial and Palliative Care; (iii) Clinical Cancer Research; and (iv) Cancer Care Services and Quality. The objective of this program is to provide students the opportunity to gain exposure to the entire spectrum of principles and practice in all fields of oncology as well as its research domains while exploring in more detail their specific area of interest in the field. The program will cater to a broad spectrum of professional and training backgrounds, including but not limited to epidemiology, management, medicine, nursing, occupational therapy/physiotherapy, psychology, social sciences, statistics, and related disciplines or specialties.

The means for obtaining graduate training in cancer research already exist at McGill but are primarily geared towards basic science disciplines. The McGill graduate programs in Experimental Medicine and Biochemistry are access points for degree-seeking candidates to careers in fundamental or experimental cancer research, as well as to clinicians specializing in one of oncology’s postgraduate medical education programs (radiation, medical, or surgical oncology). Many clinical oncologists have also sought graduate training in epidemiology via the existing M.Sc. program offered by the Department of Epidemiology, Biostatistics, and Occupational Health (EBOH). Graduate students interested in research in the fields of psychosocial oncology or palliative care have registered in either the Ingram School of Nursing or the Department of Psychology.

What McGill does not yet have is a comprehensive oncology graduate program that integrates all professional and research training streams under a single academic structure that oversees core and elective curricular activities to be tailored to maximize the educational value for degree-seeking candidates of all backgrounds. McGill’s Gerald Bronfman Department of Oncology is such an academic structure. It includes over 200 faculty members who represent the entire array of professions, disciplines, and specialties that are relevant to cancer prevention, control, and patient care. In fact, Department members have already been active as instructors and graduate supervisors for the aforementioned degree programs (offered by the following academic units: Biochemistry, Epidemiology, Biostatistics and Occupational Health, Experimental Medicine, Nursing, and Psychology).

The proposed 45-credit M.Sc. in Oncology; Non-Thesis program includes three newly created courses common to all streams: the two-term core course: Fundamentals of Oncology and Cancer Research; the single-term course: Best Practices in Biomedical Research; and the three-term course: Oncology Practicum. The practicum will be tailored to the students’ particular stream but students will be required to give a presentation on their work to their peers in the other streams. The practicum will run during the winter and summer semesters of the first year and fall semester of the second year. Students also will be required to take a number of stream-specific courses and attend fourteen lectures of the Department’s Multidisciplinary Oncology Residents Education (MORE) series (four of which should be journal clubs). Two additional key courses were created for this program: Principles and Practice of Clinical Trials for the Clinical Cancer Research stream; and Quality Improvement, Principles and Methods for the Cancer Care Services and Quality stream. It is expected that students will complete the program by the end of the fall semester of the
second year. We expect this program to be of interest to a wide range of health care professionals who wish to continue their professional careers while pursuing this graduate program, thus it is possible that some students may complete the program in two to three years.

The proposed program is in line with the McGill Strategic Plan, which supports health research and improved delivery of care in key areas such as cancer. Furthermore, cancer is one of the disease areas prioritized in the Faculty of Medicine’s most recent Strategic Plan. This plan also prioritizes the themes of patient experience, population health and health services, genetic and environmental determinants of health and disease, and personalized medicine: customized approaches to patient care, all of which are covered in the proposed program’s four streams. This intensive curriculum focusing on all aspects of cancer will build much needed human capital in this area.

Our program is unique in Quebec as there is currently no program which offers a graduate degree specifically in oncology. Moreover, this program offers students a unique opportunity to train in their chosen cancer specialty while also gaining comprehensive knowledge of cancer care and cancer research which they can apply in their professional lives or further educational and research endeavours. Graduates of this program, regardless of stream, will have acquired the skills and knowledge to serve in positions in the healthcare sector, academia, government, and in the private sector both in Quebec and elsewhere.
McGill University
Gerald Bronfman Department of Oncology

Proposed M.Sc. in Oncology; Non-Thesis

1. PROGRAM IDENTIFICATION
   Degree: Master of Science in Oncology; Non-Thesis
   Department: Gerald Bronfman Department of Oncology
   Faculty: Medicine
   University: McGill

2. RATIONALE FOR THE PROPOSED PROGRAM

2.1 Academic and cultural

2.1.1 Evolution of the Oncology discipline

The Edwin Smith Papyrus, an ancient Egyptian medical text dating back to around 3000 BC, contains the oldest known description of cancer, although at the time it was not mentioned by name.\textsuperscript{1,2} It was not until the Greek Classical period when the words \textit{carcinos} and carcinoma were used to describe tumours, by the Greek physician Hippocrates (460-370 BC).\textsuperscript{1,2} In the first and second century AD Roman physicians Archigenes and Galen each described procedures for the surgical removal of cancerous growths.\textsuperscript{3} Over the subsequent centuries many prominent physicians of the day wrote about their ideas regarding the surgical treatment of cancer and their observations on the characteristics of the tumour and its environment.\textsuperscript{1,2,4} The discovery of X-rays in 1895 by Wilhelm Conrad Roentgen had a profound impact on the practice of medicine and heralded a new age in the diagnosis and treatment of cancer.\textsuperscript{2,4} The 20\textsuperscript{th} century saw rapid advances in cancer research and screening, diagnosis and treatment of the disease. In 1939 Charles Brendon Huggins discovered the importance of hormones on the growth of certain cancers, thus creating a new avenue of exploration for cancer therapies.\textsuperscript{1,2} Louis Goodman’s 1946 discovery of the use of nitrogen mustards for the treatment of certain cancers revolutionized cancer treatment with the advent of chemotherapy.\textsuperscript{2} Screening and detection methods for cervical cancer (Pap smear), breast cancer (mammogram) and colorectal cancer (Fecal Occult Blood Test, and later colonoscopy) were developed in the 20\textsuperscript{th} century facilitating early detection of tumours and saving countless lives.\textsuperscript{2} The discovery of the first tumour marker, the carcinoembryonic antigen (CEA), by two McGill researchers, Phil Gold (a professor in the Gerald Bronfman Department of Oncology) and Samuel Freedman in 1965, paved the way for better diagnostic and prognostic strategies in cancer care. The end of World War II ushered in a new era of research using human subjects, with strict regulations and checks and balances regarding the design and conduct of clinical trials. The explosion of research activities and discoveries at the laboratory bench paved the way for the testing of new and innovative therapies for the treatment of different types of cancers. This has resulted in major breakthroughs in the treatment of cancer such as the use of Trastuzumab for certain types of breast cancer and Imatinib for chronic myelogenous leukemia.\textsuperscript{4}
A chronicle of the evolution of oncology would not be complete without looking at the patient experience. In the mid-1970s the field of psycho-oncology was born thanks to the efforts of Jimmie Holland. This subspecialty in oncology focuses on the impact of cancer on the person’s psychological well-being and behaviors and attitudes throughout the disease trajectory. Another aspect of the patient experience is the process of dying. In the 1960s Dame Cicely Saunders played an instrumental role in the development of hospices for terminally ill patients in London, England. This began the push to develop hospital palliative care in other countries. In the 1970s palliative care units were created at St. Boniface General Hospital in Winnipeg, and at the Royal Victoria Hospital in Montreal. Balfour Mount, Emeritus Professor in the Gerald Bronfman Department of Oncology, is considered the father of palliative care in Canada and is the founding Director of the Royal Victoria Hospital Palliative Care Service.

This is but a small sampling of important milestones in the evolution of the discipline of oncology. The discipline is multi-faceted and advances have been made in research, screening, diagnosis, treatment and supportive care for the many types of tumours and disease sites. These are too numerous to mention here but a more comprehensive listing of milestones in the field from antiquity to the present can be found on the American Cancer Society, History of Cancer website, the Winship Cancer Institute’s CancerQuest Timeline of Cancer 3000 BC - 1999 AD website and the National Cancer Institute’s Milestones in Cancer Research and Discovery website.

McGill University has played a significant role in the evolution of the scientific disciplines of oncology. In addition to the discovery of CEA by Phil Gold and the founding of modern palliative care by Balfour Mount, McGill researchers such as Philippe Gros, Steven Narod, and William Foulkes have been part of the lead teams that discovered important tumour suppressor genes. McGill’s Medical Physics Division is administratively linked with the Gerald Bronfman Department of Oncology. Originally led by Ervin Podgorsak and now by Jan Seuntjens, the Medical Physics Division is internationally recognized for the prominence of its research and quality of its training programs. The opportunity to eradicate the third most common human cancer worldwide, cervical cancer, is now a reality because of research on human papillomavirus (HPV) vaccination. The first successful vaccine against HPV was developed by a team in which Eduardo Franco, the current Department Chair, played a leading role. Collectively speaking, the cancer research community at McGill is internationally renowned. Section 2.1.6 below describes in detail the history and the strengths of the research and educational activities of the Gerald Bronfman Department of Oncology.

2.1.2 Originality of the proposal

Since basic cancer research is already well-established at McGill in departments such as Medicine (Division of Experimental Medicine) and Biochemistry, it was decided that the emphasis of this Integrated Program would be on less represented areas of oncology and cancer research. Currently, the programs at McGill do not meet the needs of clinicians and other professionals in health care who wish to pursue a career in academic oncology. The focus of this program will be on training at the Master’s level thus tapping into the diverse population of professionals, both in Montreal and elsewhere, who are interested in broadening their cancer research and clinical oncology knowledge and expertise to further their career goals.
The four streams of our proposed M.Sc. in Oncology; Non-Thesis: (i) Population and Global Cancer Control, (ii) Psychosocial and Palliative Care, (iii) Clinical Cancer Research, and (iv) Cancer Care Services and Quality, take advantage of the vast array of specialties and disciplines covered by the Gerald Bronfman Department of Oncology at McGill and keep in mind the domains of cancer research in which there is substantial market demand.

The integration of four distinct areas of oncology and cancer research into one unifying graduate program is a key feature of this proposal. Taken individually, the first and second streams could incorporate a thesis, whereas the third and fourth streams could not. Thus, a non-thesis program was chosen as it was the best way to maintain the integrity and raison-d’être of the four stream program.

As outlined in section 2.4.2 there are no similar programs in Quebec. Furthermore, the program’s areas of focus and structured approach to the curriculum sets it apart from other integrated cancer programs offered in Canada and internationally.

2.1.3 Definition of body of knowledge

In the proposed M.Sc. in Oncology; Non-Thesis program, students will learn about the broad scope of activities in oncology and cancer research while obtaining in depth knowledge of a chosen area of specialization.

All students enrolled in the program will gain knowledge in the following areas through the required core courses:

- Cancer nomenclature
- Tumour pathology
- Fundamentals of molecular biology with respect to cancer
- Mechanisms of carcinogenesis and tumour progression
- Cancer genetics
- Cancer immunology
- Molecular heterogeneity of cancer
- Cancer biomarkers
- Drug discovery
- Global burden of cancer
- Epidemiologic methods to study cancer etiology and screening
- Epidemiologic methods to study cancer prognosis and survival
- Cancer prevention and screening
- Palliative care
- Cancer pain and symptom control
- Cancer cachexia and nutrition
- Exercise and rehabilitation
- Psychosocial oncology
- Quality of life
- Design and conduct of clinical trials
- Medical, surgical and radiation oncology and medical physics
• Prevention, screening, diagnosis, treatment and survivorship of cancer by disease site (breast, colorectal, lung, prostate, hematologic, gynecologic, head and neck, brain, dermatologic)
• Pediatric oncology, adolescent and young adult oncology, geriatric oncology
• Models of cancer care delivery
• Health economics/health services utilization
• Standards of quality in cancer care
• Patient satisfaction
• Survivorship
• Whole person care
• Best practices in biomedical research including research ethics, reading and reviewing papers, designing a research study, data collection and management, and scholarly publishing.

Students choosing courses from the stream, Population and Global Cancer Control, will gain knowledge and skills in cancer epidemiology and prevention, statistical methods in health research, and public health research and practice with a focus on global cancer control.

Students choosing courses from the stream, Psychosocial and Palliative Care, will gain knowledge and skills in quantitative and qualitative research methods as well as research domains in psychosocial oncology, behavioural sciences, and palliative care, which will prepare them for successful careers in these domains of oncology.

Students choosing courses from the stream, Clinical Cancer Research, will gain knowledge and skills on statistics in health research and the design, conduct and analysis of clinical trials with an emphasis on cancer. This stream will prepare clinicians or allied health professionals for positions of leadership in therapeutic oncology teams.

Students choosing courses from the stream, Cancer Care Services and Quality, will gain knowledge and skills on statistics in health research, health care systems, program management in global health and primary health care, economic evaluation of health programs and the design, implementation and assessment of quality improvement initiatives with an emphasis on cancer. This stream will educate leaders in quality improvement in cancer prevention and care.

All students will obtain practical hands-on experience in their chosen area of specialization.

2.1.4 Links with other disciplines

The field of oncology is inextricably linked to many disciplines and is by necessity multi- and interdisciplinary. On the clinical side, managing the care of a cancer patient throughout the disease trajectory requires the input of a multidisciplinary/interdisciplinary team of health care professionals including physicians, nurses, psychologists, social workers, physical and occupational therapists and dietitians. Members of these teams may also interact with community-based cancer support groups as well as provincial, national and international bodies tasked with monitoring cancer incidence and developing prevention and treatment policies. Basic cancer research is conducted through such fields as biochemistry, physiology and neuroscience.
Discovering the causes of cancer requires the contributions of epidemiologists, statisticians, pathologists, geneticists, toxicologists, virologists, and clinicians. Psychosocial oncology research is conducted by those in nursing, psychology or social work. Cancer survivorship research may involve nurses, physiotherapists and dietitians. Epidemiologists conduct research on population health to ascertain the effectiveness of new screening and prevention strategies and often work collaboratively with oncology clinicians.

In the proposed M.Sc. in Oncology; Non-Thesis program, lecturers and practicum supervisors will come from many disciplines in the field of oncology and cancer research including medical, surgical and radiation oncology, molecular and cell biology, epidemiology, biostatistics, psychosocial oncology, nursing, and palliative care. In addition, the program taps into the expertise from other McGill units and disciplines including the Department of Family Medicine, Department of Epidemiology, Biostatistics and Occupational Health, Department of Human Genetics, Department of Psychology, Division of Experimental Medicine, Ingram School of Nursing, School of Social Work, School of Physical and Occupational Therapy and Desautels Faculty of Management.

2.1.5 Future developments in Oncology

The field of oncology continues to evolve as new research discoveries result in the development of new and innovative preventive strategies and therapies. In the era of personalized medicine cancer patients will be treated based on specific factors within their genetic profile that would make them more likely to respond to specific targeted therapies. Likewise, precision public health requires the identification of population groups that will benefit the most from chemo- or immune-preventive interventions and specific screening technologies. Public health and clinical research will continue to play a critical role in bringing new discoveries from the laboratory to the population and to patients. As the paradigm of patient-centered care continues to evolve, supportive care research will be front and centre as new strategies are developed to ease the burden of cancer for patients and their caregivers throughout the disease trajectory. Improvements in the quality of delivery of cancer care also will be critical in order to manage the increasing volume of cancer patients and the burgeoning costs.

2.1.6 History and strengths of Oncology at McGill

The Gerald Bronfman Department of Oncology at McGill University (originally named Department of Oncology) was founded in 1990 and since then has grown to over 200 faculty members including Faculty Lecturers, Assistant/Associate/Full Professors, Associate Members, and Adjunct Professors. Its headquarters is located at 5100 de Maisonneuve Blvd. West, Suite 720. At the time of its creation, the general trend in Canada was for clinical oncology activities to be associated with a radiation therapy department, and medical oncology to be either a separate unit or a subunit of hematology. The creation of the Oncology Department at McGill changed that paradigm with Radiation Oncology becoming a Division within the Department. By 1995, the Department had split the Division of Clinical Oncology to form the Divisions of Medical Oncology and Surgical Oncology. At inception, the Department also incorporated into its structure, Divisions of Basic Cancer Research, Cancer Epidemiology, and Palliative Care. Over time, new divisions and Department programs were added including Clinical Trials Operations (later renamed as
Clinical Research Program), Hematology-Oncology, Gynecologic Oncology, Head and Neck Oncology, Cancer Prevention, Cancer Genetics, Cancer Nutrition-Rehabilitation, Pediatric Oncology, Adolescent and Young Adult Oncology, Geriatric Oncology, Oncology Nursing, Psychosocial Oncology, Community Oncology, Whole Person Care, and Medical Physics.

Cancer-related research, teaching and clinical care are conducted throughout McGill and its affiliated hospitals. The Rosalind and Morris Goodman Cancer Research Centre, formerly the McGill Cancer Centre which was created in 1978, has 27 investigators whose basic cancer research programs cover four themes: cancer therapeutics, cellular stemness and plasticity, oncometabolism, and tumour microenvironment. At the Lady Davis Institute/Segal Cancer Centre, cancer research is conducted along seven themes: biomarkers in cancer therapy, cancer prevention and cancer genetics, molecular oncology, new cancer therapies, psychosocial oncology, translational physics and radiobiology, and evaluative research. At the McGill University Health Centre Research Institute, the Cancer Research Program focuses on hereditary predisposition to cancer as well as tumour progression and metastasis. Cancer epidemiology research is conducted in space adjacent to the administrative headquarters of the Gerald Bronfman Department of Oncology, as well as at the Lady Davis Institute. Across McGill there are a number of faculty members from other units who are not affiliated with the Gerald Bronfman Department of Oncology but who conduct cancer-related research. These units include Microbiology and Immunology, Physiology, Medicine, Human Genetics, Neurology and Neurosurgery, Surgery, Experimental Surgery, Pediatrics, Educational and Counselling Psychology, Nursing, Dentistry, Physical and Occupational Therapy, and Kinesiology and Physical Education.

The Rossy Cancer Network (RCN), which was created in 2012, involves the Gerald Bronfman Department of Oncology and McGill’s three teaching hospitals that provide cancer care, i.e., McGill University Health Centre (MUHC), Jewish General Hospital (JGH – affiliated with CIUSSS du Centre-Ouest-de-l’Île-de-Montréal), and St. Mary’s Hospital Center (SMHC – affiliated with CIUSSS de l’Ouest-de-l’Île-de-Montréal). The network has created seven disease site priorities (breast, gastrointestinal, genitourinary, gynecology, head and neck, hematology, and lung) whose leads are tasked with using a common framework of quality, resources and tools to improve cancer care across the network.

The Gerald Bronfman Department of Oncology’s Director of Undergraduate Medical Education in Oncology is responsible for ensuring the presence of oncology education in the undergraduate curriculum. The Department recently implemented a new vision for teaching oncology at the undergraduate level. In the past, medical students experienced rotations in medical and radiation oncology clinics during the second year of their program. With the Department’s advice, the Faculty of Medicine revised its undergraduate medical education curriculum to move the oncology rotations to the third year clerkship. This is an improvement as by the time students reach their clerkship year their medical knowledge is more advanced, thus facilitating their learning during the clinic rotations. The medical students spend two half-days in a medical oncology clinic and two half-days in a radiation oncology clinic. In addition, two academic half-days are devoted to the topics of diagnosis, staging and treatment of cancer, as well as studying clinical cases.

The Gerald Bronfman Department of Oncology has residency training programs in medical, surgical, and radiation oncology, which are accredited by the Royal College of Physicians and
Surgeons of Canada. The Medical Oncology Residency Training Program is a 2-year program that typically has 10-12 trainees per year. The Surgical Oncology Residency Training Program is also two years and has 2-3 trainees per year. The Radiation Oncology Residency Training Program is 5 years and has 15-20 trainees per year. The success rate of the programs is very high and trainees go on to successful careers. A number of former trainees in these programs are currently Department faculty members with their clinical practice at one of the McGill-affiliated hospitals. McGill has a gynecologic oncology residency training program, a hematology residency training program where trainees also gain experience in hematologic malignancies, and a head-and-neck oncology residency training program where trainees gain experience in head and neck cancers. In addition, McGill offers a residency program and graduate programs (M.Sc. and Ph.D.) in Medical Physics.

Experimental Medicine and Biochemistry are the existing academic structures at McGill that have trained M.Sc. and Ph.D. students in basic cancer research. The Rosalind and Morris Goodman Cancer Research Centre, the Segal Cancer Centre and the McGill University Health Centre Research Institute have highly productive research units that host dozens of new graduate and postgraduate trainees every year. Historically, the Goodman Cancer Research Centre and the Segal Cancer Centre each had a Canadian Institutes of Health Research (CIHR) Strategic Training Initiative in Health Research (STIHR) grant in cancer research, which ran from 2003 to 2009. This grant also included oncologists and cancer researchers from other McGill units. This consortium of McGill-affiliated units applied for renewal as the merged McGill Integrated Cancer Research Training Program (MICRTP), which received funding for the period 2009 to 2015. The Program was open to graduate students (M.Sc., Ph.D.) and postdoctoral fellows registered in the various basic science departments or the Division of Experimental Medicine, as well as to clinical fellows and epidemiology trainees. From 2009 to 2015, MICRTP funded 319 trainees at the Master’s, Ph.D. and Postdoctoral levels; of these, 52 were at the Master’s level.

The Epidemiology, Biostatistics and Occupational Health (EBOH) Department provides advanced training in epidemiology and there have been many trainees in cancer epidemiology over the years at both M.Sc. and Ph.D. levels. There is great opportunity to coalesce existing cancer-related activities in epidemiology, biostatistics and occupational health to be part of the proposed program’s training initiative in population and global cancer control. These include (i) the cancer epidemiology unit that straddles the Departments of EBOH and Oncology (directed by the current Department Chair, Dr. Eduardo Franco) which has trained 79 M.Sc. and Ph.D. students and 31 postdoctoral fellows; and (ii) the pharmacoepidemiology program at the JGH Clinical Epidemiology Unit, which has an equally strong training platform. The Departments of EBOH and Oncology also have strong environmental cancer research units.

Researchers and clinicians specializing in psychosocial oncology and palliative care are spread throughout McGill and its teaching hospitals. Historically, Dr. Carmen Loiselle has led the pan-Canadian multi-institutional and transdisciplinary Strategic Training Initiative in Health Research (STIHR) program called PORT (Psychosocial Oncology Research Training) (2003-2009 and 2009-2015). This training program was open to graduate students (Master’s and Doctoral) and postgraduates in a range of disciplines such as nursing, psychology, management, and medicine. As part of the requirements, trainees were expected to enroll in the 3-credit NUR2783 course (Psychosocial Oncology Research) which was developed for this training program and will be
taken by all students in the Psychosocial and Palliative Care stream of the proposed M.Sc. in Oncology; Non-Thesis program. From 2009 to 2015, the program supported 65 trainees at the Master’s, Ph.D. and Postdoctoral levels; of these, 13 were Master’s students.

From 2003 to 2009, Dr. Robin Cohen led a Strategic Training Program in Palliative Care Research, which was co-funded by CIHR’s Institute of Cancer Research, and the National Cancer Institute of Canada (now renamed as Canadian Cancer Society Research Institute). This training program was open to graduate students (Master’s and Doctoral) and postdoctoral fellows working under the supervision of participating investigators at McGill University, University of Ottawa, and Université Laval. The program trained 21 people at the Master’s, Ph.D. and postdoctoral levels; of these, 6 were Master’s students. NUR2 705 had been created for this training program and will be taken by all students in the Psychosocial and Palliative Care stream of the proposed M.Sc. in Oncology; Non-Thesis program.

Since its creation, Department faculty members have been very involved in investigator-initiated clinical trials as well as clinical trials sponsored by private industry and by national and international cooperative groups. Many have been involved in ground-breaking studies which have had a profound influence on standard of care and public policy. Oncology clinical research within the McGill network is wide-ranging, including studies focusing on systemic therapies, radiation oncology, surgical procedures, pain and symptom control, supportive care and population health. The Rossy Cancer Network is working on a database of oncology clinical trials being conducted at the McGill-affiliated hospitals ([https://www.mcgill.ca/rcr-rcn/clinical-trials](https://www.mcgill.ca/rcr-rcn/clinical-trials)). This expertise will be of great value to students in the Clinical Cancer Research stream of the proposed M.Sc. in Oncology; Non-Thesis program.

Gerald Bronfman Department of Oncology faculty members in radiation oncology at the McGill University Health Centre are actively involved in providing quality improvement training to residents. Moreover, the Rossy Cancer Network provides research grants for initiatives focusing on cancer care quality and innovation as well as quality improvement. The cancer care services and quality stream of the proposed program will be able to tap into the expertise and initiatives being developed in this area.

Continuing medical education also has been a very important component of the educational mission of the Department since its inception. The Visiting Speakers Program in Oncology (VSPO) is administered through the Gerald Bronfman Department of Oncology but is a joint initiative with the Université de Montréal. The program sponsors internationally renowned oncology experts to share their expertise with the medical community at McGill and Université de Montréal affiliated hospitals. The McGill Continuing Professional Development Office posts webcasts of the lectures on its website. Department faculty members are also regular presenters in the continuing medical education series maintained by the Faculty of Medicine.

The Gerald Bronfman Department of Oncology is also the home for the Editorial Office of a top-tier academic journal, *Preventive Medicine*, and also for a sister publication via the open access model, *Preventive Medicine Reports*. Between these two journals, more than 1700 new manuscript submissions per year are processed by the editorial staff. The Editor-in-Chief, Dr. Eduardo Franco,
will use his vast experience overseeing these two journals to teach best practices in publishing to graduate students in the program.

Specifically concerning the impact of their research, Gerald Bronfman Department of Oncology faculty members have been very influential. Appendix 1 shows a citation analysis based on the Scopus database for our departmental members. Only those with at least 1000 citations are shown. Considering all ranks, 11 members have accrued more than 15,000 citations, four were in the 10,000-15,000 range, and an additional 30 were cited at least 3,000 times. The high citation counts for some of our researchers are a reflection of their leading role in discoveries in cancer genetics (Foulkes, Tonin, Gros), advances in cancer therapy (Margolese, Hirsh, Miller), carcinogenic mechanisms (Giguère, Pelletier, Tremblay, Park), and cancer prevention (Pollak, Franco). Researchers in fields with a lower density of researchers, such as behavioural sciences or medical physics, tend to accrue lower citation counts. McGill’s oncology community is very strong in the latter two domains of research, as well.

Table 1 shows the cancer-related expertise by discipline at McGill. The names with the asterisk are those McGill faculty members who are not members of the Gerald Bronfman Department of Oncology. Academic credentials and research interests of those who will have teaching roles in this program are presented in section 4.1.1.1, Table 6.

**Table 1 - Cancer-related expertise by discipline at McGill**

Within each page, listing continues on the column to the right

<table>
<thead>
<tr>
<th>Basic Cancer Research</th>
<th>Russell Jones*</th>
<th>Jean-Pierre Routy*</th>
<th>Cancer Epidemiology</th>
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<tr>
<td>Bassam Abdulkarim</td>
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<td>Philippe Gros</td>
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<td>Sidong Huang*</td>
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<td>Genevieve Chaput*</td>
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<td>Parissa Charghi</td>
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Robin Cohen
Celine Dupuis
Justine Farley
Donald Ginsberg
Gerard Huni
Adeline Khadoury
Bernard Lapointe
Krista Lawlor
Stephen Liben*
Mary Ellen Macdonald
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Elena Neamt
Anna Towers
Golde Tradounsky
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Psychosocial Oncology
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Andrea Laizner*
Susan Law*
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Psychosocial Oncology
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Sylvie Aubin
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Andrea Laizner*
Susan Law*
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Karl Looper
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Mary Ellen Macdonald
Nicholas Makhoul*
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Denis Cournoyer
Nathalie Johnson
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Chiam Shustik
Shireen Sirhan
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Prosanto Chaudhury
Alicé Dragomir*

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Liberman
Antoine Loufi
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Khusraw Sabit
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Khalil Sultanem
Té Vuong

Medical Physics
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Slobadan Devic
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Enger
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Ives Levesque

Pathology
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Zu-hua Gao
René Michel
Alan Spatz

Head and Neck Oncology
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Richard Payne
Roger Tabah
Anthony Zeitouni*

Pediatric Oncology
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Jean-Pierre Farmer
Nada Jabado
José Montes

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Thierry Muanza

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Walter Gotlieb
Kris Jardon
Suzie Lau

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Thomas Jagoe
(Pulmonologist)
Linda Ofiara
(Pulmonologist)
Carmela Pepe
(Pulmonologist)
2.1.7 Bibliography


2.2 Socio-economic

2.2.1 Clientele

The proposed M.Sc. in Oncology; Non-Thesis, will cater to a broad spectrum of professionals and training backgrounds, including but not limited to epidemiology, management, medicine, nursing, occupational therapy/physiotherapy, psychology, social sciences, statistics and related disciplines and specialties. As evidenced by the enthusiastic letters of support from leaders in the fields of oncology and health research, as well as from potential employers of graduates of the program (Appendix 2), this is a greatly anticipated program that will fill a gap in the much needed training of the next generation of cancer experts.

2.2.2 Labour market

Graduates of this program will have acquired the skills and knowledge to serve in positions in government, academia, and in the private sector, both in Quebec and elsewhere. They will be well-poised to take on positions in such areas as research, teaching, health care services, and health care policy. Potential employers include universities, research institutes, governmental agencies, cancer charities, non-governmental organizations, contract research organizations, hospitals, pharmaceutical companies, biotechnology companies, and related institutions.
With a M.Sc. in Oncology; Non-Thesis, students who have completed the Population and Global Cancer Control stream can work in organizations tasked with epidemiologic surveillance, assessment of new cancer control technologies, and in developing public health policies.

Many who choose the Psychosocial and Palliative Care stream would themselves be trained nurses or psychologists and could use the knowledge they have gained to add value to their clinical responsibilities.

Those who choose the Clinical Cancer Research stream may be clinicians or other professionals already engaged in clinical research who would like to enhance their educational credentials in this area and be able to lead academic or private sector clinical research teams conducting clinical trials of cancer therapy. Montreal is the host city for many contract research organizations (CRO) involved with managing clinical studies sponsored by pharmaceutical companies. There is a great market for an institution that can train personnel employed by these CROs, such as clinical research associates, clinical auditors, and data managers. Some of the letters of support provide evidence that graduates of this program will have the skills CROs need.

Those who choose Cancer Care Services and Quality stream may be clinicians and other health care professionals, or health care managers, who will use the knowledge to improve clinical practice in their own institutions.

### 2.2.3 Priority area as defined by the government

Directly or indirectly, cancer affects the vast majority, if not all Quebeckers over a lifetime. No disease affects more Quebeckers than cancer. Likewise, no disease elicits as much concern to our population as cancer. In consequence, and of relevance to the proposed program, is the fact that both cancer and public health have been designated by the Quebec health ministry as priority areas since they are two of nine portfolios overseen by the Sous-Ministre.

The Programme québécois de lutte contre le cancer (PQLC) was created in 1998. Its activities over the course of the next five years led to the creation of the Direction de lutte contre le cancer (DLCC) later re-named Direction québécoise de cancérologie (DQC), a body within the health ministry tasked with planning, managing, coordinating and evaluating cancer programs and services. In 2014, the Institut de la statistique du Québec published the document Fighting Cancer in Québec and in Ontario: A Patient-Centred Approach. It was a collaborative effort between the Institut de la statistique du Québec, Cancer Care Ontario, NRC Picker Canada and the Ministère de la Santé et des Services sociaux. One goal of the study was to evaluate changes in the patient experience following implementation of the PQLC.

At the Federal level, the Canadian government provides funding to support the Canadian Partnership Against Cancer for its work in cancer control, as well as the Canadian Institutes of Health Research to help support cancer research initiatives.
2.2.4 Documents, experts or agencies consulted

The following prominent cancer experts and leaders, primary academic and health research stakeholders, as well as potential employers, have provided testimonials of support for this program proposal. Their letters are collated in Appendix 2.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casely Tetteh Ago, MB, ChB, FRCR, FRCPC</td>
<td>Chief, Capital District Department of Radiation Oncology Professor and Head, Dalhousie Department of Radiation Oncology, Nova Scotia</td>
</tr>
<tr>
<td>Armen Aprikian, MD, FRCSC</td>
<td>Medical Director, Cancer Care Mission McGill University Health Centre</td>
</tr>
<tr>
<td>Charles Balch, MD, PhD, FACS</td>
<td>Professor of Surgery, University of Texas MD Anderson Cancer Center, Houston, Texas, USA Former Vice-President, American Society of Clinical Oncology</td>
</tr>
<tr>
<td>Vatche Bartekian</td>
<td>President, Vantage BioTrials Inc., Montreal Montreal Area Meeting Chairperson Clinical Research Association of Canada</td>
</tr>
<tr>
<td>Gerald Batist, MDCM, CM, CQ, FRCPC, FACP, FCAHS</td>
<td>Acting Director, Lady Davis Institute for Medical Research Director, Segal Cancer Centre and the McGill Centre for Translational Research in Cancer Professor of Oncology, McGill University</td>
</tr>
<tr>
<td>Renaldo Battista, MD, MPH, ScD, FRCPC</td>
<td>Directeur scientifique Fonds de recherche Santé Québec</td>
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<tr>
<td>Elisabeth Baugh, MHSc.O.Ont</td>
<td>Chief Executive Officer, Ovarian Cancer Canada, Toronto</td>
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<tr>
<td>Drew Bethune, MD M.Sc. FRCSC</td>
<td>Medical Director, Program of Care for Cancer Nova Scotia Health Authority</td>
</tr>
<tr>
<td>Carol Bishop</td>
<td>Director, Research Operations Canadian Cancer Society</td>
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<tr>
<td>Adalsteinn Brown, D.Phil, AB</td>
<td>Director, Institute for Health Policy, Management, and Evaluation Dalla Lana Chair, Public Health Policy, Interim Dean, Dalla Lana School of Public Health, Toronto</td>
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<tr>
<td>Heather Bryant, MD, Ph.D., CCFP, FRCPC</td>
<td>Chief Scientific Officer Canadian Partnership Against Cancer</td>
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<tr>
<td>Webster K. Cavenee, Ph.D.</td>
<td>Director, Strategic Alliances, Ludwig Institute for Cancer Research Distinguished Professor, University of California, San Diego</td>
</tr>
<tr>
<td>Stephen Chanock, MD</td>
<td>Director, Division of Cancer Epidemiology and Genetics National Cancer Institute, National Institutes of Health Bethesda, USA</td>
</tr>
<tr>
<td>Danielle Charpentier, FRCPC</td>
<td>Hématologue oncologue Cogestionnaire médicale Centre intégré de cancérologie du CHUM</td>
</tr>
<tr>
<td>Jacques Côté, Ph.D.</td>
<td>Directeur de l’Axe Oncologie Centre de Recherche CHU de Québec – Université Laval</td>
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<tr>
<td>Yves Fradet, MD</td>
<td>Professeur titulaire Département de Chirurgie CHU de Québec – Université Laval</td>
</tr>
<tr>
<td>Denise Deakin, Ph.D.</td>
<td>President and CEO Scimega, Montreal</td>
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<tr>
<td>Stuart Edmonds, Ph.D.</td>
<td>Vice-President for Research, Health Promotion and Survivorship Prostate Cancer Canada</td>
</tr>
<tr>
<td>Name</td>
<td>Position and Institution</td>
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<tr>
<td>Elizabeth Eisenhauer MD FRCP</td>
<td>Head, Department of Oncology, Queen's University, Cancer Program Medical Director, Kingston Health Sciences Centre</td>
</tr>
<tr>
<td>Max Fehlmann, Ph.D.</td>
<td>Président et chef de la direction, Société de recherche sur le cancer, Montreal</td>
</tr>
<tr>
<td>Christine Friedenreich, Ph.D., FCAHS</td>
<td>Scientific Leader, Cancer Epidemiology and Prevention Research, Cancer Control Alberta, Alberta Health Services, Calgary</td>
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<tr>
<td>Mary Gospodarowicz, MD</td>
<td>Regional Vice-President, Cancer Care Ontario, Toronto Medical Director, Princess Margaret Cancer Centre, Professor of Radiation Oncology, University of Toronto, Former President of Union for International Cancer Control (UICC), Geneva, Switzerland</td>
</tr>
<tr>
<td>Carolyn Gotay, Ph.D., FCAHS</td>
<td>Professor and Interim Co-Director, School of Population and Public Health (SPPH), Director, Centre of Excellence in Cancer Prevention, University of British Columbia, Vancouver</td>
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<td>Walter Gotlieb, MD, Ph.D.</td>
<td>President, Society of Gynecologic Oncology of Canada, Ottawa</td>
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<td>Adrian Langleben, MD, FRCP</td>
<td>Chair of the Department of Oncology and Director of the Division of Medical Oncology, St. Mary’s Hospital, CIUSSS ODIM</td>
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<td>Roberto Lara</td>
<td>Senior Director, Business Operations, Head, Canadian Operations, Precision Oncology, Flemington, NJ, USA</td>
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<tr>
<td>Jean Latreille, MDCM, FRCP</td>
<td>Directeur général, Direction générale de cancérologie, Ministère de la Santé et des Services sociaux, Quebec</td>
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<tr>
<td>Mark Levine, C.M., M.D., M.Sc., FRCP, FASCO</td>
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</tr>
<tr>
<td>Victor Ling, O.C., O.B.C., Ph.D.</td>
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</tr>
<tr>
<td>Susan D. Marshall</td>
<td>Chief Executive Officer, Brain Tumour Foundation of Canada, Toronto</td>
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<tr>
<td>Carole Mayer, Ph.D., MSW</td>
<td>President Canadian Association of Psychosocial Oncology (CAPO), Toronto</td>
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<td>Roderick R. McInnes, CM, MD, Ph.D., FRSC</td>
<td>Acting President, Canadian Institutes of Health Research/Government of Canada, Ottawa</td>
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<tr>
<td>Anne-Marie Mes-Masson, Ph.D.</td>
<td>Directrice, Réseau de recherche sur le cancer du FRQS, Directrice Scientifique, Institut du cancer de Montréal, Responsable, Axe Cancer, Centre de recherche CHUM</td>
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<tr>
<td>Nicole Mittmann, M.Sc., Ph.D.</td>
<td>Chief Research Officer, Cancer Care Ontario</td>
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<td>Mark Oremus, Ph.D.</td>
<td>President, Canadian Society for Epidemiology and Biostatistics, Associate Professor, School of Public Health and Health Systems, University of Waterloo</td>
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<td>Vassilios Papadopoulos, D.Pharm., Ph.D., D.Sc. (Hon)</td>
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<tr>
<td>Kathleen I. Pritchard, MD, FRCP</td>
<td>Departmental Division Director, Medical Oncology, Clinician Scientist, Sunnybrook Research Institute, Division of Hematology/Medical Oncology</td>
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</tbody>
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2.3 Institutional Orientation

2.3.1 Faculty and the University's development plan

The proposed M.Sc. in Oncology; Non-Thesis, fits very well with both the University and Faculty of Medicine Strategic Research Plans.

The McGill University Strategic Research Plan places a high priority on health research and improved delivery of care, with cancer as one of its key areas of focus. The Faculty of Medicine’s Strategic Research Plan has a number of prioritized themes including patient experience, population health and health services, genetic and environmental determinants of health and disease and personalized medicine: customized approaches to patient care. Cancer is one of the

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Sunnybrook Odette Cancer Centre</td>
<td>Professor of Medicine, Department of Medicine</td>
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<td></td>
<td>University of Toronto</td>
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<tr>
<td>Linda Rabeneck, MD, MPH, FRCPC</td>
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<td>Cancer Care Ontario, Toronto</td>
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<tr>
<td>Daniel Rayson, MD, FRCPC, FACP</td>
<td>Head – Division of Medical Oncology</td>
</tr>
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<td></td>
<td>Professor of Medicine, Dalhousie University</td>
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<td></td>
<td>Director, Atlantic Clinical Cancer Research Unit (ACCRU)</td>
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<td></td>
<td>Nova Scotia Health Authority, Halifax</td>
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<tr>
<td>Nathalie Rivard, Ph.D.</td>
<td>Professeure</td>
</tr>
<tr>
<td></td>
<td>Chaire de recherche du Canada en signalisation du cancer colorectal et de l'inflammation intestinale</td>
</tr>
<tr>
<td></td>
<td>Directrice du thème porteur facultaire Cancer: biologie, pronostic et diagnostic</td>
</tr>
<tr>
<td></td>
<td>Directrice de l’axe Cancer: biologie, pronostic et diagnostic du CR-CHUS, Sherbrooke</td>
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<tr>
<td>Stephen M. Robins, Ph.D.</td>
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<td>Canadian Institutes of Health Research, Institute of Cancer Research</td>
</tr>
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<td>Jack Siemiatycki, Ph.D.</td>
<td>Professeur titulaire</td>
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<td>Université de Montréal</td>
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<tr>
<td>John J. Spinelli, Ph.D., P.Stat</td>
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<td>Tony Teti</td>
<td>Director of Operations</td>
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<td>Rossy Cancer Network, Montreal</td>
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<td>Shelagh Tippet-Fagyas</td>
<td>President and General Manager</td>
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<tr>
<td></td>
<td>Leukemia and Lymphoma Society of Canada</td>
</tr>
<tr>
<td>Nathalie Tremblay</td>
<td>Présidente-directrice générale</td>
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<tr>
<td></td>
<td>Fondation cancer du sein du Québec</td>
</tr>
<tr>
<td>Donna Turner, Ph.D.</td>
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<tr>
<td></td>
<td>CancerCare Manitoba</td>
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<tr>
<td>Christine Williams, Ph.D.</td>
<td>Deputy Director</td>
</tr>
<tr>
<td></td>
<td>Ontario Institute for Cancer Research, Toronto</td>
</tr>
<tr>
<td>Eric Vigneault, MD, M.Sc.</td>
<td>President, Canadian Association of Radiation Oncology (CARO)</td>
</tr>
<tr>
<td>James R. Woodgett, Ph.D.</td>
<td>Director of Research, Lunenfeld-Tanenbaum Research Institute</td>
</tr>
<tr>
<td></td>
<td>Sinai Health System, Toronto, Ontario</td>
</tr>
</tbody>
</table>

20
disease areas prioritized in the strategic plan, and building human capital is one of the implementation strategies.

The proposed program’s disease focus is cancer and the four streams tie in with the prioritized themes as follows: Population and Global Cancer Control – strategic plan theme of population health; Psychosocial and Palliative Care – strategic plan theme of patient experience; Clinical Cancer Research – strategic plan theme of personalized medicine: customized approaches to patient care; Cancer Care Services and Quality – strategic plan themes of patient experience and health services.

2.3.2 Horizontal and Vertical integration; “complementariness” within disciplinary sector

With respect to horizontal integration, the program will cater to a broad spectrum of professionals and training backgrounds including but not limited to epidemiology, management, medicine, nursing, occupational therapy, physiotherapy, psychology, social sciences, biostatistics and related disciplines or specialties. The stream-specific courses are those offered by other McGill units such as Experimental Medicine, Epidemiology, Biostatistics and Occupational Health, Psychology, Human Genetics, Family Medicine, Ingram School of Nursing, Desautels Faculty of Management, School of Social Work, and School of Physical and Occupational Therapy.

Regarding vertical integration, the Gerald Bronfman Department of Oncology is comprised of faculty members with a broad range of cancer-related expertise. They will be instrumental in lecturing in four of the new courses created by the Department specifically for this new program. In addition, many will play a role as mentors when students conduct their Oncology Practicum.

One of the defining courses of the proposed Master’s program is Fundamentals of Oncology and Cancer Research. This course showcases the complementariness within Oncology as each week students will learn a different facet of the cancer field from experts within the Department. Basic cancer researchers will discuss topics such as mechanisms of carcinogenesis and tumour progression, and drug discovery. Cancer epidemiologists will discuss topics such as the global burden of cancer, cancer etiology, prevention, screening, and cancer survival. Cancer therapies and disease sites will be addressed by clinicians specializing in medical, radiation or surgical oncology. Survivorship, behavioural research, quality of life and pain and symptom control will be addressed by Department faculty members with expertise in psychosocial oncology or palliative care.

2.4 Relevance to the university network

2.4.1 Why existing programs offered at McGill and elsewhere cannot meet needs adequately

Outside of our own community of McGill-affiliated academic and research institutions, there is a lack of advanced training opportunities for oncology and cancer research. Our own consultation with stakeholders in Montreal, across the province, and in different Canadian cities shows unequivocally that there is a great need for a multifaceted, eclectic graduate program in oncology and cancer research that is truly inter- and trans-disciplinary.
Many universities offer Master’s and Ph.D. degrees in basic cancer research, either as stand-alone (cancer biology, molecular oncology) or incorporated within a broader context of basic research. However, the exhaustive internet search that we conducted (Appendix 3) revealed that there is a dearth of graduate programs in oncology that are truly multidisciplinary, incorporating a broad range of fields under the umbrella of cancer research (e.g. basic and translational cancer research, cancer epidemiology, psychosocial oncology and clinical research in cancer).

2.4.2 Review of similar programs in Quebec, Canada, United States and Europe

In Quebec, there are no official Master’s or Ph.D. programs in Oncology at McGill, Université de Montréal, Université de Sherbrooke, or Université Laval. Université de Montréal offers a Master of Science in Biomedical Sciences with a number of different options including clinical research and experimental medicine, however there is no option specific for cancer.

Appendix 3 provides details of cancer-focused graduate programs in Canada (University of British Columbia, University of Calgary, University of Alberta), United States (Memorial Sloan Kettering Cancer Center, NYU School of Medicine, Stanford University, University of Texas, MD Anderson Cancer Center) and Europe (University of Nottingham – UK, VU Amsterdam – Netherlands and University of Glasgow – Scotland). Of these, the programs with components that are of interest to McGill’s Gerald Bronfman Department of Oncology are at University of British Columbia, University of Alberta, Memorial Sloan Kettering Cancer Center, University of Nottingham, VU Amsterdam and University of Glasgow. These are summarized below.

1. The University of British Columbia offers a M.Sc. or Ph.D. degree in Interdisciplinary Oncology (http://www.iop.ca/programs/programs.asp). Students are required to take two oncology core courses as well as electives chosen from courses offered by other programs at the university. In addition to basic sciences, this program incorporates a number of different fields including radiological sciences, epidemiology, sociobehavioural studies and health economics. The program typically has 50 graduate students enrolled, mostly at the Ph.D. level.

While this program specifies two core courses and leaves the balance of the course requirements up to the discretion of the student/supervisor, our program is more structured, providing at the outset, a more concrete vision of the learning experience for each stream. Moreover, in his letter of support, John J. Spinelli (Vice President of Population Oncology at the BC Cancer Agency and Professor in the School of Population and Public Health at the University of British Columbia) notes that population and global cancer control, psychosocial and palliative care and cancer care services are not adequately covered in the University of British Columbia’s Interdisciplinary Oncology Program.

2. At the University of Alberta, Cross Cancer Institute, the Department of Oncology (http://www.oncology.med.ualberta.ca/Pages/default.aspx) offers both M.Sc. and Ph.D. degrees in Oncology under two specializations: Cancer Sciences and Medical Physics. Students in the Cancer Sciences specialty are required to take various oncology courses offered by the Department such as Tumour Biology or Nutrition and Metabolism Related to Cancer. Typical enrollment for the two specializations combined is 50-60 students. In
2014/2015 the enrollment in the Cancer Sciences specialty alone was 15 M.Sc. and 18 Ph.D. students.

Our proposed program offers a broader range of course options and research disciplines.

3. At the Gerstner Sloan Kettering Graduate School of Biomedical Sciences (https://www.sloankettering.edu/gerstner) only a Ph.D. degree is offered. The program has a one-year core course focusing on topics related to basic cancer research, a responsible conduct of research course, a mini-course on logic and critical analysis and a first-year clinical program. The goal of the clinical portion is to expose students to how laboratory work can be applied in the clinic. The students learn about clinical trials, treatment planning, and challenges clinicians routinely face. The students also have the opportunity to spend time observing in the clinics. In 2014/2015, 60 students were enrolled.

4. The University of Nottingham in the United Kingdom has a one-year M.Sc. Oncology program that is designed for scientists, clinicians and other health care professionals (https://www.nottingham.ac.uk/pgstudy/courses/medicine/medical-sciences/oncology-M.Sc.aspx). There are core modules that cover a range of topics in cancer including tumour immunology and physiology, drug development and radiation biology. In addition there are optional modules that cover topics in cancer therapies. Students also are required to complete a research project. Examples of previous research projects show a focus on basic research.

5. At VU Amsterdam in the Netherlands (VUmc School of Medical Sciences), there is a Master’s Program in Oncology (https://med.vu.nl/en/Programs/Master-Oncology/index.aspx). The Program is two years with a number of compulsory courses focused predominantly on basic science, optional course choices which provide more latitude, and three research projects divided into a minor internship, a major internship (Master’s thesis) and a literature study.

6. The University of Glasgow in Scotland, offers a one-year M.Sc. Cancer Sciences program (http://www.gla.ac.uk/postgraduate/taught/cancersciences/#/programmestructure,researchprojects). Students are required to take a 13-week core course in the first semester and a 6-week core course in the second semester. Optional courses include Drug Discovery, Drug Development and Clinical Trials, Diagnostic Technologies and Devices, Viruses and Cancer etc. Students also complete a 14-week long bioscience research project. A scan of previous research projects show that they are focused on basic research.

Our proposed program differs from 3-6 above in that it is a two-year Master’s program providing more in-depth knowledge of the multidisciplinary field of oncology and cancer research. Furthermore, it is not based on laboratory work.

In addition to the above, specific graduate training on healthcare quality is available from two institutions, one in Canada and one in the USA. Appendix 3 describes a Cancer Care Quality Training Program at the University of North Carolina (http://sph.unc.edu/hpm/the-cancer-care-quality-training-program/overview/) and a Healthcare Quality Program at Queens University
The cancer care services and quality component of our proposed program is unique. While the Queens University Healthcare Quality Program is not specific to cancer, the University of North Carolina’s Cancer Care Quality Training Program offers courses specifically focused on cancer care. Our program provides a stream that will focus on training in quality improvement while also allowing students to become more familiar with the multidisciplinary field of oncology and cancer research.

2.4.3 Originality of proposal

As demonstrated in the above review of other programs and the letters of support (Appendix 2), the proposed M.Sc. in Oncology; Non-Thesis, is unique in that it offers students an opportunity to obtain a comprehensive overview of the entire field of oncology and cancer research while also gaining more in-depth knowledge and experience in one of four cancer-related areas of specialization. No other program identified in our search has offered such an intense, eclectic and structured curriculum with cancer as its focus and geared to students with a broad range of education and professional backgrounds.

2.4.4 Student mobility

The creation within McGill of the Rossy Cancer Network (RCN) has brought new opportunities and resources for launching a McGill graduate program in oncology. The RCN involves McGill’s Gerald Bronfman Department of Oncology and McGill’s three teaching hospitals that provide cancer care, i.e., McGill University Health Centre (MUHC), Jewish General Hospital (JGH – affiliated with CIUSSS du Centre-Ouest-de-l’Île-de-Montréal), and St. Mary’s Hospital Center (SMHC – affiliated with CIUSSS de l’Ouest-de-l’Île-de-Montréal). The RCN has endeavoured to expand the resources in information technology (IT) to connect and permit seamless integration of patients and clinical information across McGill teaching hospitals. The RCN gift agreement also covers financial resources towards capacity building within McGill, which will permit our clinical base to seek graduate training in oncology. There will be many opportunities for wide-ranging clinical research across the RCN’s integrated hospitals, an important by-product of which is advanced training. In fact, the fourth of the aforementioned streams – cancer care services and quality – was added specifically to expand the RCN outreach to graduate education.

Students will be required to complete all of their courses at McGill University. In consultation with the Graduate Program Director, students will be able to conduct their practicum at any of the hospital or research institutions affiliated with McGill University. There may be an option to conduct the practicum at other universities, hospitals or facilities in Montreal but this will be determined on a case-by-case basis.

2.4.5 Inter-university collaboration

The Gerald Bronfman Department of Oncology collaborates with the Université de Montréal on the Visiting Speakers Program in Oncology. The proposed M.Sc. in Oncology; Non-Thesis, will provide even greater opportunity for collaboration as we explore the possibility of some students choosing to conduct their practicum with an expert in their chosen stream from the Université de Montréal or its affiliated hospitals. Furthermore, the four newly created lecture-based courses
under the auspices of the Gerald Bronfman Department of Oncology, opens the door to the possibility of soliciting experts in the field from the Université de Montréal and other institutions in the Montreal area to serve as guest lecturers. In fact, during the process of procuring letters of support, Dr. Eduardo Franco, the Department Chair, has engaged in discussions with Dr. Yves Fradet at the CHU de Quebec, Université Laval, with Dr Mark Levine at McMaster University, and with Dr. Lakshmi Krishnan, from the National Research Council, Ottawa, exactly with the purpose of enabling inter-university and inter-institutional cooperation with a view to enrich the training experience of our students. Furthermore, the courses proposed in our program will be open for attendance by students from other universities in Quebec that have interuniversity agreements with McGill University.

2.4.6 Relevance to Quebec Network

Cancer is a high priority area for the Quebec government. All Quebeckers are touched by cancer, whether directly, experiencing the suffering brought by the disease, or indirectly by having to care for a loved one affected by this disease. With the ageing of the population, the burden of cancer is expected to rise in Quebec and across Canada. It is thus of vital importance to address cancer prevention and control, the testing of new therapies, patient experience and the quality of the delivery of cancer care. The proposed program, the first of its kind in Quebec, will provide much needed training in these areas. It is expected that this program will attract professionals from other universities and university-affiliated hospitals across Quebec who will then apply the knowledge and skills they have acquired to their professional and teaching endeavours at their own institutions.

2.5. Timetable of program implementation and projected student enrolment

2.5.1 Expected date of implementation

The expected date of implementation of the program is September 2018 based on the assumption that the program will receive approval from the Ministère de l'Éducation et de l'Enseignement supérieur.

2.5.2 Student enrollment

Table 2 shows the projected enrollment over five years for each of the four streams, as conservative estimates. Since it is expected that many of those enrolled will be simultaneously pursuing their profession, an attrition rate of approximately 20% is forecast after the first year. While enrollment may be slow at the beginning, over time it is expected to increase in all four streams. Over the initial five-year period it is anticipated that over 50 students will have graduated from the program.
Table 2 – Enrollment

<table>
<thead>
<tr>
<th>Stream</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population and Global Cancer Control</td>
<td>2</td>
</tr>
<tr>
<td>Psychosocial and Palliative Care</td>
<td>2</td>
</tr>
<tr>
<td>Clinical Cancer Research</td>
<td>2</td>
</tr>
<tr>
<td>Cancer Care Services and Quality</td>
<td>2</td>
</tr>
<tr>
<td>Total new admissions</td>
<td>8</td>
</tr>
<tr>
<td>Attrition</td>
<td>NA</td>
</tr>
<tr>
<td>Enrolled in Second Year</td>
<td>NA</td>
</tr>
<tr>
<td>Total in the program</td>
<td>8</td>
</tr>
</tbody>
</table>

2.5.3 Clientele

The clientele of the proposed program includes those with backgrounds including but not limited to basic sciences, epidemiology, management, medicine, nursing, occupational therapy/physiotherapy, psychology, social sciences, statistics and related disciplines or specialties. It is expected that the majority would be new students to McGill rather than a redistribution from other programs.

At McGill, students enrolled in graduate programs (M.Sc. or Ph.D.) to conduct basic cancer research in a laboratory do so through other Departments or Divisions such as Biochemistry or Experimental Medicine. As the proposed program does not include a basic cancer research stream it will not affect enrollment in basic science programs. Students interested in psychosocial oncology or palliative care research currently enroll in Master’s or Ph.D. programs through the Department of Psychology or School of Nursing. In these programs, students are required to write a thesis. As the proposed program requires a practicum rather than a thesis it selects for a different clientele. In the past, some oncology clinicians have enrolled in the Epidemiology, Biostatistics and Occupational Health (EBOH) Department in order to pursue a Master’s degree focused on cancer epidemiology. However, given that this is only a small proportion of the students enrolled in EBOH it is not expected that our proposed program would have a significant impact on enrollment in their graduate program.

The Population and Global Cancer Control stream will promote training of the global cancer control experts of tomorrow. McGill’s recent commitment in the areas of global health dovetails nicely with this stream. The EBOH and Oncology Departments have strengths in the areas of program evaluation and many collaborative links in sub-Saharan Africa and Latin America. Existing memoranda of understanding between McGill and institutions in these regions (some of which are in place already) could form the basis for recruitment and for projecting McGill’s influence in capacity building in the developing world.

The Division of Experimental Medicine currently offers a Graduate Diploma in Clinical Research. The Clinical Cancer Research stream of the proposed M.Sc. in Oncology; Non-Thesis, builds on
this theme by adding additional course requirements designed to provide the student with advanced knowledge on the design, conduct and analysis of clinical trials and its application to the field of oncology. The proposed program may affect enrollment in the Graduate Diploma in Clinical Research only if their interest is in oncology. However, the existing Diploma certification is not at the M.Sc. level and thus, it caters to a clientele with slightly different interests.

The fourth stream that is proposed is justified because of the enormous growth of evidence-based clinical medicine in cancer care. The Cancer Care Services and Quality stream is truly a new niche to attract local and external clientele. The culture of quality in cancer care has become a de facto discipline in oncology with its own methodology to assess improvements in care and monitor ongoing care based on objective and quantifiable indicators and metrics. These have been standardized by professional societies and medical jurisdictions in each of the oncology subspecialties, as well as at the cancer site level.

Many benchmarks exist and others are in constant development to permit institutions to gauge their performance in providing optimal cancer care. There is great demand for nurses and oncologists with advanced training in quality of care across hospital-based cancer care units across North America. The onset of the Rossy Cancer Network (RCN) within McGill cancer hospitals has fostered this culture and sponsored a program of capacity building in this area. Strategically speaking, with the RCN we have acquired the experience to provide advanced training in this area for a local Quebec clientele, as well as to nurses and clinicians from across Canada and the US. Dr. Ari Meguerditchian leads on behalf of the RCN a funding and awards program for capacity building and research on improvements in cancer care. At the provincial level, Dr. Carolyn Freeman, one of our faculty members, leads a high-level committee on quality in the provision of cancer care and is also responsible for quality improvement at the McGill University Health Centre.
3. ACADEMIC DOSSIER

3.1 Program objectives

3.1.1 General objectives

The general objective of the M.Sc. in Oncology; Non-Thesis, is to provide students the opportunity to gain exposure to the entire spectrum of principles and practice in all fields of oncology as well as its research domains while exploring in more detail their specific area of interest in the field. This program will provide a comprehensive and multidisciplinary approach to advanced oncology training where students are exposed to the intellectual cross-fertilization necessary for further innovation in the field.

3.1.2 Specific objectives

1. To understand the complexity of cancer and its implications to society.
2. To understand the value of a multidisciplinary/interdisciplinary approach to the disease in research and patient care.
3. To acquire in-depth knowledge and experience in one area of the cancer field (population and global cancer control, psychosocial and palliative care, clinical cancer research, or cancer care services and quality).
4. To gain knowledge and develop practical skills in oncology and cancer research that can be applied in their chosen profession.

3.2 Structure and academic regulations

3.2.1 Admission requirements and selection procedures

3.2.1.1 General and specific requirements

Applicants are expected to have a Bachelor’s degree in fields related to health, biomedical disciplines, health management or economics with a minimum cumulative GPA of 3.2/4.0 (B+) on the McGill scale.

3.2.1.2 Selection criteria

In addition to their most recent curriculum vitae, applicants will be required to provide a 1-2 page personal statement describing their educational background, professional background (if applicable) and reasons for wishing to take the program. They also will be required to complete an application form where they will indicate their preferred stream and, if they wish, a secondary choice. Two letters of reference will be required from professional or educational acquaintances of the candidate.
3.2.1.3 Selection process

Each applicant’s dossier will be reviewed by the Admissions Committee (refer to 3.2.4.1). Applicants who do not meet the general requirements or who are missing components of the application will not be considered further. The remaining applicants will be considered based on their curriculum vitae, personal statement, letters of reference and suitability for their preferred stream. Those applicants who were deemed unsuitable for their preferred stream will then be assessed for suitability in their second stream choice if they provided one.

3.2.2 Length of program

3.2.2.1 Total number of credits

The M.Sc. in Oncology; Non-Thesis, program is 45 credits and is expected to be completed by the end of the fall semester of the second year (full-time) or within 2-3 years (part-time).

3.2.2.2 Credit distribution by term

The Gerald Bronfman Department of Oncology created five new courses for this program as follows. Detailed course outlines of each are provided in Appendix 4:

1. ONCO 610D1/D2 Fundamentals of Oncology and Cancer Research: A 6-credit required course to be taken by students in all streams during the fall and winter semesters of the first year.
2. ONCO 620 Best Practices in Biomedical Research: A 3-credit required course to be taken by students in all streams during the fall semester of the first year.
3. ONCO 630J1/J2/J3 Oncology Practicum: An 18-credit required course to be taken by all students during the winter and summer semesters of the first year and fall semester of the second year.
4. ONCO 615 Principles and Practice of Clinical Trials: A 3-credit course to be taken by students in the Clinical Cancer Research stream during the fall semester of the first year.
5. ONCO 625 Quality Improvement Principles and Methods: A 3-credit course to be taken by students in the Cancer Care Services and Quality stream during the fall semester of the first year.

The remaining courses are offered by other units within McGill University. Table 3 shows an example of the schedule of courses for each stream with the credit distribution by term, based on the semester these other courses were offered in the recent past. Further details on the course requirements, justification and sequence for each stream can be found in sections 3.3.1, 3.3.2 and 3.3.4 respectively.
Table 3 - Schedule of courses showing breakdown of credits by stream

<table>
<thead>
<tr>
<th>Population and Global Cancer Control</th>
<th>Psychosocial and Palliative Care</th>
<th>Clinical Cancer Research</th>
<th>Cancer Care Services and Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year (Fall)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>Statistics course (FMED 505 or EPIB 507)</td>
<td>Quantitative Research Methods (EXMD 634)</td>
<td>Principles and Practice of Clinical Trials (ONCO 615)</td>
<td>Quality Improvement Principles and Methods (ONOC 625)</td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>Principles of Public Health Practice (PPHS 612D1)</td>
<td>Qualitative Health Research (FMED 625)</td>
<td>Three Workshops in Clinical Trials (EXMD 617, 618, 619)</td>
<td>Statistics course (FMED 505 or EPIB 507)</td>
</tr>
<tr>
<td>1.5 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>Complementary Course Choice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 credits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Year (Winter)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>Oncology Practicum (ONCO 630J1)</td>
<td>Oncology Practicum (ONCO 630J1)</td>
<td>Oncology Practicum (ONCO 630J1)</td>
<td>Oncology Practicum (ONCO 630J1)</td>
</tr>
<tr>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
</tr>
<tr>
<td>Principles of Public Health Practice (PPHS 612D2)</td>
<td>Psychosocial Oncology Research (NUR2 783)</td>
<td>Clinical Trials &amp; Research (EXMD 620, 625, 626)</td>
<td>Health Care Systems (BUSA 698)</td>
</tr>
<tr>
<td>1.5 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>Complementary Course Choice</td>
<td>Palliative Care (NUR2 705)</td>
<td>Complementary Course Choice* (HGEN 690; EXMD 614)</td>
<td>Program Management in Global Health &amp; Primary Health Care (FMED 619)</td>
</tr>
<tr>
<td>(HGEN 690; EXMD 614)</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td><strong>First Year (Summer)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oncology Practicum (ONCO 630J2)</td>
<td>Oncology Practicum (ONCO 630J2)</td>
<td>Oncology Practicum (ONCO 630J2)</td>
<td>Oncology Practicum (ONCO 630J2)</td>
</tr>
<tr>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
</tr>
<tr>
<td><strong>Second Year (Fall)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oncology Practicum (ONCO 630J3)</td>
<td>Oncology Practicum (ONCO 630J3)</td>
<td>Oncology Practicum (ONCO 630J3)</td>
<td>Oncology Practicum (ONCO 630J3)</td>
</tr>
<tr>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
<td>6 credits</td>
</tr>
<tr>
<td>Cancer Epidemiology and Prevention (EPIB 671)</td>
<td>Complementary Course Choice (SWRK 668; PSYC 507; POTH 637; EPIB 671)</td>
<td>Statistics course (FMED 505 or EPIB 507)</td>
<td>Economic Evaluation of Health Programs (PPHS 528)</td>
</tr>
<tr>
<td>3 credits</td>
<td></td>
<td>3 credits</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

*Complementary Course Choice* includes options such as Statistics course (FMED 505 or EPIB 507) and Economic Evaluation of Health Programs (PPHS 528).
### 3.2.2.3 Study mode (full-time/part-time)

Students may register as full-time or part-time but must complete the program in a maximum of three years. However, the five courses developed for this program by the Gerald Bronfman Department of Oncology must be taken in the year and semester specified in Table 3. In addition, it would be advisable for students to take the statistics or quantitative/qualitative methods courses prior to or in conjunction with the practicum as shown in Table 3.

### 3.2.3 Supervision and evaluation of students

The Graduate Program Director will monitor the progress of all students and will be available to meet with and guide students as necessary for their successful completion of the program. The stream-specific members of the Practicum Committee (refer to 3.2.4.1) will also serve as informal academic advisors to students in their stream.

The Oncology Practicum course instructor will meet with each new student mid-way through the fall semester to discuss Oncology Practicum placement. The practicum supervisor will be responsible for completing an assessment of the student at the end of each semester of the practicum and submitting this to the course instructor. The course instructor will review the progress of each student and submit a report to the Graduate Program Director at the end of each semester of the practicum.

Table 4 outlines the McGill grading scale for graduate programs. Students are required to obtain a B- or higher in each course in order to complete the program. Although no grade is attached to the MORE sessions attendance is taken and students must demonstrate that they have attended the mandatory fourteen sessions.

All students will follow University regulations as described in the e-Calendar under University regulations and resources (see link below). The regulations cover the following topics: Authorization, Acknowledgement, and Consent; Categories of Students; Registration; Course Information and Regulations; Course Withdrawal; University Withdrawal; Summer Studies; Student Records; Failure Policy in Graduate Studies; Language Policy; University Student Assessment Policy; Regulations Concerning Theses; Academic Integrity; Identification and Personal Information; Submitting Legal Documents; Graduation; McGill IT Resources; Student Health & Insurance; Facilities

All students will follow the University’s Guidelines and Policies as described in the e-Calendar under University regulations and resources (see link below). This covers the following topics: Regulations on Graduate Student Supervision; Regulations on Graduate Student Research Progress Tracking; Ph.D. Comprehensives Policy; Graduate Studies Reread Policy; Guidelines for the Academic Accommodation of Pregnant Students and Students Caring for Dependents; Failure Policy; Guideline on Hours of Work.

Table 4 - McGill University grading scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
<th>Numerical Scale of Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>85-100%</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>80-84%</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>75-79%</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>70-74%</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td>65-69%</td>
</tr>
<tr>
<td>F (Fail)</td>
<td>0</td>
<td>0-64%</td>
</tr>
</tbody>
</table>

3.2.4 Program administration

3.2.4.1 Name and composition of committee

Admissions Committee
- Graduate Program Director (Committee Chair)
- Faculty member representing Population and Global Cancer Control
- Faculty member representing Psychosocial and Palliative Care
- Faculty member representing Clinical Cancer Research
- Faculty member representing Cancer Care Services and Quality
- Oncology Practicum course instructor
- Academic Advisor to the Chair (non-voting) representing the Department Chair
- Graduate Program Coordinator (non-voting)
The Faculty members will be appointed by the Graduate Program Director, after consultation with the Department Chair.

Practicum Committee
- Oncology Practicum course instructor (Committee Chair)
- Faculty member representing Population and Global Cancer Control
- Faculty member representing Psychosocial and Palliative Care
- Faculty member representing Clinical Cancer Research
- Faculty member representing Cancer Care Services and Quality
- Academic Advisor to the Chair (non-voting) representing the Department Chair
- Graduate Program Coordinator (non-voting)
The Faculty members will be appointed by the Graduate Program Director, after consultation with the Department Chair.
3.2.4.2 Role of committee

The Admissions Committee will review all application dossiers and determine which applicants will be admitted into the program and to which stream. The Practicum Committee will meet early in the fall semester to discuss placement of new students. Each faculty member representing a stream will present to the committee a list of people interested in serving as a supervisor to students taking the practicum. Practicum Committee members will also serve as informal academic advisors to students in their particular stream.

3.3 Required academic activities

3.3.1 Detailed description of program academic requirements

Master of Science in Oncology: Non-Thesis (45 credits)

Students in each of the four streams will take courses specific for their chosen field. In addition, all students registered in the program will be required to take the two-semester core course, Fundamentals of Oncology and Cancer Research, the one-semester Best Practices in Biomedical Research and the three-semester Oncology Practicum. Finally, all students will be required to attend at least fourteen lectures (four of which should be journal clubs) of the Department’s Multidisciplinary Oncology Residents Education (MORE) series (see Appendix 5). This series, which runs from July 1st to June 30th, was created for the Department’s medical, surgical and radiation oncology residents and has been highly praised during accreditation by the Royal College of Physicians and Surgeons of Canada. Its journal clubs (four per year) involve also the senior trainees from the Cancer Epidemiology Unit and are moderated by its Director, which at present is also the Department Chair, Dr. Eduardo Franco.

Specific course requirements are outlined below:

Required Courses (27 credits)
ONCO 610 D1/D2 Fundamentals of Oncology and Cancer Research (6 credits)
ONCO 620 Best Practices in Biomedical Research (3 credits)
ONCO 630 J1/J2/J3 Oncology Practicum (18 credits)

Complementary Courses (18 credits)
18 credits from one of the following streams:

Stream 1: Population and Global Cancer Control
6 credits from:
PPHS 612 D1/D2 Principles of Public Health Practice (3 credits)
EPIB 671 Cancer Epidemiology and Prevention (3 credits)

3 credits from:
FMED 505 Basic Analysis for Health Data (3 credits)
EPIB 507 Biostats for Health Sciences (3 credits)
EPIB 521 Regression Analysis for Health Sciences (3 credits)
Students who have previously taken one of the above statistics courses or a similar course, can choose EPIB 521

3 credits from:
HGEN 690 Inherited Cancer Syndromes (3 credits)
EXMD 614 Environmental Carcinogenesis (3 credits)
POTH 637 Cancer Rehabilitation (3 credits)

And 6 credits of coursework at the 500 level or higher chosen in consultation with the student’s academic advisor or supervisor. Courses must be approved by the Department’s Graduate Program Director.

**Stream 2: Psychosocial and Palliative Care**
12 credits from:
EXMD 634 Quantitative Research Methods (3 credits)
FMED 625 Qualitative Health Research (3 credits)
NUR2 705 Palliative Care (3 credits)
NUR2 783 Psychosocial Oncology Research (3 credits)

3 credits from:
SWRK 668 Living with Illness, Loss and Bereavement (3 credits)
PSYC 507 Emotions, Stress and Illness (3 credits)
HGEN 690 Inherited Cancer Syndromes (3 credits)
EPIB 671 Cancer Epidemiology and Prevention (3 credits)
POTH 637 Cancer Rehabilitation (3 credits)

And 3 credits at the 500 level or higher chosen in consultation with the student’s academic advisor or supervisor. Course must be approved by the Department’s Graduate Program Director.

**Stream 3: Clinical Cancer Research**
12 credits from:
**ONCO 615 Principles and Practice of Clinical Trials (3 credits)**

EXMD 640 Experimental Medicine Topic 1 (3 credits)

EXMD 617 Workshop in Clinical Trials 1 (1 credit)
EXMD 618 Workshop in Clinical Trials 2 (1 credit)
EXMD 619 Workshop: Clinical Trials 3 (1 credit)

EXMD 620 Clinical Trials and Research 1 (1 credit)
EXMD 625 Clinical Trials and Research 2 (1 credit)
EXMD 626 Clinical Trials and Research 3 (1 credit)

3 credits from:
FMED 505 Basic Analysis for Health Data (3 credits)
EPIB 507 Biostats for Health Sciences (3 credits)
EPIB 521 Regression Analysis for Health Sciences (3 credits)
Students who have previously taken one of the above statistics courses or a similar course, can choose EPIB 521.

3 credits from:
HGEN 690 Inherited Cancer Syndromes (3 credits)
EXMD 614 Environmental Carcinogenesis (3 credits)
EPIB 671 Cancer Epidemiology and Prevention (3 credits)
POTH 637 Cancer Rehabilitation (3 credits)

Stream 4: Cancer Care Services and Quality
12 credits from:
ONCO 625 Quality Improvement Principles and Methods (3 credits)

FMED 619 Program Management in Global Health & Primary Health Care (3 credits)
PPHS 528 Economic Evaluation of Health Programs (3 credits)
BUSA 698 Health Care Systems (3 credits)

3 credits from:
FMED 505 Basic Analysis for Health Data (3 credits)
EPIB 507 Biostats for Health Sciences (3 credits)
EPIB 521 Regression Analysis for Health Sciences (3 credits)
Students who have previously taken one of the above statistics courses or a similar course, can choose EPIB 521.

3 credits from:
HGEN 690 Inherited Cancer Syndromes (3 credits)
EXMD 614 Environmental Carcinogenesis (3 credits)
EPIB 671 Cancer Epidemiology and Prevention (3 credits)
POTH 637 Cancer Rehabilitation (3 credits)

3.3.2 Justification

The core course, Fundamentals of Oncology and Cancer Research, will provide students with an overview of the entire spectrum of clinical and research activities in oncology. The course also will provide a venue whereby students enrolled in different streams can interact with their peers, thus reinforcing the multidisciplinary/interdisciplinary nature of cancer research and clinical care. The second new mandatory course, Best Practices in Biomedical Research, integrates concepts and principles in research ethics, integrity, grant writing, and scholarly publishing. The Gerald Bronfman Department of Oncology is the home for the Editorial Office of one of the most prestigious journals in public health: Preventive Medicine. The students will thus learn directly from instructors who have direct experience with the process of biomedical publishing. The Oncology Practicum will allow students to gain practical research or quality improvement experience relevant to their stream. In keeping with the multidisciplinary nature of the program each student will present the work they completed in their practicum to their peers in all four streams. By attending several lectures in the MORE series, students will have the opportunity to
interact with oncology residents and to enhance their knowledge on cancer clinical care. Finally, a course on statistics or quantitative methods is mandatory for all streams as this plays a critical role in data analysis.

Each stream has course requirements relevant to the discipline: the courses Principles of Public Health Practice and Cancer Epidemiology and Prevention are important for population and global cancer control; the courses Psychosocial Oncology Research, Palliative Care, Quantitative Research Methods and Qualitative Health Research will impart critical concepts for those interested in psychosocial oncology and/or palliative care research; the courses Principles and Practice of Clinical Trials, Experimental Medicine Topic 1, Workshops in Clinical Trials (1, 2, 3) and Clinical Trials and Research (1, 2, 3) will provide important knowledge and skills to those interested in conducting clinical research; the courses Quality Improvement Principles and Methods, Health Care Systems, Economic Evaluation of Health Programs and Program Management in Global Health & Primary Health Care will provide students with the knowledge and skills necessary to plan, conduct and assess quality improvement initiatives in health care.

3.3.3 Proposed areas of concentration

Students will choose one of four streams: Population and Global Cancer Control; Psychosocial and Palliative Care; Clinical Cancer Research; Cancer Care Services and Quality. Many of the stream-specific courses will allow students to increase their knowledge in that particular cancer-related discipline. In addition, the core course, Fundamentals of Oncology and Cancer Research, will include topics related to the student’s chosen stream.

3.3.4 Description of a typical sequence of courses or activities

A typical sequence of courses for students completing the program by the end of the fall term of the second year is shown in Table 3. The course grid was designed so that early in the curriculum students will acquire the necessary information and knowledge critical for conducting their practicum. In addition, courses from other units were slotted based on their historic placement in either the fall or winter semester.

Population and Global Cancer Control
During the fall semester of the first year students will take Fundamentals of Oncology and Cancer Research, Best Practices in Biomedical Research, one of the statistics courses for health sciences, Principles of Public Health Practice and a complementary course. During the winter semester students will continue with Fundamentals of Oncology and Cancer Research and Principles of Public Health Practice. They also will begin their Oncology Practicum and will take a complementary course. In the summer students will continue their Oncology Practicum. During the fall semester of the second year students will continue with the Oncology Practicum and will take Cancer Epidemiology and Prevention as well as a complementary course.

Psychosocial and Palliative Care
During the fall semester of the first year students will take Fundamentals of Oncology and Cancer Research, Best Practices in Biomedical Research, Quantitative Research Methods and Qualitative Health Research. During the winter semester students will continue with Fundamentals of
Oncology and Cancer Research and will begin their Oncology Practicum. They also will take the courses, Psychosocial Oncology Research and Palliative Care. In the summer students will continue their Oncology Practicum. During the fall semester of the second year students will continue with their Oncology Practicum and will take two complementary courses.

Clinical Cancer Research
During the fall semester of the first year students will take Fundamentals of Oncology and Cancer Research, Best Practices in Biomedical Research, Principles and Practice of Clinical Trials and three Workshops in Clinical Trials. During the winter semester students will continue with Fundamentals of Oncology and Cancer Research and will begin their Oncology Practicum. They also will take the three courses of Clinical Trials & Research as well as a complementary course. In the summer students will continue their Oncology Practicum. During the fall semester of the second year students will continue with their Oncology Practicum and will take one of the statistics courses for health sciences, Experimental Medicine Topic 1 and a complementary course.

Cancer Care Services and Quality
During the fall semester of the first year students will take Fundamentals of Oncology and Cancer Research, Best Practices in Biomedical Research, Quality Improvement Principles and Methods and one of the statistics courses for health sciences. During the winter semester students will continue with Fundamentals of Oncology and Cancer Research and will begin their Oncology Practicum. They also will take the courses, Health Care Systems and Program Management in Global Health and Primary Health Care. In the summer students will continue their Oncology Practicum. During the fall semester of the second year students will continue their Oncology Practicum and will take Economic Evaluation of Health Programs as well as a complementary course.

Students may attend the Multidisciplinary Oncology Residents Education (MORE) series lectures at any time during the course of their MSc in Oncology; Non-Thesis program as long as they fulfill the mandatory requirement of 14 lectures, four of them being journal clubs.
4. RESOURCES

4.1 Staff resources required, available and projected

4.1.1 Teaching staff

4.1.1.1 Academic staff in place

The Course Instructor is tasked with coordinating the course. In addition to teaching lectures the instructor may engage experts in the field as guest lecturers. The instructors for the courses offered in this proposed M.Sc. program are listed in Table 5:

Table 5 - Course Instructors

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Course Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONCO 610D1/D2</td>
<td>Fundamentals of Oncology and Cancer Research</td>
<td>Marc Fabian, Melissa Henry</td>
</tr>
<tr>
<td>ONCO 620</td>
<td>Best Practices in Biomedical Research</td>
<td>Eduardo Franco*</td>
</tr>
<tr>
<td>ONCO 630J1/J2/J3</td>
<td>Oncology Practicum</td>
<td>John Kildea</td>
</tr>
<tr>
<td>ONCO 615</td>
<td>Principles and Practice of Clinical Trials</td>
<td>Agnihotram Ramanakumar</td>
</tr>
<tr>
<td>ONCO 625</td>
<td>Quality Improvement Principles and Methods</td>
<td>Carolyn Freeman</td>
</tr>
<tr>
<td>FMED 505</td>
<td>Basic Analysis for Health Data</td>
<td>Tibor Schuster</td>
</tr>
<tr>
<td>EPIB 507</td>
<td>Biostats for Health Sciences</td>
<td>Christopher Gravel</td>
</tr>
<tr>
<td>EPIB 521</td>
<td>Regression Analysis for Health Sciences</td>
<td>Farhad Shokoohi</td>
</tr>
<tr>
<td>EXMD 634</td>
<td>Quantitative Research Methods</td>
<td>Nandini Dendukuri</td>
</tr>
<tr>
<td>FMED 625</td>
<td>Qualitative Health Research</td>
<td>Gillian Bartlett-Esquiland**</td>
</tr>
<tr>
<td>EPIB 671</td>
<td>Cancer Epidemiology and Prevention</td>
<td>Eduardo Franco</td>
</tr>
<tr>
<td>PPHS 612D1/D2</td>
<td>Principles of Public Health Practice</td>
<td>Joseph Cox, Faisca Richer</td>
</tr>
<tr>
<td>NUR2 705</td>
<td>Palliative Care</td>
<td>Robin Cohen</td>
</tr>
<tr>
<td>NUR2 783</td>
<td>Psychosocial Oncology Research</td>
<td>Carmen Loiselle</td>
</tr>
<tr>
<td>EXMD 617</td>
<td>Workshop in Clinical Trials 1</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 618</td>
<td>Workshop in Clinical Trials 2</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 619</td>
<td>Workshop in Clinical Trials 3</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 620</td>
<td>Clinical Trials and Research 1</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 625</td>
<td>Clinical Trials and Research 2</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 626</td>
<td>Clinical Trials and Research 3</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>EXMD 640</td>
<td>Experimental Medicine Topic 1</td>
<td>Bertrand Jean-Claude</td>
</tr>
<tr>
<td>FMED 619</td>
<td>Program Management in Global Health &amp; Primary Health Care</td>
<td>Yves Bergevin</td>
</tr>
<tr>
<td>PPHS 528</td>
<td>Economic Evaluation of Health Programs</td>
<td>Eric Latimer</td>
</tr>
<tr>
<td>BUSA 698</td>
<td>Health Care Systems</td>
<td>Beste Kucukyazici</td>
</tr>
<tr>
<td>HGEN 690</td>
<td>Inherited Cancer Syndromes</td>
<td>Patricia Tonin</td>
</tr>
<tr>
<td>EXMD 614</td>
<td>Environmental Carcinogenesis</td>
<td>Jian Hui Wu</td>
</tr>
<tr>
<td>POTH 637</td>
<td>Cancer Rehabilitation</td>
<td>Ana Maria Rodriguez</td>
</tr>
</tbody>
</table>
Table 6 - Credentials of Course Instructors and Guest Lecturers

<table>
<thead>
<tr>
<th>Name and Academic Training</th>
<th>Position</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moulay ALAOUI-JAMALI, Ph.D.</strong></td>
<td>Professor, Gerald Bronfman Department of Oncology</td>
<td>Basic Research: Biology of cancer progression to metastasis; Anticancer drug pharmacology; Drug discovery; Preclinical cancer models for screening novel therapeutics; Cancer biomarkers and therapeutic targets</td>
</tr>
<tr>
<td>Ph.D. – Cancer Pharmacology (René-Descartes University and National Institute for Cancer Research in Villejuif, Paris, France)</td>
<td>Associate Member, The Rosalind and Morris Goodman Cancer Research Centre, McGill University</td>
<td></td>
</tr>
<tr>
<td>Specialized degree – Experimental/Molecular Oncology (Krémlin Bicêtre/Paris-Sud University of Medicine, Paris, France)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Sc. – Clinical Cancer Pharmacology (Lariboisière-St-Louis University of Medicine, Paris, France)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional degree – Genetic Toxicology (René-Descartes University of Pharmacy and Cancer Research Institute (IRSC), Villejuif, France)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thierry ALCINDOR, M.D., M.Sc.</strong></td>
<td>Associate Professor, Gerald Bronfman Department of Oncology; Co-Director, Visiting Speakers Program in Oncology</td>
<td>Clinical research - sarcoma, gastrointestinal</td>
</tr>
<tr>
<td>M.Sc. – Experimental Therapeutics (University of Oxford, Oxford, UK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting fellow (clinical observership/clinical research) (Joint Center for Sickle Cell and Thalassemic Disorders at Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship – Hematology/Oncology (New England Medical Center, Tufts University School of Medicine, Boston, Massachusetts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Education and Training</td>
<td>Clinical Research</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td><strong>Armen APRIKIAN, M.D., F.R.C.S.C.</strong></td>
<td>Residency – Internal Medicine-Primary Care (Yale-New Haven Medical Center, Yale University School of Medicine, New Haven, Connecticut) M.D. (Université d’État d’Haïti, Port-au-Prince, Haïti) Clinical Training (Memorial Sloan-Kettering Cancer Center, New York, New York) Clinical Training – Urology Residency Program (McGill University) Clinical Training – Urology Program (Université de Sherbrooke) M.D. (Université de Sherbrooke) Diploma of Collegiate Studies – Health Sciences (Vanier College)</td>
<td>Professor, Gerald Bronfman Department of Oncology Professor, Department of Surgery Richard Tomlinson Chair in Prostate Cancer Chief, Department of Oncology, MUHC</td>
</tr>
<tr>
<td><strong>Jamil ASSELAH, M.D.</strong></td>
<td>Fellowship – Clinical Investigational Unit, Translational Research (Institut Curie, Paris, France) Residency – Medical Oncology (University of Algiers, Algiers, Algeria) M.D. (University of Algiers, Algiers, Algeria)</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology Director, Undergraduate Medical Education, Gerald Bronfman Department of Oncology</td>
</tr>
<tr>
<td><strong>Sarit ASSOULINE, M.D.</strong></td>
<td>Resident in Oncology, M.Sc. – Epidemiology and Biostatistics (McGill University) Residency – Oncology (McGill University) Fellowship in drug development with the IND (Investigational New Drug) Group (National Cancer Institute of Canada, Clinical Trials Group, Kingston, Ontario) Residency – Hematology (McGill University) Residency – Internal Medicine (University of Toronto) M.D. (McGill University)</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology Attending Physician, Jewish General Hospital, Montreal, Quebec, Division of Hematology, Department of Internal Medicine</td>
</tr>
<tr>
<td><strong>Professor, Gerald Bronfman Department of Oncology</strong></td>
<td>Clinical research - urologic cancers; Surgical procedures for the treatment of urologic cancers; Health-care services utilization and costs</td>
<td></td>
</tr>
<tr>
<td><strong>Associate Professor, Gerald Bronfman Department of Oncology</strong></td>
<td>Clinical research - breast, gastrointestinal, prostate</td>
<td></td>
</tr>
<tr>
<td><strong>Associate Professor, Gerald Bronfman Department of Oncology</strong></td>
<td>Clinical research - hematologic malignancies</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Education/Training</td>
<td>Position/Institution</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Laurent AZOULAY, Ph.D.</strong></td>
<td>B.Sc. – Interdisciplinary Honours in Immunology (McGill University)</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
</tr>
<tr>
<td></td>
<td>Ph.D. – Pharmaceutical Sciences, Pharmacoc epidemiology (Université de Montréal)</td>
<td>Associate Professor, Department of Epidemiology, Biostatistics and Occupational Health</td>
</tr>
<tr>
<td></td>
<td>M.Sc. – Biomedical Sciences, Epidemiology (Université de Montréal)</td>
<td>Member, Cancer Research Society Division of Epidemiology</td>
</tr>
<tr>
<td></td>
<td>B.Sc. – Physiology (McGill University)</td>
<td>Centre for Clinical Epidemiology, Lady Davis, Institute, Jewish General Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Member, Segal Cancer Centre, Jewish General Hospital</td>
</tr>
<tr>
<td><strong>Mark BASIK, M.D.</strong></td>
<td>Research Fellowship – Surgical Oncology (Roswell Park Cancer Institute, Buffalo, New York)</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
</tr>
<tr>
<td></td>
<td>Fellowship – Surgical Oncology (Roswell Park Cancer Institute, Buffalo, New York)</td>
<td>Associate Professor, Dept Surgery, McGill University</td>
</tr>
<tr>
<td></td>
<td>Residency – Medical Oncology (McGill University, Montreal General Hospital)</td>
<td>Clinical research: breast, colorectal; Personalized medicine</td>
</tr>
<tr>
<td></td>
<td>Residency – General Surgery (Université de Montréal)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.D. (McGill University)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diploma of Collegial Studies – Health Sciences (Marianopolis College)</td>
<td></td>
</tr>
<tr>
<td><strong>Gerald BATIST, M.D.</strong></td>
<td>Clinical Staff Fellowship – National Cancer Institute - Navy Oncology Branch (Bethesda, Maryland)</td>
<td>Professor, Gerald Bronfman Department of Oncology</td>
</tr>
<tr>
<td></td>
<td>Clinical Research Fellowship – Nutrition and Metabolism Laboratory (New England Deaconess Hospital, Harvard University, Boston, Massachusetts)</td>
<td>Director, McGill University Centre for Translational Research in Cancer</td>
</tr>
<tr>
<td></td>
<td>Residency (New England Deaconess Hospital, Boston, Massachusetts)</td>
<td>Associate member, Department of Pharmacology &amp; Therapeutics, McGill</td>
</tr>
<tr>
<td>Name</td>
<td>Education and Experience</td>
<td>Positions</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Internship – Internal Medicine</strong>&lt;br&gt;(St. Vincent's Hospital Centre, New York City, New York)</td>
<td>M.D. (McGill University)&lt;br&gt;B.Sc. (Columbia University)</td>
<td><strong>Manuel BOROD, M.D., M.B.A.</strong>&lt;br&gt;Masters Business Administration&lt;br&gt;(Concordia University)&lt;br&gt;M.Sc. – Public Health, (University of California, Los Angeles, California)&lt;br&gt;Residency – Family Medicine (Montreal General Hospital)&lt;br&gt;M.D. (McGill University)&lt;br&gt;B.Sc. – Honours Biochemistry (McGill University)</td>
</tr>
<tr>
<td><strong>Nathaniel BOUGANIM, M.D.</strong>&lt;br&gt;Clinical Research Fellowship – Breast Cancer (Ottawa Regional Cancer Centre)&lt;br&gt;Residency – Medical Oncology (McGill University)&lt;br&gt;Specialization – Internal Medicine (McGill University)&lt;br&gt;M.D. (McGill University)&lt;br&gt;B.Sc. – Microbiology &amp; Immunology (McGill University)</td>
<td>Assistant Professor, Gerald Bronfman Department of Oncology&lt;br&gt;Medical Oncologist, McGill University Health Centre&lt;br&gt;Director of the Oncology Clinical Teaching Unit</td>
<td>Clinical research: breast, colorectal</td>
</tr>
<tr>
<td><strong>Robin COHEN, Ph.D.</strong>&lt;br&gt;Ph.D. – Psychology (McGill University)&lt;br&gt;M.Sc. – Psychology (McGill University)&lt;br&gt;B.Sc. – Psychology (McGill University)</td>
<td>Professor, Gerald Bronfman Department of Oncology&lt;br&gt;Research Director, Palliative Care McGill&lt;br&gt;Member, Division of Experimental Medicine, Department of Medicine, McGill University&lt;br&gt;Associate Member, School of Nursing, Faculty of Medicine, McGill University</td>
<td>Palliative care; Quality of life of patients and caregivers; Meaning-making</td>
</tr>
<tr>
<td><strong>Alice DRAGOMIR, M.Sc., Ph.D.</strong></td>
<td>Assistant Professor&lt;br&gt;Dept. of Experimental Surgery, Division of Urology</td>
<td>Health economics and health outcomes of prostate cancer; Analysis of health services</td>
</tr>
<tr>
<td>Name</td>
<td>Education and Experience</td>
<td>Research Interests</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Marc FABIAN, Ph.D.    | Ph.D. – Pharmaceutical Sciences, Pharmacoeconomics/Pharmacoepidemiology (University of Montreal)  
M.Sc. – Statistics (University of Montreal)  
Bachelor – Economics, Socio-Economic Statistics (Academy of Economic Studies, Bucharest, Romania) | Scientist in Health Economics and Outcomes Research, Research Institute of McGill University Health Center  
Associate Member, Department of Surgery, Division of Surgical Research, McGill University  
Associate Professor, University of Montreal, Faculty of Pharmacy |
|                       |                                                                            | utilization, drug costs and clinical outcomes in patients with advanced prostate cancer |
Clinical Research Fellowship – Human Immunogenetics (St. Mark's Hospital, London, UK. At the time, affiliated with the Division of Medical and Molecular Genetics, KGT Medical School, University of London, UK.)  
M.B.B.S (University of London, London, UK)  
B.Sc. – Anatomy (University of London, London, UK) | Professor, Gerald Bronfman Department of Oncology  
Medical Scientist, Montreal General Hospital  
Associate member, Department of Obstetrics and Gynecology, Faculty of Medicine, McGill University, Montreal  
Director, Program in Cancer Genetics, Departments of Oncology and Human Genetics, McGill University  
Assistant Physician, Jewish General Hospital, Montreal  
Assistant Physician, Royal Victoria Hospital, Montreal  
Assistant Physician, Montreal General Hospital | Genetics of breast, colorectal, prostate, pancreatic and ovarian cancer |
| Eduardo FRANCO, MPH, DrPH | DrPH (University of North Carolina, Chapel Hill, North Carolina)  
MPH (University of North Carolina, Chapel Hill, North Carolina) | Professor, Gerald Bronfman Department of Oncology  
Chair, Gerald Bronfman Department of Oncology  
Director, Division of Cancer Epidemiology, Gerald Bronfman Department of  | Cancer Epidemiology; Cancer prevention; Cancer screening. Cervix and other anogenital; Upper aero-digestive tract; Bladder; Prostate |
| **B.Sc.** (Universidade Estadual de Campinas, Instituto de Biologia, Campinas, Brazil) | **Oncology, Faculty of Medicine, McGill University**  
**Professor, Department of Epidemiology, Biostatistics and Occupational Health, Faculty of Medicine, McGill University**  
**Editor-in-Chief, *Preventive Medicine* and *Preventive Medicine Reports*** |
|---|---|
| **Angela GENGEB, M.D.**  
**International Master’s Program in Practicing Management (Lancaster University, Lancashire, UK)**  
**Fellowship – Neuromuscular Diseases (Montreal Neurological Institute)**  
**Residency – Neurology (McGill University, Montreal Neurological Hospital)**  
**Residency – Internal Medicine (McGill University, Royal Victoria Hospital)**  
**M.D. (Memorial University of Newfoundland, St. John’s)**  
**B.M.Sc. (Memorial University of Newfoundland, St. John’s)**  
**B.Sc. – Physiotherapy (Dalhousie University, Halifax)** | **Associate Professor, Department of Neurology and Neurosurgery**  
**Director, Clinical Research Unit Montreal Neurological Institute**  
**Director, ALS Clinic, Montreal Neurological Hospital**  
**Neuromuscular Disease Clinic and Staff Neurologist, Montreal Neurological Hospital** |
| **Walter GOTLIEB, M.D., Ph.D.**  
**Fellowship – Gynecologic Oncology (UCLA Medical School, Los Angeles, California)**  
**Residency – Obstetrics and Gynecology (Libre de Bruxelles, Brussels, Belgium)**  
**Residency – Obstetrics and Gynecology (Université Libre de Bruxelles, Brussels, Belgium)**  
**M.D. (Universite Libre de Bruxelles, Brussels, Belgium)**  
**Kandidatuur in de medische wetenschappen (R.U.C.A., Antwerp, Belgium)** | **Professor, Gerald Bronfman Department of Oncology**  
**Director of Gynecologic Oncology, McGill University**  
**Director of Surgical Oncology, McGill University**  
**Director Division of Gynecologic Oncology & Colposcopy, Jewish General Hospital**  
**Clinical research - Gynecological cancers; Robotic surgery for gynecological cancers** |
<table>
<thead>
<tr>
<th><strong>Melissa HENRY, Ph.D.</strong></th>
<th>Assistant Professor, Gerald Bronfman Department of Oncology</th>
<th>Developing, implementing, and evaluating psychosocial interventions designed to improve quality of life in patients with advanced cancer, particularly in the field of head and neck oncology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D. – Psychology (UQAM)</td>
<td>Associate Member, Department of Otolaryngology – Head and Neck Surgery</td>
<td></td>
</tr>
<tr>
<td>M.Ps. – Clinical Psychology (University of Montreal)</td>
<td>Assistant Professor, Department of Psychology</td>
<td></td>
</tr>
<tr>
<td>B.Sc. – Psychology, Minor: Arts &amp; Sciences (University of Montreal)</td>
<td>Psychologist, Otolaryngology - Head and Neck Surgery and Segal Cancer Centre, Jewish General Hospital</td>
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<tr>
<th><strong>Tarek HIJAL, M.Sc., F.R.C.P.C.</strong></th>
<th>Assistant Professor, Gerald Bronfman Department of Oncology</th>
<th>Optimizing delivery of radiotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters – Health Economics, Policy and Management (London School of Economics, London, UK)</td>
<td>Director, Division of Radiation Oncology, McGill University Health Centre</td>
<td></td>
</tr>
<tr>
<td>Attestation de Formation Spécialisée Approfondie, Fellowship in breast oncology and hematologic malignancies (Institut Curie, Paris, France)</td>
<td>Radiation Oncologist, Division of Radiation Oncology, McGill University Health Centre</td>
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<tr>
<td>Residency – Radiation Oncology (McGill University)</td>
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<tr>
<td>B.Sc. – Honours Biochemistry (McGill University)</td>
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<tr>
<th><strong>Vera HIRSH, M.D.</strong></th>
<th>Professor, Gerald Bronfman Department of Oncology</th>
<th>Clinical trials for lung cancer therapies</th>
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<tr>
<td>Haematology (Royal Victoria Hospital, McGill University)</td>
<td>Chair, Lung Cancer Committee, McGill</td>
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<tr>
<td>M.D. (Universitas Carolina Pragensis, Charles University, Prague, Czech Republic)</td>
<td>Associate Member, Department of Medicine, McGill University Health Centre</td>
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<tr>
<td></td>
<td>Medical Oncology, Lung Multidisciplinary Clinic, Montreal General Hospital</td>
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<tr>
<td></td>
<td>Chief, Hematology Laboratory and Blood Bank, Santa Cabrini Hospital</td>
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<tr>
<td>Name</td>
<td>Position and Details</td>
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<tr>
<td><strong>Thomas HUTCHINSON, M.B., F.R.C.P.C.</strong></td>
<td>Chair, Tumour Board Conferences, Santa Cabrini Hospital &lt;br&gt;Resident – Nephrology (Royal Victoria Hospital) &lt;br&gt;Resident – Medicine (Royal Victoria Hospital) &lt;br&gt;M.D. (University College, Dublin, Ireland) &lt;br&gt;Professor, Gerald Bronfman Department of Oncology &lt;br&gt;Professor, Departments of Medicine and Epidemiology, McGill University, Montreal &lt;br&gt;Physician, Division of Palliative Care, Faculty of Medicine, McGill University Health Centre &lt;br&gt;Director, Programs in Whole Person Care, Faculty of Medicine</td>
<td></td>
</tr>
<tr>
<td><strong>Nada JABADO, M.D., Ph.D.</strong></td>
<td>Associate Member, Gerald Bronfman Department of Oncology &lt;br&gt;Professor of Pediatrics, Faculty of Medicine, McGill University &lt;br&gt;Staff Physician, Department of Pediatrics, Division of Hematology/Oncology, Montreal Children’s Hospital, McGill University Health Center &lt;br&gt;Pediatric glioblastoma multiforme</td>
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<tr>
<td><strong>Thomas JAGOE, M.B. B.Chir., Ph.D.</strong></td>
<td>Associate Member, Gerald Bronfman Department of Oncology &lt;br&gt;Associate Professor McGill University Department of Medicine &lt;br&gt;Director of McGill Cancer-Nutrition-Rehabilitation Program &lt;br&gt;Assistant Professor, McGill University Department of Medicine and Oncology &lt;br&gt;Attending Physician, Pulmonary Division, Jewish General Hospital, Montreal &lt;br&gt;Cancer cachexia</td>
<td></td>
</tr>
<tr>
<td>Ph.D. (University of Newcastle-upon-Tyne, Newcastle Upon Tyne, UK) &lt;br&gt;M.D. (St Mary's Hospital Medical School, London, UK) &lt;br&gt;MB B.Chir. (University of Cambridge, Cambridge, UK) &lt;br&gt;BA – General Medical Tripos (Corpus Christi College, Cambridge, UK)</td>
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<tr>
<td>Name</td>
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<td>Education and Research Experience</td>
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<tr>
<td>Petr KAVAN, M.D., Ph.D.</td>
<td>Co-Director, Peter Brojde Lung Cancer Centre, Jewish General Hospital</td>
<td>Ph.D. – Oncology (Charles University, Prague, Czech Republic)</td>
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<tr>
<td></td>
<td></td>
<td>Research Fellowship (Baylor College of Medicine, Houston, Texas)</td>
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<td></td>
<td>Residencies – Department of Pediatrics, Department of Surgery, Medicine and ICU (Charles University, Prague, Czech Republic)</td>
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<td>M.D. (Charles University, Prague, Czech Republic)</td>
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<tr>
<td>John KILDEA, Ph.D., M.C.C.P.M.</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
<td>Clinical Residency – Therapeutic Medical Physics (Department of Medical Physics, McGill University Health Centre)</td>
</tr>
<tr>
<td></td>
<td>Associate Member, Department of Physics</td>
<td>M.Sc. – Medical Radiation Physics (McGill University)</td>
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<tr>
<td></td>
<td>Associate Member, Medical Physics Unit</td>
<td>Ph.D. – High-Energy Astrophysics (University College Dublin, Dublin, Ireland)</td>
</tr>
<tr>
<td></td>
<td>Clinical Medical Physicist, Department of Medical Physics, McGill University Health Centre</td>
<td>B.Sc. – Physics with Astrophysics (Queen’s University Belfast, Belfast, Northern Ireland)</td>
</tr>
<tr>
<td>Tom KOUTSAVLIS, M.D., L.M.C.C., M.Sc., C.S.P.Q., F.R.C.P.C., M.B.A.</td>
<td>Adjunct Professor, Epidemiology, Biostatistics and Occupational Health</td>
<td>Master of Business Administration (John Molson School of Business, Concordia University)</td>
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<td>FRCPC – Public Health/Community Medicine (Royal College of Physicians and Surgeons of Canada)</td>
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<td>M.Sc. – Epidemiology &amp; Biostatistics (McGill University)</td>
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<tr>
<td><strong>Adrian LANGLEBEN, M.D., F.R.C.P.C.</strong></td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
<td>Attending Physician, Department of Medicine, Division of Hematology and Medical Oncology, St. Mary's Hospital</td>
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<td></td>
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<td>Attending Physician, Department of Oncology, Jewish General Hospital</td>
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<td></td>
<td>Director, Department of Oncology, St. Mary’s Hospital, Montreal</td>
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<td>Co-director Oncology Program - CIUSSS ODIM</td>
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<td><strong>Pierre LANEUVILLE, M.D.</strong></td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
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<tr>
<td><strong>Bernard LAPOINTE, M.D.</strong></td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
<td>Eric M. Flanders Chair, Palliative Medicine</td>
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<tr>
<td></td>
<td></td>
<td>Director, Palliative Care McGill, a Program of the Department of Oncology</td>
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<td></td>
<td>Chief, Division of Palliative Medicine, Department of Oncology, Segal Cancer Centre, Jewish General Hospital</td>
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<td>Medical Director of Palliative Care Services, CIUSSS centre-ouest de Montréal</td>
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<td><strong>Carmen LOISELLE, Ph.D.</strong></td>
<td>Professor, Gerald Bronfman Department of Oncology</td>
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<tr>
<td>Name</td>
<td>Education</td>
<td>Professional Roles</td>
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<tr>
<td>M.Sc. – Nursing Community Mental Health (University of Wisconsin-Madison, Madison, Wisconsin)</td>
<td>Associate Member, Rosalind &amp; Morris Goodman Cancer Research Centre</td>
<td>Director, McGill University Oncology Nursing Program and Psychosocial Oncology</td>
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<tr>
<td></td>
<td>B.Sc. – Nursing (University of Montréal)</td>
<td>Member, Board of Directors, Hope &amp; Cope, Jewish General Hospital</td>
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<td></td>
<td></td>
<td>Co-Director (Academic), Segal Cancer Centre at Jewish General Hospital</td>
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<td>Senior Investigator, Segal Cancer Centre and Lady Davis Institute for Medical Research, Jewish General Hospital</td>
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<tr>
<td>Christine MAHEU, Ph.D.</td>
<td>M.Sc.N. (Université de Montréal)</td>
<td>Associate Member, Gerald Bronfman Department of Oncology</td>
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<tr>
<td></td>
<td>B.Sc.N. (Université de Montréal)</td>
<td>Associate Professor, Ingram School of Nursing</td>
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<tr>
<td></td>
<td></td>
<td>Psychosocial and behaviour impact of cancer in cancer survivors and individuals at risk for inherited cancers; Group psychotherapy approaches to help cancer survivors’ deal with uncertainty and fear of recurrence; Descriptive studies for health capitals among minority groups towards breast cancer prevention</td>
</tr>
<tr>
<td>Ari MEGUERDITCHIAN, M.D., M.Sc., F.R.C.S.C., F.A.C.S.</td>
<td>Fellowship – Surgical Oncology (Roswell Park Cancer Institute, Buffalo, New York)</td>
<td>Associate Professor, Gerald Bronfman Department of Oncology</td>
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<tr>
<td></td>
<td>Research Fellowship (Roswell Park Cancer Institute, Buffalo, New York)</td>
<td>Associate Professor, Department of Surgery</td>
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<td>M.Sc. (University of Montreal)</td>
<td>Associate Member, Department of Epidemiology</td>
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<tr>
<td></td>
<td>Residency – General Surgery (Laval University, Quebec City)</td>
<td>Program Lead, Cancer Quality &amp; Innovation, Rossy Cancer Network</td>
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<tr>
<td></td>
<td>M.D. (University of Montreal)</td>
<td>Surgical Oncologist, McGill University Health Centre</td>
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<tr>
<td></td>
<td>Health Sciences Degree (Hon.) (Marianopolis College)</td>
<td>Member, Clinical and Health Informatics Research Group, MUHC Research Institute</td>
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<tr>
<td></td>
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<td>Developing tools that ensure quality in the delivery of cancer care across the community</td>
</tr>
<tr>
<td>René MICHEL, M.D., F.R.C.P.C.</td>
<td>Fellow – Pathology (Royal College of Physicians of Canada)</td>
<td>Associate Member, Gerald Bronfman Department of Oncology</td>
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<td></td>
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<td>Professor, Department of Pathology</td>
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<tr>
<td></td>
<td></td>
<td>Pulmonary vascular diseases and pulmonary hypertension; Pulmonary edema and acute respiratory distress syndrome: Pulmonary fibrosis, Morphometry, Immunohistochemistry,</td>
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<tr>
<td>Name</td>
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<tr>
<td><strong>Residency – Surgery, Pathology</strong> (Royal Victoria Hospital, Montreal General Hospital)</td>
<td>M.D. (McGill University) B.Sc. (McGill University)</td>
<td>Staff Pathologist, McGill University Health Center</td>
</tr>
</tbody>
</table>
| Wilson MILLER, M.D., Ph.D. | M.D. – Cornell University Medical College (Ithaca, New York)  
Ph.D. – Developmental & Cellular Biology (Rockefeller University, New York City, New York)  
A.B. – Department of Biochemistry (Princeton University, Princeton, New Jersey) | Professor, Gerald Bronfman Department of Oncology  
Associate Member, Division of Dermatology, Jewish General Hospital  
Clinical Lead, Rossy Cancer Network, McGill University Department of Oncology  
Director, Clinical Research Unit, Jewish General Hospital | Mechanisms of action and development of novel anti-cancer therapies |
| Belinda NICOLAU, Ph.D.     | Ph.D. – Epidemiology and Public Health (University College London, London, UK)  
M.Sc. – Dental Public Health (Barts and the London School of Medicine and Dentistry, London, UK)  
Periodontics, Dental Science Specialty (State University of Rio de Janeiro, Brazil) | Associate Member, Gerald Bronfman Department of Oncology  
Associate Professor, Faculty of Dentistry  
Director, Division of Oral Health and Society, Faculty of Dentistry | Aetiology of chronic oral diseases, including oral cancer |
| Alexandre ORTHWEIN, Ph.D.  | Ph.D. – Department of Microbiology and Immunology (University of Montreal)  
M.Sc. – Department of Microbiology and Immunology (University of Montreal)  
B.Sc. – Immunology-Virology (Department of Biochemistry, University of Strasbourg, Strasbourg, France) | Assistant Professor, Gerald Bronfman Department of Oncology  
Principal Investigator, Lady Davis Institute, Jewish General Hospital | Basic Research: Elucidating how DNA double-strand breaks are repaired in B-cells to allow for a protective immunity but limit B-cell carcinogenesis; Identifying new markers for the diagnosis of B-cell malignancies and immunodeficiency syndromes as well as defining novel targets for the treatment of patients affected by these diseases. |
| Kevin PETRECCA, M.D., Ph.D. | Fellowship – Skull-Base Surgery (University of Washington, Seattle, Washington) | Associate Member, Gerald Bronfman Department of Oncology  
William Feindel Chair in Neuro-Oncology | Molecular mechanisms that regulate cell motility - focus on malignant glial cell invasion; Developing intraoperative tools to improve brain cancer surgery |
<table>
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<tr>
<th>Name</th>
<th>Education</th>
<th>Occupation</th>
<th>Research Interests</th>
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</table>
| Michael POLLAK, M.D. | Residencies – Internal Medicine and Medical Oncology (Princess Margaret Hospital and associated teaching units, University of Toronto) | Professor (tenured), Departments of Medicine and Oncology, McGill University  
Board of Directors & Scientific Advisory Board, Center for Translational Research in Oncology, McGill University | Insulin and IGF physiology in relation to cancer; Mechanisms by which the anti-diabetic drug, metformin, may act to restrain cancer growth or prevent the development of cancer |
|                       | Residency – Internal Medicine (Toronto General Hospital, University of Toronto) | Director, Cancer Prevention Program, McGill University  
Member, Department of Endocrinology, Jewish General Hospital |                                                                                                                                    |
|                       | Residency – Internal Medicine (St. Michael’s Hospital, University of Toronto) | Staff Physician, Department of Internal Medicine and Oncology, Jewish General Hospital |                                                                                                                                    |
|                       | M.D. (McGill University) |  
Dip. Collegial Studies – Biology & Computer Science (McGill University) |                                                                                                                                    |
| Agnihotram RAMANAKUMAR, Ph.D. | Ph.D. – Population Sciences, Specialization: Cancer Epidemiology (International Institute for Population Sciences, Mumbai, India) | Adjunct Professor, Gerald Bronfman Department of Oncology  
Senior Biostatistician, Centre for Innovative Medicine, McGill University Health Centre | Infection and Cancer; Cancer Epidemiology; Cancer Registration and Surveillance; Clinical Trials; Statistical Methods; Health Economics/Health Economics and Outcomes Research |
|                       | Master of Population Science – Health Economics, Cancer Epidemiology, Biostatistics, Public Health (International Institute for Population Sciences, Mumbai, India) |  
M.A. – Mathematical Economics, Specialization: Health Economics, Econometric models (Andhra University, Visakhapatnam, India) |                                                                                                                                    |
|                       | M.Sc. – Statistics, Specialization: Demography, Biostatistics, Computer |  
Infection and Cancer; Cancer Epidemiology; Cancer Registration and Surveillance; Clinical Trials; Statistical Methods; Health Economics/Health Economics and Outcomes Research |                                                                                                                                    |
<table>
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<tr>
<th>Name</th>
<th>Education/Training</th>
<th>Position/Role</th>
<th>Research Areas</th>
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<tr>
<td><strong>Marie-Claire RICHER, Ph.D.</strong></td>
<td>Assistant Professor, Faculty of Medicine, School of Nursing, McGill University</td>
<td>CIUSSS Ouest-de-l’Ile de Montréal</td>
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<td></td>
<td>M.Sc.(a) – Nursing (McGill University)</td>
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<td>B.Sc. (Université de Montréal)</td>
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<tr>
<td><strong>Carolyn ROUSSEAU, Ph.D.</strong></td>
<td>Senior Clinical Manager, Rossy Cancer Network</td>
<td></td>
<td>Development of murine lung metastasis model for head and neck squamous cell carcinoma, interleukin-2 in treatment of HNSCC, LAK cells in treatment of HNSCC, T-cell lymphocytes in treatment of head and neck cancer.</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (McGill University, Department of Medicine, Division of Experimental Medicine)</td>
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<td>B.Sc. – Biochemistry co-op program (Concordia University)</td>
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<tr>
<td><strong>Nader SADEGHI, M.D.</strong></td>
<td>Professor and Chairman, Department of Otolaryngology - Head and Neck Surgery, McGill University</td>
<td>Chief Otolaryngologist/Head and Neck Surgeon, MUHC</td>
<td>Role of X chromosome in cancer; Function of PPP2R3B gene as a metastasis suppressor gene; Regulation and role of FoxP3 gene</td>
</tr>
<tr>
<td></td>
<td>Fellowship – Skull Base-Head and Neck Surgery and Reconstruction (Rush Presbyterian St. Luke’s Medical Centre, Rush University, Chicago, Illinois)</td>
<td>Director, McGill Head and Neck Cancer Program</td>
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<td>Residency – Department of Otolaryngology (McGill University)</td>
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<td>Residency – Core Surgery (McGill University)</td>
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<tr>
<td><strong>Alan SPATZ, M.D.</strong></td>
<td>Professor, Gerald Bronfman Department of Oncology</td>
<td>Director, Pathology Department, Jewish General Hospital/CIUSSS Centre Ouest de l’Ile-de-Montreal</td>
<td></td>
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<tr>
<td></td>
<td>Fellowship – Surgical Pathology (Gustave Roussy Cancer Institute, Villejuif, France)</td>
<td>Professor, Department of Pathology, McGill University</td>
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<td>Residency – Anatomic Pathology (Pierre &amp; Marie Curie University, Paris, France)</td>
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<td>M.Sc. – Molecular Oncology (PARIS XI University, le Kremellin-Bicetre, France)</td>
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<td>M.D. (LYON I University, Lyon, France)</td>
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<tr>
<td><strong>Barry Stein, M.D.</strong></td>
<td>Assistant Professor, Gerald Bronfman Department of Oncology</td>
<td>Clinical research - colorectal surgery</td>
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<tr>
<td>Fellowship – Colon and Rectal Surgery (Lahey Clinic Medical Centre, Burlington, Massachusetts)</td>
<td>Assistant Professor, Department of Surgery, McGill University</td>
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<tr>
<td>Residency – General Surgery (McGill University)</td>
<td>Director, Colon and Rectal Surgery, McGill University Health Centre</td>
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<tr>
<td>M.D. (McGill University)</td>
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<thead>
<tr>
<th><strong>Ivan Topisirovic, M.D., Ph.D.</strong></th>
<th>Assistant Professor, Gerald Bronfman Department of Oncology</th>
<th>Basic research: To comprehend how changes in mRNA translation and energy metabolism are coordinated, to understand how mTOR regulates mRNA translation. mTOR is the major regulator of mRNA translation, whereby both mTOR signaling and mRNA translation are frequently dysregulated in neoplasia, and to establish the role of quality control of newly synthesized polypeptides (NSPs) in cancer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D. – Biology (University of Belgrade, Serbia and Montenegro)</td>
<td>Associate Member, Faculty of Medicine, Department of Biochemistry, McGill University</td>
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<tr>
<td>M.D. (University of Belgrade, Serbia, Yugoslavia)</td>
<td>Associate Member, Faculty of Medicine, Department of Medicine, Division of Experimental Medicine, McGill University</td>
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<td>Lady Davis Institute, Jewish General Hospital</td>
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<thead>
<tr>
<th><strong>Josie Ursini-Siegel, Ph.D.</strong></th>
<th>Associate Professor, Gerald Bronfman Department of Oncology</th>
<th>Research goals: To determine how ShcA-driven signaling pathways control breast cancer immune suppression. To determine how ShcA-driven signaling pathways promote breast tumour angiogenesis. To determine how ShcA-driven signaling pathways increase glycolytic and glutamine-dependent metabolism in breast cancer cells to promote tumour growth and metastasis. To determine the functional role of p66ShcA-induced oxidative stress signals in the development of breast cancer and its progression to metastatic disease. To determine whether p66ShcA-induced oxidative stress can influence response to chemotherapy and/or targeted therapies in breast cancer.</th>
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<tr>
<td>Ph.D. – Medical Sciences (McMaster University)</td>
<td>Full Member, Division of Experimental Medicine, McGill University</td>
<td></td>
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<tr>
<td>M.Sc. – Biochemistry (McMaster University)</td>
<td>Associate Member, Department of Biochemistry, McGill University</td>
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<tr>
<td>B.Sc. – Biochemistry (McMaster University)</td>
<td>Associate Member, Goodman Cancer Research Centre, McGill University</td>
<td></td>
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<tr>
<td></td>
<td>Investigator, Lady Davis Institute for Medical Research</td>
<td></td>
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<table>
<thead>
<tr>
<th><strong>Antonio Vigano, M.D.</strong></th>
<th>Associate Professor, Gerald Bronfman Department of Oncology</th>
<th>Validation of tools for assessing nutrition and performance in advanced cancer patients; Definition of relationships between molecular, nutritional and</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Fellowship – Palliative Care (University of Alberta)</td>
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53
<table>
<thead>
<tr>
<th><strong>Clinical Research Fellowship – Palliative Care Program</strong> (University of Alberta)</th>
<th><strong>Residency – Anaesthesiology and Pain Therapy</strong> (University of Milan, Milan, Italy)</th>
<th><strong>M.D.</strong> (University of Milan School of Medicine, Milan, Italy)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M.Sc. – Clinical Epidemiology</strong> (University of Alberta)</td>
<td><strong>Director, McGill Performance and Nutrition Laboratory</strong></td>
<td><strong>Attending Physician, Supportive and Palliative Care Division, MUHC</strong></td>
</tr>
<tr>
<td><strong>Té RUONG, M.D.</strong></td>
<td><strong>Director, Cancer Rehabilitation (CARE) Program, Cancer Mission, MUHC</strong></td>
<td><strong>Associate Physician, Jewish General Hospital</strong></td>
</tr>
<tr>
<td><strong>Post-graduate – Radiation Oncology</strong> (Institut Gustave Roussy &amp; Institut Curie, Paris, France)</td>
<td><strong>Post-graduate – Radiation Oncology</strong> (University of Toronto)</td>
<td><strong>Post-graduate – Medical Oncology</strong> (Université de Montréal)</td>
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<tr>
<td><strong>Post-graduate – Internal Medicine</strong> (Université de Montréal)</td>
<td><strong>Post-graduate – Medical Oncology</strong> (University of Toronto)</td>
<td><strong>Post-graduate – Internal Medicine</strong> (Université de Montréal)</td>
</tr>
<tr>
<td><strong>M.D.</strong> (Université de Montréal)</td>
<td><strong>M.D.</strong> (University of Milan)</td>
<td><strong>B.A.C.</strong> (Lycée du Mas de Tesse, Montpellier, France)</td>
</tr>
</tbody>
</table>

**Research expertise:**
- Functional correlates of cancer cachexia; Diagnosis and treatment of male hypogonadism in advanced cancer; Prediction and prevention of surgical risks in elderly cancer patients; Evaluation of body composition in lymphedema
- Pattern of pelvic recurrence in patients with rectal cancer.
- Long-term functional results of patients treated with adjuvant external beam radiation either external beam radiation or high dose rate brachytherapy for advanced rectal cancer.
- The role of high dose rate brachytherapy for patients with locally advanced esophageal cancer.
- Nano robotic technology as a mean to deliver targeted radiation therapy for rectal cancer.
- Psycho-social factors involved during brachytherapy for patients with rectal cancer.
- Intra operative radiation therapy as a mean to deliver targeted radiation therapy for patients with breast cancer.
- Chemotherapy timing for patients with rectal cancer.
- Nimotuzumab as a radio sensitizer for patients with anal canal cancer.
- Intensity modulated brachytherapy for patients with rectal cancer.
- Optimized treatment strategies for patients with T4 recto-sigmoid cancer.
- Intra operative radiation for patients with early breast cancer.
<p>| <strong>Doreen WAN-CHOW-WAH, M.D.</strong> | <strong>Associate Member, Gerald Bronfman Department of Oncology</strong> | <strong>Goals as geriatric oncologist:</strong> Understand the challenges encountered by cancer physicians treating older cancer patients and factors influencing older cancer patients’ treatment decisions. Analyze the impact of a comprehensive geriatric assessment in older cancer patients receiving chemotherapy. |
| Fellowship – Medical Oncology (McGill University) | Assistant Professor, Division of Geriatric Medicine, McGill University | |
| Fellowship – Geriatric Medicine (McGill University) | Medical Director, Segal Cancer Centre, Jewish General Hospital | |
| Residency – Internal Medicine (Royal Victoria Hospital, MUHC) | Program Director, Fellowship in Geriatric Oncology, McGill University | |
| M.D. (McGill University) | Program Director, Geriatric Medicine Residency, McGill University | |
| B.Sc. – Microbiology &amp; Immunology (McGill University) | Royal Victoria Hospital &amp; Montreal General Hospital | |
| | Jewish General Hospital | |
| | Montreal Chinese Hospital | |
| <strong>Beatrice WANG, M.D.</strong> | <strong>Associate Member, Gerald Bronfman Department of Oncology</strong> | <strong>Research on dermato-oncology, cancer screening and surveillance in transplant recipients.</strong> |
| Fellowship – Molecular Biology of Aging (Lady Davis Institute, McGill University) | Assistant Professor, Division of Dermatology, Royal Victoria Hospital, MUHC | |
| Fellowship – Basic Research in Skin Aging (Boston University School of Medicine) | Assistant Professor, Faculty of Medicine, McGill University | |
| Residency – Dermatology (McGill University) | Director, Melanoma Clinic, MUHC | |
| Residency – Pediatrics (Montreal Children’s Hospital) | | |
| M.D. (McGill University) | | |
| B.Sc. – Double Major in Physiology and Art History (McGill University) | | |
| <strong>Gillian BARTLETT-ESQUILANT, Ph.D.</strong> | <strong>Professor</strong> | <strong>Ethics, privacy and implementation related to genomic testing in primary care; direct-to-patient knowledge translation around health promotion, personalized medicine and pharmacogenomics in family medicine</strong> |
| Ph.D. – Epidemiology (McGill University) | Dept. of Family Medicine | |
| M.Sc. – Epidemiology (McGill University) | Associate Chair | |
| B.A. – Psychology (McGill University) | Dept. of Family Medicine | |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Education/Training</th>
<th>Position</th>
<th>Research Interests</th>
</tr>
</thead>
</table>
Residency – Community Health (Public Health) (McGill University)  
Residency – Family Medicine (Dalhousie University, Halifax)  
M.D. (McGill University) | Assistant Professor, Department of Family Medicine  
Director, Global Health Programs, Department of Family Medicine  
Clinical Governance, Medical Advisor, Institut national d’excellence en santé et en services sociaux (INESSS) | Identifying cost-effective interventions and approaches to their scale-up and in strengthening primary health care / family medicine |
| Joseph COX, M.D.            | Residency – Public Health & Prevention Medicine (McGill University)  
M.Sc. – Epidemiology (McGill University)  
Residency – Family Medicine (McGill University)  
M.D. (Dalhousie University, Halifax)  
B.A. – Psychology (Dalhousie University, Halifax)  
B.Sc. – Biology (Dalhousie University, Halifax) | Associate Professor Department of Epidemiology, Biostatistics & Occupational Health  
Associate Member Department of Medicine, Faculty of Medicine  
Associate Member Department of Family Medicine, Faculty of Medicine | Monitoring sexually transmitted and blood-borne infections and related determinants, among priority populations (gay, bisexual and other men who have sex with men, people who inject drugs); Evaluation of interventions to improve the health and care of people living with substance use disorders, HIV and hepatitis C |
| Nandini DENDUKURI, Ph.D.    | Ph.D. – Biostatistics (McGill University)  
M.Sc. – Integrated Statistics (Indian Institute of Technology, Kanpur, India) | Medical Scientist Division of Clinical Epidemiology  
McGill University Health Centre, Montreal  
Associate Professor, Department of Medicine and Department of Epidemiology and Biostatistics  
Director Technology Assessment Unit, McGill University Health Centre, Montreal | Development of methods in the area of evaluating diagnostic tests in the absence of a gold standard, meta-analysis of diagnostic test properties and Bayesian estimation of small proportions; Technology assessment and epidemiology |
<p>| Blaine DITTO, Ph.D.         |                                      | Professor, Department of Psychology                                      | Stress-related physiology; patterns of affective and physiological response to different stressors; CNS |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree Details</th>
<th>Research Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher GRAVEL, Ph.D.</td>
<td>Ph.D. – Mathematics - Probability and Statistics (Carleton University, Ottawa) M.Sc. – Probability and Statistics (Carleton University, Ottawa) B.Math – Probability and Statistics (Carleton University, Ottawa) B.A. – Psychology (Carleton University, Ottawa)</td>
<td>Post-doctoral Fellow, Epidemiology, Biostatistics and Occupational Health, McGill University</td>
</tr>
<tr>
<td>Bertrand JEAN-CLAUD</td>
<td>Ph.D. – Organic Chemistry (McGill University) M.Sc. – Organic Chemistry (University of Moncton, New Brunswick) B.Sc. – Biochemistry (University of Moncton, New Brunswick)</td>
<td>Assistant Professor, Department of Medicine, McGill University Health Centre Associate Member, Department of Pharmacology, McGill University Member, Division of Experimental Medicine, Department of Medicine, McGill University Director, McGill CIHR Drug Development Training Program</td>
</tr>
<tr>
<td>Beste KUCUKYAZICI, Ph.D.</td>
<td>Ph.D. – Operations Management, Minor Epidemiology (McGill University) M.Sc. – System Engineering (Yeditepe University, Istanbul, Turkey) B.Sc. – Industrial Engineering (Marmara University, Istanbul, Turkey)</td>
<td>Assistant Professor, Operations Management, Desautels Faculty of Management, McGill University</td>
</tr>
<tr>
<td>Name</td>
<td>Qualifications</td>
<td>Position</td>
</tr>
<tr>
<td>---------------------------</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Eric LATIMER, Ph.D.</td>
<td>Ph.D. – Economics (Carnegie Mellon University, Pittsburgh, Pennsylvania)</td>
<td>Professor Dept. of Psychiatry</td>
</tr>
<tr>
<td></td>
<td>M.S. – Economics (Carnegie Mellon University, Pittsburgh, Pennsylvania)</td>
<td>Associate Member, Dept. of Epidemiology and Biostatistics</td>
</tr>
<tr>
<td></td>
<td>M.S. – Sciences Économiques (Université de Montréal)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.A.Sc – System Design Engineering (University of Waterloo, Waterloo)</td>
<td></td>
</tr>
<tr>
<td>Faisca RICHER, M.D., M.Sc., F.R.C.P.C.</td>
<td>M.D. (University of Ottawa)</td>
<td>Associate Professor Dept of Epidemiology, Biostatistics and Occupational Health</td>
</tr>
<tr>
<td></td>
<td>M.Sc. – Epidemiology (McGill University)</td>
<td></td>
</tr>
<tr>
<td>Ana Maria RODRIGUEZ, Ph.D.</td>
<td>Ph.D. (McGill University)</td>
<td>Course Lecturer, School of Physical and Occupational Therapy</td>
</tr>
<tr>
<td></td>
<td>M.Sc. – Rehabilitation Sciences/Public Health (McGill University)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.Sc. – Physical Therapy (McGill University)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.Sc. – Biology (McGill University)</td>
<td></td>
</tr>
<tr>
<td>Tibor SCHUSTER, Ph.D.</td>
<td>Ph.D. – Biostatistics (Ludwig-Maximilians Universität München, Munich, Germany)</td>
<td>Assistant Professor Dept. of Family Medicine</td>
</tr>
<tr>
<td></td>
<td>M.Sc. – Diplom-Statistiker Univ, Biostatistics (Ludwig-Maximilians Universität München, Munich, Germany)</td>
<td></td>
</tr>
<tr>
<td>Farhad SHOKOOHI, Ph.D.</td>
<td>Ph.D. – Statistics (Shahid Beheshti University, Tehran, Iran)</td>
<td>Postdoctoral Fellow Dept. of Epidemiology, Biostatistics, and Occupational Health</td>
</tr>
<tr>
<td></td>
<td>M.Sc. – Mathematical Statistitics (Shahid Beheshti University, Tehran, Iran)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B.Sc. – Mathematical Statistics (Razi University, Kermanshah, Iran)</td>
<td></td>
</tr>
<tr>
<td>Patricia TONIN, Ph.D.</td>
<td>Ph.D. (University of Toronto, Toronto)</td>
<td>Associate Member, Gerald Bronfman Department of Oncology</td>
</tr>
<tr>
<td></td>
<td>M.Sc. (University of Toronto, Toronto)</td>
<td></td>
</tr>
</tbody>
</table>
The course, ONCO 625 Quality Improvement Principles and Methods, will also feature guest lectures from experts in the field who are affiliated with the McGill teaching hospitals or other academic institutions in Montreal:

Jean-Yves Fiset – Eng., Ph.D. teaches at École Polytechnique de Montréal at the undergraduate and graduate levels. He has a Ph.D. in Electrical Engineering with a focus on Human Factors and Artificial Intelligence.

Patricia Lefebvre is the Director of Quality, Risk Management & Performance at the McGill University Health Centre. She has a Master of Pharmacy Practice from the Université de Montréal.

Karine Vigneault, Ph.D. is the Patient Partnership Coordinator at the McGill University Health Centre. She has an MA in Communication Studies from McGill and a Ph.D. in Communication from the Université de Montréal.

Noe Djawn White is the Continuous Improvement advisor and Quality Improvement facilitator at the McGill University Health Centre.

Table 7 - Number of Trainees for Proposed Instructors

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Undergraduate</th>
<th>Master's</th>
<th>Ph.D.</th>
<th>Postdoctoral Fellow</th>
<th>Residents &amp; Fellows</th>
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<tr>
<td>Moulay Alaoui-Jamali</td>
<td>21</td>
<td>11 (10)</td>
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<td>12 (12)</td>
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<tr>
<td>Thierry Alcindor</td>
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<tr>
<td>Jamil Asselah</td>
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<tr>
<td>Laurent Azoulay</td>
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<tr>
<td>Mark Basik</td>
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<tr>
<td>Gerald Batist</td>
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<tr>
<td>Robin Cohen</td>
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<tr>
<td>Alice Dragomir</td>
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<tr>
<td>Marc Fabian</td>
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<tr>
<td>William Foulkes</td>
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<tr>
<td>Eduardo Franco</td>
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<tr>
<td>Angela Genge</td>
<td>18(16)</td>
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<td>Melissa Henry</td>
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<tr>
<td>Vera Hirsh</td>
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<td>Nada Jabado</td>
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<td>John Kildea</td>
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<td>Pierre Laneuville</td>
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<tr>
<td>Bernard Lapointe</td>
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<tr>
<td>Carmen Loiselle</td>
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<tr>
<td>Christine Maheu</td>
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<tr>
<td>Ari Meguerditchian</td>
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<tr>
<td>René Michel</td>
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<td>4(4)</td>
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<tr>
<td>Wilson Miller</td>
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<tr>
<td>Belinda Nicolau</td>
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<td>Kevin Petrecca</td>
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<tr>
<td>Michael Pollak</td>
<td>4</td>
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<tr>
<td>Marie-Claire Richer</td>
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<tr>
<td>Alan Spatz</td>
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<tr>
<td>Ivan Topisirovic</td>
<td>6</td>
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<tr>
<td>Josie Ursini-Siegel</td>
<td>14</td>
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<td>6</td>
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<tr>
<td>Antonio Vigano</td>
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<td>2</td>
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</tr>
<tr>
<td>Gillian Bartlett-Esquilant</td>
<td>23(17)</td>
<td>10(2)</td>
<td>3</td>
<td>6</td>
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<tr>
<td>Joseph Cox</td>
<td>8(5)</td>
<td>6(5)</td>
<td>1</td>
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<tr>
<td>Nandini Dendukuri</td>
<td>9(7)</td>
<td>12(6)</td>
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<tr>
<td>Blaine Ditto</td>
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<tr>
<td>Christopher Gravel</td>
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<tr>
<td>Bertrand Jean-Claude</td>
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<td>6(5)</td>
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<tr>
<td>Beste Kucukyazici</td>
<td>1(1)</td>
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<tr>
<td>Eric Latimer</td>
<td>9(7)</td>
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<tr>
<td>Farhad Shokoohi</td>
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<tr>
<td>Patricia Tonin</td>
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<td>6(5)</td>
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<tr>
<td>Jian Hui Wu</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
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</table>

**Research Funding** (See Appendix 6)

**Publications** (See Appendix 7)

### 4.1.1.2 New staff required

As the enrolment of new students acquires momentum and the program becomes well established, there will be a secure revenue stream to the university from tuition. For the time being, the Department has secured substantial funding to assist the onset of the program and guarantee its success. As the program gains a stable clientele of students and becomes established, we will assess possible deficits in teaching capacity. We expect that we will need two tenure-stream slots for new faculty members to be appointed in oncology within 2-3 years of the onset of the program. These new positions are reserved for faculty members who will play active teaching roles in the program.
4.1.2 Administrative and support staff

4.1.2.1 Staff in place

The Academic Advisor to the Chair (Dr. Gayle Shinder) provides feedback and support to the Chair regarding academic matters within the Department based on knowledge of the research, teaching, and clinical activities of the faculty members. This includes monitoring all Department educational activities including undergraduate medical education, postgraduate medical education and continuing medical education. Dr. Shinder has worked closely with the Chair in developing this proposed M.Sc. in Oncology; Non-Thesis program and is well poised to ensure its seamless integration into the Department’s education portfolio. She also provides guidance to the Department’s Postgraduate Medical Education coordinator responsible for organizing the Multidisciplinary Oncology Residents Education (MORE) series which also will be an important feature of the proposed graduate program. On behalf of the Chair, the Academic Advisor to the Chair will oversee the Graduate Program Coordinator’s activities to ensure that the program is running smoothly.

4.1.2.2 New staff required if applicable

Graduate Program Director
The Graduate Program Director (GPD) will be responsible for managing all aspects of the proposed M.Sc. in Oncology; Non-Thesis program and for advising students on academic matters. The GPD will liaise with course instructors of the five courses created for this program to ensure they are running smoothly and will work closely with the Graduate Program Coordinator. The GPD will report to the Department Chair and will follow procedures mandated by Graduate and Postdoctoral Studies.

Graduate Program Coordinator
The Graduate Program Coordinator (GPC) will provide all administrative support to the Graduate Program Director in the management of the program. This person will be the point of contact for prospective and current students regarding admissions, university regulations etc. The GPC will liaise with Graduate and Postdoctoral Studies, Enrolment Services and other University units as required.

4.2 Physical and other resources required, available and projected

4.2.1 Library resources

4.2.1.1 Quality of Collections and Quantity

The McGill Library has 13 branches including the Schulich Library of Physical Sciences, Life Sciences, and Engineering; Osler Library of the History of Medicine; Humanities and Social Sciences Library; Rare Books and Special Collections; McGill University Archives; Research Commons; Education Curriculum Resources Centre; Nahum Gelber Law Library; Islamic Studies Library; Geographic Information Centre; Birks Reading Room; Marvin Duchow Music Library and the MacDonald Campus Library. The library also has the following affiliated collections and
partner libraries: Historical collections; Polish Institute; Presbyterian College. The Schulich Library of Physical Sciences, Life Sciences, and Engineering will be the branch predominantly used by students enrolled in the proposed M.Sc. Oncology, Non-Thesis.

The McGill library’s collection has over 6 million volumes/items including almost 2.1 million print books, over 2.1 million E-books, close to 58,000 print journals and over 100,000 E-journals. In addition, the library has 1400 online databases as well as over 651,000 government documents (over 546,000 electronic and over 105,000 print).

4.2.1.2 Accessibility; Assistance and reference services provided; access to resources available at other institutions

The Schulich Library of Physical Sciences, Life Sciences & Engineering is open throughout the week during the fall and winter semesters, however, its public service desk is closed on Saturdays. During the summer session the library and its public service desk are open Monday to Friday. After-hours access can be requested at times when the library is not open for a 24-hour period.

Group work spaces and individual work spaces can be booked in some of the branches. Computers located in the library can be used to access library e-resources. While on campus library resources can be accessed by authorized users from wired or wireless computers. When off campus, the library resources can be accessed using EZproxy (using the person’s McGill login username and password) or the Virtual Private Network (VPN).

Liaison Librarians work with faculty research teams and individuals to help them navigate the library’s vast array of resources and determine the best use of these resources for the person’s particular needs. The library’s holdings of electronic and print material can be searched using the WorldCat Local Catalogue (http://mcgill.worldcat.org/advancedsearch). The library also offers digitalization services and has a bilingual grants database which facilitates the search for major funders.

The library offers students information skills workshops to help them develop information research skills and learn the software programs used for creating bibliographies.

The McGill Library has an Interlibrary Loan service which allows people to obtain material held in other libraries in North America. The McGill Library’s membership in the Center for Research Libraries provides the opportunity to borrow a vast array of material (in microformats or digital) from countries around the world. Those with a BCI card can borrow in person from other libraries and Canadian Universities.

Libraries are also located at the McGill-affiliated hospitals. Students conducting their Oncology Practicum at a particular hospital may wish to use that library and would be required to seek permission from the appropriate person at that institution.
4.2.2 Computer Facilities

4.2.2.1 Quality and Quantity

The McGill Library has over 500 computer workstations. The speed of the McGill wireless connection is up to 54 Mbps using the 802.11a/g/n/ac standards. Software on library computer workstations include but are not limited to Adobe Reader, Microsoft Office Suite, Google Chrome, Firefox, Internet Explorer, Adobe Flash and Endnote. Trend Micro is the internet security software provided by McGill on all of its computers. Staff and students may obtain Trend Micro from McGill free-of-charge for their personal computers.

4.2.2.2 Accessibility

Students will have access to the library computers during regular library hours. The Gerald Bronfman Department of Oncology will provide four to five computer workstations in cubicle space in the open concept area of the department’s headquarters at 5100 de Maisonneuve Blvd. West, Suite 720.

Printing and photocopying at McGill is managed via the uPrint service. Copiers are available at the McGill libraries. There is no charge for using uPrint to scan to email. Students will receive a monthly bill from Student Services for any printing and copying they have done. uPrint drivers installed on home computers will allow students to use uPrint when connected to the McGill VPN. The Gerald Bronfman Department of Oncology has two uPrint copiers.

4.2.3.3 Technical support; training and maintenance, networks

Computer technical support is provided by McGill University’s IT Customer Services (ICS) or the Faculty of Medicine’s MedIT. When the Gerald Bronfman Department of Oncology moved from its downtown office space to its current location, all computer technical support was transferred from ICS to MedIT. This support includes the setup, configuration and upgrade of desktop software in addition to network storage and backup of essential files. File space with MedIT is backed up every day and archived monthly. The website for the Gerald Bronfman Department of Oncology (http://www.medicine.mcgill.ca/oncology/) is hosted by MedIT.

McGill IT Services provide training and workshops for administrative systems and centrally provided IT services. They offer over 30 courses for McGill systems such as Teaching and Learning Technologies, uApply, Surveys, Information Security etc.

McGill Network and Communication Services (NCS) are responsible for access to Local Area Networks (LAN), Wireless Network, Internet and email and manage the infrastructure and IT security for all McGill central systems.

4.2.3 Laboratories

Wet laboratories will not be required for the M.Sc. in Oncology; Non-Thesis.
4.2.4 Space

4.2.4.1 Teaching space: quality and quantity

Most of the classes will be taught at classrooms on campus. The Gerald Bronfman Department of Oncology headquarters has two seminar rooms and a conference room which can be used for teaching. In fact, EPIB 671, which is to be taken by all students in the Population and Global Cancer Control stream and is a complementary course option for students in the other streams, is taught in one of the seminar rooms. Classroom space for the Department’s newly created courses may also be available at the McGill University Health Centre. The MORE series, to be attended by all students, is held there.

4.2.4.2 Office space

There will be no designated office space for students since the bulk of their curriculum is coursework. The needs of students during their practicum will differ depending on their chosen stream. Students in the Population and Global Cancer Control stream will require a desk and a computer. Students in the Psychosocial and Palliative Care stream will require a desk and a computer and possibly access to the oncology clinics. Students in the Clinical Cancer Research and Cancer Care Services and Quality streams will require access to oncology clinics. Practicum supervisors will make arrangements for space needed by their students.

4.2.4.3 Study space

The four to five computer workstations in cubicle space in the open concept area of the Department’s headquarters at 5100 de Maisonneuve Blvd. West, Suite 720 may serve as study space if they are available. In addition, the Department’s seminar and conference rooms may be used if they are available.

4.2.4.4 Financial Aid

There is currently no funding available to support graduate students in this program. We expect that faculty supervisors may be able to offer an initial bursary to incoming students.
APPENDICES
Appendix 1 – Cumulative Citation Counts of Faculty Members
Appendix 2 – Letters of Support
Appendix 3 - Graduate Programs in Oncology or Healthcare Quality at Other Universities
Appendix 4 – Course Outlines
Appendix 5 – MORE Series/Journal Clubs
Appendix 6 – Research Funding 2012-2017
Appendix 7 – Publications 2012-2017
Appendix 8 – CVs (included on a USB stick rather than in paper format)
## APPENDIX 1

**Cumulative Citation Counts for Faculty Members – Gerald Bronfman**

**Department of Oncology** (based on Scopus database search done on June 27-29, 2017)

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## Appendix 1: Citation Counts for Departmental Faculty Members

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## Appendix 1: Citation Counts for Departmental Faculty Members

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APPENDIX 2 - Letters of Support

1. Casely Tetteh Ago (Professor and Head, Dalhousie Department of Radiation Oncology, Nova Scotia)
2. Armen Aprikian (Medical Director, Cancer Care Mission, McGill University Health Centre)
3. Charles Balch (Professor of Surgery, MD Anderson Cancer Center, Houston, Texas, USA)
4. Yatche Bartekian (President, Vantage BioTrials Inc., Montreal)
5. Gerald Batist (Director, Segal Cancer Centre, McGill University)
6. Renaldo Battista (Directeur scientifique, Fonds de recherché Santé Québec)
7. Elisabeth Baugh (Chief Executive Officer, Ovarian Cancer Canada, Toronto)
8. Drew Bethune (Medical Director, Program of Care for Cancer, Nova Scotia Health Authority)
9. Carol Bishop (Director, Research Operations, Canadian Cancer Society, Toronto)
10. Adalsteinn Brown (Interim Dean, Dalla Lana School of Public Health, Toronto)
11. Heather Bryant (Chief Scientific Officer, Canadian Partnership Against Cancer, Toronto)
12. Webster K. Cavenee (Distinguished Professor, University of California at San Diego, USA)
13. Stephen Chanock (Director, Division of Cancer Epidemiology and Genetics, National Institutes of Health, Bethesda, USA)
14. Danielle Charpentier (Co-gestionnaire médicale, Centre intégré de cancérologie du CHUM)
15. Jacques Côté & Yves Fradet (Respectively, Directeur de l’Axe Oncologie, Centre de Recherche CHU de Québec & Professeur titulaire, Département de chirurgie, CHU de Québec, Université Laval)
16. Denise Deakin (President and CEO, Scimega, Montreal)
17. Stuart Edmonds (Vice-President for Research, Prostate Cancer Canada)
18. Elizabeth Eisenhauer (Head, Department of Oncology, Queen's University, Kingston)
19. Max Fehlmann (Président et chef de la direction, Société de recherche sur le cancer, Montreal)
20. Christine Friedenreich (Scientific Leader, Cancer Epidemiology and Prevention Research, Alberta Health Services, Calgary)
21. Mary Gospodarowicz (Medical Director, Princess Margaret Cancer Centre; Former President of Union for International Cancer Control (UICC), Geneva, Switzerland)
22. Carolyn Gotay (Professor and Interim Co-Director, School of Population and Public Health, University of British Columbia, Vancouver)
23. Walter Gotlieb (President, Society of Gynecologic Oncology of Canada, Ottawa)
24. Lakshmi Krishnan (Director, Research & Development, National Research Council, Ottawa)
25. Adrian Langleben (Chair, Department of Oncology, St. Mary’s Hospital, CIUSSS ODIM)
26. Roberto Lara (Senior Director, Head, Canadian Operations, Precision Oncology, Flemington, NJ, USA)
27. Jean Latreille (Directeur, Direction générale de cancérologie, Ministère de la Santé et des Services sociaux, Quebec)
28. Mark Levine (Professor and Chair, Department of Oncology, McMaster University, Hamilton)
29. Victor Ling (President and Scientific Director, Terry Fox Research Institute, Vancouver)
30. Susan D. Marshall (Chief Executive Officer, Brain Tumour Foundation of Canada, Toronto)
31. Carole Mayer (President, Canadian Association of Psychosocial Oncology, Toronto)
32. Roderick R. McInnes (Acting President, Canadian Institutes of Health Research/Government of Canada, Ottawa)
33. Anne-Marie Mes-Masson (Directrice Scientifique, Institut du cancer de Montréal)
34. Nicole Mittmann (Chief Research Officer, Cancer Care Ontario, Toronto)
35. Mark Oremus (President, Canadian Society for Epidemiology and Biostatistics)
36. Vassilios Papadopoulos (Dean, School of Pharmacy, University of Southern California, Los Angeles, USA)
37. Kathleen I. Pritchard (Division Director, Medical Oncology, University of Toronto)
38. Linda Rabeneck (Vice-President, Prevention and Cancer Control, Cancer Care Ontario, Toronto)
39. Daniel Rayson (Head, Division of Medical Oncology, Dalhousie University, Halifax)
40. Nathalie Rivard (Directrice de l’axe Cancer, Centre de recherche-CHUS, Sherbrooke)
41. Stephen M. Robins (Scientific Director, Canadian Institutes of Health Research, Institute of Cancer Research)
42. Jack Siemietycki (Professeur titulaire, Centre de recherche du CHUM, Université de Montréal)
43. John J. Spinelli (Vice President, Population Oncology, BC Cancer Agency, Vancouver)
44. Tony Teti (Director of Operations, Rossy Cancer Network, Montreal)
45. Shelagh Tippet-Fagyas (President, Leukemia and Lymphoma Society of Canada)
46. Jon Tonita (Chief Executive Officer, Saskatchewan Cancer Agency)
47. Nathalie Tremblay (Présidente-directrice générale, Fondation cancer du sein du Québec)
48. Donna Turner (Director, Population Oncology, CancerCare Manitoba, Winnipeg)
49. Christine Williams (Deputy Director, Ontario Institute for Cancer Research, Toronto)
50. Eric Vigneault (President, Canadian Association of Radiation Oncology)
51. James R. Woodgett (Director of Research, Lunenfeld-Tanenbaum Research Institute, Toronto)
June 21, 2017

Dr. Eduardo Franco
James McGill Professor
Director, Division of Cancer Epidemiology
McGill University

Dear Dr. Franco,

I am writing to express our enthusiasm and support of the proposed Integrated Graduate Program in Oncology at McGill.

My colleagues and I have reviewed the salient features of the proposed program and agree that this would be a good program and a benefit to a wide range of professionals interested in further developing their skills or wanting to enhance their professional careers. We acknowledge that this is a first of its kind program not being offered elsewhere in Canada, and is bound to attract a wide spectrum of learners including from Dalhousie and Atlantic Canada.

We also believe there could be opportunities to collaborate with McGill Oncology on future projects and research opportunities within our newly structured Program of Care for Cancer in Halifax as well as collaborating with faculty members in our department.

We support and recommend this program for approval to Quebec's Ministry of Education and look forward to hearing about its success.

With kind regards,

[Signature]

Dr. Casely Tetteh Ago MB, ChB, FRCR, FRCPC
Professor and Head, Dalhousie Department of Radiation Oncology
Chief, Capital District Department of Radiation Oncology

Nova Scotia Cancer Centre, Dickson Building, 5820 University Avenue
Halifax, NS B3H 1V7
June 26 2017

Eduardo Franco, BSc, MPH, DrPH, FRSC. FCAHS, OC
James McGill Professor
Department of Oncology and Epidemiology & Biostatistics
Director, Division of Cancer Epidemiology
Chairman Department of Oncology Faculty of Medicine
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC H4A 3T2

RE: Establishment of the McGill Department of Oncology Graduate Program

Dear Eduardo,

It gives me great pleasure to write this strong letter enthusiastically supporting the creation of the McGill Department of Oncology Graduate Program. As Clinical Chief of Oncology at the McGill University Health Centre (MUHC), I strongly believe that this initiative will have a major and invaluable impact on trainees in oncology at McGill. It is without doubt that the availability of graduate education uniquely provided by the Department of Oncology will greatly enhance the career opportunities of such graduates in the field of clinical cancer care in Quebec and Canada. Such a program as designed will provide an education specific to the needs of oncology and currently not provided by other graduate programs. The field of oncology has been advancing at a rapid pace and the educational needs for future professionals and academics in oncology require graduate education tailored to these rapid changes. Certainly, graduates from the McGill Oncology Graduate program would be viewed favorably for potential careers at MUHC in Cancer Care. Finally, I believe that the availability of such a well-structured and specific educational program in Oncology will attract candidates from all over Quebec, other provinces in Canada and likely from the United States.

I greatly look forward to the launch of this important graduate program.

Respectfully yours,

Armen Aprikian, MD.
July 5, 2017

Eduardo Franco, MPH, DrPH, FRSC, FCAHS, OC
James McGill Professor
Minda de Gunburg Chair
Director, Division of Cancer Epidemiology
Editor-In-Chief, Preventive Medicine

RE: Letter of Support for Proposal for Integrated Graduate Program in Oncology

Dear Dr. Franco

It is my pleasure to write a strong letter of support for your proposed graduate program in oncology at McGill University in Montréal. I have reviewed your application that describes a robust training program in oncology that will equip potential leaders in the cancer field in both Canada and the United States. There is a great need for capacity building of well-trained physicians with exposure to the entire spectrum of oncology ranging from clinical care to cancer research in various specialty disciplines. You have an outstanding faculty to provide the training and mentorship of graduate students. The expertise and reputation of your faculty should attract the highest quality of applicants to this graduate program from throughout North America.

My past experience in leading oncology educational programs over four decades provides a qualified perspective of evaluating the proposed oncology training programs at the McGill Department of Oncology and its curriculum design. I have led the surgical oncology training programs at M.D. Anderson Cancer Center in Houston Texas, and have served as the CEO and executive vice president of the American Society of Clinical Oncology, which is the largest cancer education professional organization in the world.

I have also been involved in the evaluation of surgical and oncology training programs in the United States and elsewhere in the world. My current role at M.D. Anderson Cancer Center is to provide career development advice and mentoring for the trainees and young faculty in the Departments of Surgical Oncology and of Breast Surgical Oncology. I'm quite willing to recommend that some of our young trainees apply to your graduate program in oncology once it is implemented. I also believe that the graduates of your program would be very attractive for faculty recruitment at the academic cancer centers here in the Texas Medical Center.
In summary, I have great admiration for the quality of the educational programs in your Department of Oncology at McGill University, and strongly support your application for an Integrated Graduate Program in Oncology that would result in a Masters of Science degree. I would be glad to assist the program by recommending qualified individuals from Canada and the United States to apply to your program and identify potential faculty positions in the United States for your graduates.

Sincerely,

Charles M. Balch, M.D., F.A.C.S.
UT MD Anderson Cancer Center
Phone: 713-563-0189
FAX: 713-745-6287
Email: cmbalch@mdanderson.org
June 29, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
James McGill Professor and Minda de Gunzburg Chair, Gerald Bronfman Department of Oncology & Director, Division of Cancer Epidemiology, McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC,
Canada, H4A 3T2

Re: Proposal for a new Oncology M.Sc. program at McGill University

Dear Dr. Franco,

I was recently made aware that McGill University is applying for grants, funding and approvals to initiate a new Masters in Science (non-thesis) program in Oncology, which, as a life science and clinical research professional myself, am very pleased to hear about. I would like to offer my support and re-iterate how important this type of course will be to our local life science industry and help train future clinical research professionals to become competent leaders in providing ground-breaking new therapies to cancer patients in Quebec and all across Canada.

I am particularly pleased about this new course offering since it will be unique amongst Quebec universities and will play an important role in retaining talented scientific minds within our workforce by providing them the right tools, knowledge and experience (through pertinent internship programs) to prepare them for the “real world” of patient care. It will also help bridge gaps and build stronger ties with life science organizations, especially in the Province of Quebec, where many biotechnology, pharmaceutical and medical device companies have moved their operations elsewhere due to many different reasons, not least of which is a lack of qualified/educated workforce. Your new program will help to fill this gap and provide new human resource capital for a rebounding life science sector.

These are also truly exciting times for Quebec and Canada with regards to a stronger push for making our great nation the “go-to place” to conduct clinical studies for international drug and device developers. Many new initiatives are being heralded throughout each province to provide solutions for conducting faster and more cost-effective trials while keeping a high level of quality that Canadians are known for throughout the world. Organizations such as MARS Excite, Clinical Trials Ontario, CATALIS/CQDM, Canadian Clinical Trials Coordinating Centre, BioQuebec, and Innovative Medicines Canada are spearheading key initiatives in realizing this goal, and have begun collaborating more closely with academic centers who are at the cutting edge of health research, and it would be my hope that your Oncology M.Sc. program will be counted amongst the important contributors that drive forward tangible results in making Canada and Quebec “the best country to run your clinical oncology study”. In fact, BioQuebec recently signed an MOU with MassBio (Boston) for more cross-border collaborations, definitely a sign of the times that as Quebecers, we are positioned well to start offering our scientific
talent to our neighbors down south. It’s an ambitious vision, but one which is definitely achievable through proper support, resources and funding. This is why I highly recommend that your Oncology M.Sc. program receive financial (and other forms of intangible) support via various channels of our government and industry. You can at least count Vantage BioTrials amongst your supporters, and I wish you success with your new program.

Sincerely,

[Vatche Bartekian, President
Vantage BioTrials, Inc.
Montreal, QC, Canada
www.vantagebiotrials.com]
June 21, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
James McGill Professor and Minda de Gunzburg Chair
Gerald Bronfman Department of Oncology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC H4A 3T2

Re: Letter of support for McGill Graduate Program in Integrated Oncology

Dear Eduardo,

I am extremely pleased to write to express my very strong support for the graduate program in integrated oncology. This is something new that has been very much needed, and I'm so very glad that you have persevered in your goal to realize this remarkable plan.

This Program is designed to educate and train eligible students in vital areas of activities, including Population and Global Cancer Control, Psychosocial and Palliative Care, Clinical Cancer Research; and Cancer Care Services and Quality. This very comprehensive program builds on the various courses, lectures series and mentorship opportunities that were created over time; it integrates and upgrades them, and then adds important new components.

The result is a dynamite and highly advanced academic opportunity that prepares trainees to take up positions in a variety of disciplines that continue to expand and therefore will require such individuals. There's little doubt that the graduates of this Program will find positions in Quebec healthcare institutions and in various departments of Universities. The Program will likely also provide graduates whose skills would be highly useful in various Government regulatory and even research funding agencies.

The Program is so unique, on an international level, that I feel certain that within a few years it will draw candidates from across Canada, the U.S. and beyond. Each of the four areas covered in the Program represents a vital aspect of best care in cancer, and the formal training the Program provides will be increasingly vital to healthcare systems and institutions seeking to ensure evidence-based, patient-focused and comprehensive quality programs in cancer. That includes organizations across North America, and probably elsewhere as well. I can easily imagine competing for the Program's graduates to fill positions at the Segal Cancer Centre and the CIUSSS-COM.
I am very proud of this new Program, and I offer my support, and that of my colleagues, in helping ensure its success.

Sincerely,

Gerald Batist
PAR COURRIER ÉLECTRONIQUE

Montréal, le 9 juin 2017

Prof. Eduardo L. Franco, MPH, DrPH, FRSC, FCAHS, OC
Directeur, Service de l’épidémiologie du cancer
Département d’oncologie
Université McGill
5100, boul. de Maisonneuve Ouest, Bureau 720
Montréal (Qc) H4A 3T2

OBJET : Appui - programme intégré d'études supérieures en oncologie

Cher Professeur Franco,

Le domaine de l'oncologie est un secteur d'excellence en recherche au Québec. En effet, nous avons plusieurs centres de recherche de calibre international dans le domaine de l'oncologie pour l'ensemble du spectre de la recherche, allant de la recherche fondamentale à la recherche clinique et à la recherche sur les populations. D'ailleurs, le Québec vient de se doter d'un instrument important de cohésion pour la consolidation de ses activités de recherche en cancer incluant l'aspect de la commercialisation et de la transformation des résultats de la recherche en pratique clinique, soit la pertinence clinique. L'Oncopole a été mis en place il y a quelques mois grâce à un travail de collaboration entre le Fonds de recherche du Québec – Santé et la pharmaceutique Merck qui a investi la somme de 15 M$ pour les trois prochaines années.

Dans ce contexte, l'intérêt de consolider les efforts de formation de professionnels qui œuvreront en oncologie est tout à fait clair. La proposition de l'Université McGill est originale et très bien pensée. Elle arrive au moment opportun et permet de regrouper toutes les compétences nécessaires à la mise en place d’un tel programme.

C'est pourquoi le Fonds de recherche du Québec - Santé appuie cette initiative, convaincu qu'elle sera un complément extrêmement utile au développement de l’Oncopole.

Veuillez agréer, cher Professeur Franco, l'expression de mes salutations distinguées.

Renaldo Battista, M.D., M.P.H., Sc.D., F.R.C.P. (C)
Directeur scientifique
RB/dk

500, rue Sherbrooke Ouest, bureau 800
Montréal (Québec) H3A 3C6
Téléphone : 514 873-2114
Télécopieur : 514 873-8768
www.frqs.gouv.qc.ca
Thursday, June 15, 2017

Dr. Eduardo L. Franco  
Professor and Chair, Gerald Bronfman Department of Oncology  
McGill University  
5100 Maisonneuve Blvd West  
Suite 720  
Montreal, QC  
H4A 3T2

RE: Integrated Graduate Program in Oncology

Dear Dr. Franco,

Ovarian cancer is the most fatal women's cancer, with a mortality rate of 56% over five years — a statistic that has not changed significantly in 50 years. Ovarian Cancer Canada is committed to increasing the knowledge and capacity of healthcare providers across the spectrum of healthcare research and delivery, in order to improve these outcomes for women living with ovarian cancer in this country.

We therefore applaud McGill University and the Gerald Bronfman Department of Oncology for their leadership in creating an advanced program to build capacity across the entire spectrum of oncology, from clinical care to cancer research, in various disciplines. We believe that this multidisciplinary approach has the potential to attract students from across the country seeking to pursue a career in cancer care, research, or policymaking.

Sincerely,

[Signature]

Elisabeth Baugh, MHSc. O. Ont.  
CEO, Ovarian Cancer Canada
June 19, 2017

Dr. Eduardo Franco  
Professor and Chair  
Gerald Bronfman Department of Oncology  
McGill University  
5100 Maisonneuve Blvd West, Suite 720  
Montreal, QC, H4A3T2

Dear Dr. Franco:

Thank you for letting me know about your proposed MSc programme in Oncology. I have reviewed the format, the course structure and the objectives.

As a former practicing surgical oncologist and now in my position as medical director of our Nova Scotia Cancer Programme I am keenly interested in the content of this Master’s Programme. Delivery of high quality oncology services has become increasingly complex and the skill set that graduates of this programme will obtain will be much sought after.

The programme will not only be of interest to us in the future in our cancer organization for future workers, but it will also be a resource for students here in Nova Scotia to bring much needed knowledge and understanding to their future careers.

I strongly support this well-conceived programme and believe that these Masters graduates in Oncology will bring far reaching benefits to cancer care across the country.

Sincerely,

Drew Bethune  
Medical Director  
Program of Care for Cancer
June 19, 2017

Dr Eduardo Franco  
Gerald Bronfman Department of Oncology Faculty of Medicine  
McGill University  
5100 Maisonneuve Blvd West, Suite 720  
Montreal, Québec  H4A 3T2

Dear Dr Franco,

On behalf of the Canadian Cancer Society, I would like to express our support for the implementation of the Integrated Graduate Program in Oncology at McGill University.

As you know, the Canadian Cancer Society is a community-based organization whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer. As Canada's largest national charitable funder of cancer research, we support research across a broad spectrum, from cancer epidemiology and prevention, to biomedical, translational and clinical research, to work towards improving the quality of life of patients and their families. We believe that the proposed oncology program will build nationwide capacity in cancer research across disciplines and across the country, and that its impact will also extend outside of the sphere of research into applied cancer care.

The multidisciplinary and yet structured, focused nature of the program will position McGill University to deliver graduates who are equipped to address the contemporary challenges we face in cancer care head-on. As our population ages and the burden of cancer increases, individuals who are trained in epidemiology and cancer control, addressing psychosocial issues, providing palliative care, designing and executing innovative clinical research and ensuring that health services are sustainable and evidence-based will be highly sought in the fields of cancer research and care in Canada and abroad.

These skills align directly with the theoretical and applied training that graduates of the program will receive. Given their exposure to topics, challenges and solutions across the full spectrum of cancer care, we expect that graduates will be uniquely positioned to lead successful careers in the academic, government and industry sectors, both within the field of cancer research and the broader healthcare landscape.

Our hope is that such a program will also enhance knowledge exchange across disciplines to accelerate the translation of research evidence into action to ultimately have a meaningful impact on Canadians with cancer. This innovative program has the potential to act as a model for others, and we look forward to following its progress and evolution over time.

Kind regards,

Carol Bishop  
Director, Research Operations
Dear Professor Franco:

I am writing to express my support for the proposed integrated program MSc in Oncology at McGill University. This program fills a vital need within Quebec as it develops its cancer system more fully and across Canada as jurisdictions struggle with the challenges of modern cancer care and control.

There are several strengths to this program. First and foremost, it builds on world-class quality cancer scholarship at McGill and includes strengths from across the University. Second, it positions excellent scholars like Professor Loiselle and Professor Freeman in leadership roles. This is critical because scholars like these two individuals are both committed to world-class evaluation and research and to the transfer of new evidence to decision-makers so that their work has impact in terms of improving the performance of cancer care in Quebec and across Canada. Finally, the program builds off of major investments by the people of Quebec and the Governments of Quebec and Canada in discovery and improvement of cancer care at the McGill hospitals. I fully expect that the graduates of this proposed program will find leadership roles in cancer care and cancer research around the world. They will easily find employment at the Dalla Lana School of Public Health (University of Toronto) and across the Ontario cancer care system and I expect that many of our graduates will want to add to their credentials by completing the proposed MSc at McGill.

I am hopeful that this proposed program will strengthen McGill’s and Quebec’s role in improving cancer care across Canada and I know that it will position McGill as a major partner to cancer care research globally.

With warmest regards,

Adalsteinn Brown
Director, Institute for Health Policy, Management, and Evaluation
Dalia Lana Chair, Public Health Policy,
Interim Dean, Dalia Lana School of Public Health
June 26, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
James McGill Professor and Chairman
Gerald Bronfman Department of Oncology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC H4A 3T2

Dear Dr. Franco (Dear Eduardo):

Thank you for sending an outline of the proposed program for an integrated M.Sc. program in oncology at McGill. It looks like an exciting and positive venture – and one that will be of benefit to Canadians and to Québec as both continue in their efforts to implement cancer control strategies.

The multidisciplinary nature of your target audience is particularly appealing – one of the lessons learned in the past several years of working in cancer control in Canada and in global contexts is that cancer control is indeed a “team sport”. It is critical to build teams that have expertise in clinical knowledge, but just as importantly, in policy development, patient engagement, systems planning, and any number of other skills. It is clear to me that this program has the ability to reach out to all of these groups – and because of its design, the program will appeal to those already in busy professional careers who can use it to augment their skills.

The four streams cover key areas of cancer control. While clinical cancer research is perhaps the best established of the four streams, we know that we need to move beyond classical clinical trials if we are to get improvements out to patients as early as possible, and this stream could help address this. Canada and Québec have both been working in palliative and psychosocial care, and the Palliative Care and End-of-Life National Network (which includes representation from QC) has identified key areas for further education and study. Cancer care quality measures is a nascent field that has so far contributed to advances in Canada, but there is much development to be done, and the fact that your program recognizes this is very welcome indeed. And finally, none of this matters unless we are able to make advances for the total population, and thus the global/population focus is important (and especially in view of the recent resolution of the World Health Organization on cancer).

Continued on next page...
You and your team have shown the leadership and capability to organize complex programs in the past, and we will look forward to your continued success with this well-articulated adventure. We know it will benefit your students, and will help create the leaders we need for integrated cancer control in Québec and Canada. I wish you every success in your endeavours.

Sincerely,

Heather Bryant MD, PhD, CCFP, FRCPC
Chief Scientific Officer
May 27, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
Director, Division of Cancer Epidemiology
Department of Oncology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, Canada H4A3T2

Dear Eduardo,

It was great to discuss your plans for a new McGill graduate program in oncology when we were in Sao Paulo reviewing the AC Camargo Hospital. As you know, I was on the faculty of McGill for several years in the 1980’s and I have an abiding fondness and respect for it. Anything that enhances its already international-class reputation is something I am delighted to support.

In this case, a unified graduate program encompassing the multi-faceted approaches to cancer etiology, control, prevention, treatment and care strikes me as an ideal project to this end. It offers the possibility of training the many types of needed professionals in the breadth of this important scientific and health care problem that is increasing with the aging of the population. These sorts of graduate programs are mystifyingly small in number around the world and McGill would be, in my view, a perfect place to launch such an effort. In fact, I believe that a vibrant program at McGill would be an international attraction and could easily recruit participants from North America and around the world. On the other hand, I also believe that such a program would be an attractive one from which my institution and others like it would seek to recruit graduates for their own faculties, this extending its reach even further.

In short, I congratulate you on this vision. It is timely and necessary as a response to the needs to conquer cancer and it is entirely appropriate that McGill be in the forefront of this effort. With all best wishes,

Sincerely yours,

Webster K. Cavenee, Ph.D.
June 30, 2017

Eduardo Franco, MPH, DrPH, FRSC, FCAHS, OC
James McGill Professor
Minda de Gunzburg Chair
Director, Division of Cancer Epidemiology
Editor-In-Chief, Preventive Medicine
Gerald Bronfman Department of Oncology Faculty of Medicine
McGill University
5100 Maisonneuve Blvd West
Suite 720
Montreal, Québec
Canada H4A 3T2

Dear Eduardo:

It gives me great pleasure to provide an enthusiastic letter of support for the Proposal for Integrated Graduate Program in Oncology- MSc Oncology from the Quebec Ministry of Education. This proposal is a continuation of your superb program, known for its innovation and the integration of training across disciplines for the next generation of scientists, particularly in cancer research, policy and clinical care. The proposed program clearly meets the needs of Quebec, Canada and the international community. I am confident that graduates of this superb program, which will be augmented by the realization of this proposal, will step into important academic and public policy roles in not only Canada but in North America and Europe. As outlined, the completion of this program should enable talented individuals to seek and land positions in Canada and the US, as well as perhaps elsewhere in the world.

It is important to point out that the Gerald Bronfman Department of Oncology at McGill University has an international reputation for its commitment to the training and development of the next generation of cancer scientists. We, here, at the Division of Cancer Epidemiology and Genetics have selected former trainees for our program and consistently found them to be outstanding in all respects. Several have advanced through our academic ranks on the basis of outstanding science. Clearly, their scientific training laid the foundation for their accomplished excellence. Based on our experience, I am confident that the Gerald Bronfman Department of Oncology will attract superb students and remain at the cutting edge of cancer research. Many of the students will certainly come from North America but also Europe, India and China.

Cancer research continues to discover many new insights into cancer biology, prevention and treatment. In turn, these findings continue to form the foundation for cancer care, policy and prevention. A major challenge is to integrate training across sub-disciplines in cancer research, in an effort to stimulate new avenues of research but more importantly more effective solutions to age-old problems in cancer research. It is the interdisciplinary nature of the proposal that is
especially attractive, drawing in experts in outcomes research and palliative care research into an environment traditionally driven by epidemiology, basic and policy research. Moreover, the program creates an opportunity for synergy across disciplines, in very inventive ways. The proposed course work is innovative, reflecting a thoughtful approach towards how to equip the next generation with the right tools to succeed, often using rapidly emerging technical advances to consider new ways to solve long-standing problems.

In conclusion, let me restate my strong support for this proposal and the expected role it will play in training the next generation of cancer researchers, who in turn, should become leaders in the field. I am especially enthusiastic about the integration of disciplines, clearly outlined to encourage collaboration and avoid the pitfalls of re-invention. If funded, it is clear that this program will continue to be a major center for training and research in the complex world of cancer. Please do not hesitate to contact me if I can be of further assistance in this most important matter.

Sincerely yours,

Stephen Chanock, MD
Director, Division of Cancer Epidemiology and Genetics
National Cancer Institute
National Institutes of Health
Le 26 juin 2017

Dr Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
Directeur du département d’oncologie
Université McGill
5100, boul. Maisonneuve Ouest
Bureau 720
Montréal, (Québec)
H4A 3T2

OBJET : Proposition de l’Université McGill – Programme intégré d’études supérieures en oncologie

Cher Dr Franco,

Il me fait plaisir d’offrir mon soutien à la création d’un nouveau programme d’études supérieures de deuxième cycle en oncologie. Ce programme correspond fort bien aux connaissances requises des professionnels appelés à se joindre à nos équipes multidisciplinaires et ces derniers n’auront certainement aucun problème à être recrutés au sein de nos institutions respectives et même dans d’autres organismes en lien avec l’oncologie.

Les quatre volets de formation proposés par votre programme correspondent à des besoins identifiés par la Direction de lutte contre le cancer et permettront autant à nos médecins qu’à d’autres professionnels de la santé d’acquérir un niveau d’expertise fort recherché actuellement par nos institutions avec pour objectif d’améliorer la qualité et la pertinence des soins offerts en oncologie au Québec.

Veuillez agréer, Cher Dr Franco, l’expression de mes salutations distinguées.

Dr Danielle Charpentier, FRCPC
Hématologue oncologue
Cogestionnaire médicale
Centre intégré de cancérologie du CHUM
22 juin 2017

Dr Eduardo Franco,
Directeur
Département d’oncologie Gerald Bronfman
Faculté de Médecine
Université McGill
Montréal, Canada

Re : Proposition de l’Université McGill pour un Programme Intégré d’études supérieures en Oncologie – MSc en Oncologie (sans thèse)

Cher Dr Franco,

C’est avec enthousiasme que nous vous écrivons cette lettre de soutien à votre proposition de mise en place d’un Programme intégré d’études supérieures en Oncologie à l’Université McGill que vous soumettez prochainement au ministère de l’Éducation et de l’Enseignement supérieur du Québec.

Nous tenons à saluer le leadership de votre département et le travail exceptionnel de recensement que vous avez fait au niveau national et international qui vous a permis de concevoir un programme de formation en oncologie original et répondant à des besoins de formation importants. Nous sommes d’avis qu’un tel programme permettra au Québec de se positionner parmi les leaders dans ce domaine et d’avoir la main d’œuvre experte pour s’attaquer au problème du Cancer qui est devenu la première cause de décès. Il ne fait aucun doute que les quatre volets de votre programme de maîtrise qui touchent le contrôle du cancer au niveau des populations, les soins psychosociaux et palliatifs, la recherche clinique et les services et la qualité du traitement du cancer seront d’intérêt pour un large éventail de professionnels provenant de différents milieux. Ces professionnels variés bénéficieront d’une formation leur donnant une vue d’ensemble détaillée et complète de l’oncologie sur toutes ses facettes, tout en développant les compétences s’appliquant à leurs propres activités professionnelles.

Le CHU de Québec a déjà amorcé la construction d’un Centre Intégré du Cancer qui regroupera sur un même site des professionnels et chercheurs de formations très variées avec l’objectif de faire avancer la médecine de précision en oncologie et d’offrir des soins de haute qualité à une population de deux millions dispersée sur un grand territoire. Nous sommes convaincus que les professionnels diplômés d’un tel programme de formation seront très en demande et bénéficieront de bons emplois en oncologie. A cet égard et tel que discuté brièvement avec vous, plusieurs de nos professeurs à l’Université Laval pourraient contribuer à ce curriculum et nous sommes heureux que vous ayiez reçu de façon très positive la possibilité de faire un cours conjoint qui puisse être donné à Montréal et à Québec favorisant ainsi la formation d’un plus grand nombre de professionnels en Oncologie au Québec. De plus, nous serions aussi intéressés à explorer avec vous la conception d’un programme qui serait adressé aux étudiants en sciences biologiques et moléculaires du cancer de façon à les mieux outiller pour leur recherche mais aussi pour l’intégration plus rapide de ces approches.
dans le traitement des patients atteints de cancer.

Nous vous souhaitons une excellente réception de votre proposition de *Programme Intégré d’Études Supérieures en Oncologie* auprès du ministère de l’Éducation et de l’Enseignement supérieur et nous espérons que nos professionnels et étudiants se destinant à une carrière en oncologie pourront bénéficier dans un proche avenir de cette formation fort bien conçue.

Soyez assuré, Dr Franco, de notre collaboration dans ce dossier et recevez nos plus sincères félicitations pour cette initiative très bienvenue.

Jacques Côté PhD  
Directeur de l’Axe Oncologie  
Centre de Recherche  
CHU de Québec – Université Laval

Yves Fradet MD  
Professeur titulaire  
Département de Chirurgie
June 16, 2017

Dr. Eduardo Franco  
Gerald Bronfman Department of Oncology  
Faculty of Medicine  
McGill University  
5100 Maisonneuve Blvd. West, suite 720  
Montreal, Québec  
Canada H4A 3T2

Dear Dr. Franco,

With great enthusiasm, I read your proposal to the Ministry of Education requesting its support of an innovative, multi-faceted graduate oncology program at McGill, effective fall 2018. I commend you & your colleagues for undertaking this important initiative.

As a veteran Montreal based employer in the field of oncology clinical research, I can attest to the need for a graduate program in the highly specialized field of oncology clinical research. All too often my company, Scimega Research, receives curriculum vitaes from university students with a basic science research background in oncology seeking employment in clinical research. These individuals have a strong desire to be part of a very exciting and dynamic field but lack the prerequisite training. Systematically, we must turn them away. They are disappointed, disillusioned and don't know where to start to bridge the gap between their formal training and what is necessary to be gainfully employed in clinical research.

The program McGill University has designed would put an end to this by ensuring that students interested in oncology clinical research are informed of and directed to this program at the right time in their academic decision-making process. Given that the majority of Canadian oncology clinical research is conducted in Quebec and Ontario, I believe that both students and employers would greatly benefit from this program. McGill's reputation of excellence coupled with the innovative nature of this program would likely see students enrolling from across the country, resulting in an influx of young adults who may well decide to establish their career here in Montreal.

In closing I would like to say that launching this program is an excellent opportunity for the province of Quebec and McGill University to play a national leadership role by demonstrating an ability to innovate to address an important unmet need. I wish you the best of luck with this project!

Sincerely,

[Signature]

Denise Deakin  
President
June 19, 2017

Dr. Eduardo L. Franco  
OC James McGill Professor and Chairman  
Gerald Bronfman Department of Oncology  
McGill University

Dear Dr. Franco,

Prostate Cancer Canada was very interested to learn of your proposed Masters level Integrated Graduate Program in Oncology at McGill University. We applaud your efforts on this very worthwhile program that encompasses cancer research, policy, and clinical care. It has the potential to significantly enhance capacity building in oncology in Canada.

We recognize that this multidisciplinary program will benefit many students with diverse interests in cancer research and include a broad spectrum of cancer research and clinical oncology topics. Given the tremendous oncology research community at McGill University, there are outstanding opportunities for learning from preeminent researchers in the field. As a result, this could improve the accessibility of this program to students of different geographic and academic backgrounds. Altogether the program has great potential to produce graduates with a wide range of career options from working in government institutions to academia to biotechnology and bio-pharm companies. We expect that this enhanced education in oncology could contribute to improvement in the quality of care and management of disease for countless people affected by cancer.

We would like to demonstrate our enthusiasm for your program and send our best wishes for its adoption into McGill’s academic calendar.

Sincerely,

Stuart Edmonds PhD  
VP Research, Health Promotion and Survivorship  
Prostate Cancer Canada
June 16, 2017

Eduardo L. Franco DrPH, FRSC, FCAHS, OC
James McGill Professor and Chairman
Gerald Bronfman Department of Oncology
McGill University

Re: Proposed Integrated Graduate Program in Oncology at McGill University

Dear Professor Franco,

I am pleased to write a very strong letter of support for the proposed new Integrated Graduate Program in Oncology at McGill University.

All too often graduate programs in cancer research have focused almost exclusively on fundamental/discovery cancer research – which while very important, can leave untouched important clinical, epidemiological and sociological elements of cancer research which must be explored and integrated if progress in prevention, treatment, population outcomes, survivorship and palliation are to be achieved.

Important questions for the fundamental biological research investigation often come from clinical or population observations (why do some patients benefit from a specific treatment but others do not? Why do patients with certain infections get cancer at a higher frequency?). Similarly, discovery lab-based science can drive clinical or even epidemiological research (most notably in cancer treatments or preventative vaccines). To consider these in isolation from each other is to miss important opportunities for innovation and creativity.

In my own career as a clinical investigator, I have seen numerous examples of this playing out, as colleagues “outside” my own area of research have little understanding of clinical cancer care, how clinical research is conducted etc. – and yet hope one day to translate their own research into a clinical setting.

All this is to say: an Integrated Graduate Program in Oncology is long overdue in Canada and McGill’s leadership in developing such an ambitious program is to be strongly commended.
I appreciate the opportunity to review the proposed program outline and understand that students entering the program will have several “streams” to pick from in terms of their focused interest, but that all will be exposed to core curriculum that spans the breadth of oncology research (from prevention to population and from lab to clinic).

I see many opportunities for the graduates of this program in future – in government, academia and in industry. Government would benefit by being able to recruit individuals who have not only expertise in public health and cancer prevention (for example), but who also have larger perspective on clinical practice and research. Universities are increasingly interested in “translational” research programs – but to populate them is challenging when research programs are siloed – graduates of the Integrated Graduate Program in Oncology as described in the document, would be appealing for recruitment to academic translational research programs. Finally I have seen in industry how challenging it is for them to recruit scientists who ready for the reality of the jobs available there – those with PhD in lab based research science may not have had any exposure to the process of clinical drug development research which is a pre-requisite for success in the industry environment.

These represent but a few examples based on my own experience for how graduates of the proposed McGill Integrated Graduate Program in Oncology would have a clear advantage in future careers over graduates of other programs.

I commend you on the creation of the new Program and wish you success in getting this launched soon!

With kind regards

Elizabeth Eisenhauer MD FRCPC FRSC FCAHS
Head, Department of Oncology
Queen’s University
Cancer Program Medical Director
Kingston Health Sciences Centre
Montréal, le 6 juin 2017

M. Eduardo Franco
Directeur du Département d'oncologie Gerald Bronfman
Université McGill
720-5100 Boul. Maisonneuve Ouest
Montréal, QC H4A 3T2

Monsieur,

Avec les changements démographiques qu’entraîne le vieillissement de la population, les cas de cancer iront en augmentant au cours des prochaines décennies. Il est donc primordial de tout mettre en œuvre dès maintenant afin de prévenir, détecter et traiter cette terrible maladie.

J’ai été heureux de prendre connaissance du projet de programme de 2e cycle en oncologie du département d’oncologie Gerald Bronfman de l’Université McGill. Il s’agit d’un domaine d’études spécialisées où il y a assurément un manque de capacité tant au Québec que dans le reste du Canada.

Le programme proposé de maîtrise en oncologie - sans thèse donnera à des étudiants venus de différents horizons (biochimie, sciences sociales, soins infirmiers, gestion de la santé, etc.) l’opportunité de se spécialiser dans différents aspects de l’oncologie, dont la recherche sur le cancer qui est notre principal créneau.

Nous appuyons donc ce projet avec enthousiasme et sommes convaincus que le programme proposé permettra à un large éventail de professionnels d’approfondir les différents aspects du cancer, de la recherche fondamentale à la recherche clinique, en passant par la prévention, les soins psychosociaux et palliatifs ainsi que la qualité de traitement du cancer.

Nous sommes convaincus que les finissants de ce programme sauront utiliser leurs connaissances pour le bien-être des patients, en occupant des emplois hautement qualifiés, tant au Québec que dans le reste du Canada.

Max Fehlmann
Président et chef de la direction
June 4, 2017

Dr Eduardo Franco
James McGill Professor and Minda de Gunzburg Chair
Gerald Bronfman Department of Oncology
Director, Division of Cancer Epidemiology
McGill University
5100 Maisonneuve Blvd West, Suite 720;
Montreal, QC,
Canada H4A 3T2

Dear Dr Franco:

Re: Proposal for an Integrated Graduate Program in Oncology – MSc Oncology, Non-Thesis

It gives me great pleasure to provide this very strong letter of support and endorsement of your efforts to establish an integrated graduate program in oncology at McGill University. As the head of the Department of Cancer Epidemiology and Prevention Research of Alberta Health Services and as an Adjunct Professor and Division Head for Preventive Oncology, Department of Oncology at the Cumming School of Medicine, I can attest to the urgent need for this type of graduate training program in oncology since none currently exists anywhere in Canada. My department at Alberta Health Services is entirely focused on cancer epidemiology and prevention research and I am frequently seeking qualified health professionals to join our department in the fields of preventive oncology/cancer epidemiology. Unfortunately, these searches are often difficult and we sometimes have positions open for a long time because of this lack of available individuals trained at this level. Hence, this graduate program would address the current lack of capacity that exists in Canada.

I have reviewed the detailed documents that you sent me for this proposed MSc program (and the added PhD option to begin in 2020). I support the four streams that you are proposing in population and global cancer control, psychosocial and palliative care, clinical cancer research and cancer care services and quality. These four streams cover the breadth of cancer research that captures the areas of research that these graduates would subsequently work in. I was impressed by the proposed courses in fundamentals of oncology and cancer research, best practices in biomedical research and the oncology practicum course. These three courses will provide the foundational knowledge and applied experience that will be an outstanding basis for future employment in oncology-related disciplines. In addition, I note that you have created specialized courses in principles and practice of clinical trials and quality improvement principles and methods for the third and fourth streams, respectively. Given that the students will also have access to other courses offered at McGill University that will further enhance their knowledge and understanding in this discipline, they will have an extremely solid training that will prepare them to excel in their subsequent careers.
I congratulate you on your vision and determination to create a new graduate training program at McGill University since such an undertaking is both labour- and time-intensive. You have brought your years of experience and expertise in cancer epidemiology and your leadership as the Head of the Department of Oncology, McGill University to the planning of this program. It is clearly evident that the proposed program is very well conceptualized, carefully planned as well as logistically feasible from a faculty teaching and budgetary perspective. In addition, you have carefully considered all of the requirements for different career paths from oncology. Your comparison of this program with other similar oncology graduate programs worldwide also demonstrates that this program is unique on a global level. The program addresses a clear gap that currently exists in the oncology training programs not only at McGill University but in Canada and even worldwide. It is particularly noteworthy that this course will serve such a broad spectrum of health professionals from epidemiology, health care management, medicine, nursing, occupational therapy, physiotherapy, psychology, social sciences, statistics, health economics, health services and sub-disciplines within these fields. The course outlines and descriptions are all complete and this oncology graduate program is clearly ready to be implemented.

I wish you success and, hopefully, quick approval of this outstanding proposal. I look forward to working with the graduates of this program in my department in Alberta Health Services and at the University of Calgary.

Yours sincerely,

Christine Friedenreich, PhD, FCAHS
Scientific Leader
Cancer Epidemiology and Prevention Research
CancerControl Alberta
Alberta Health Services

Adjunct Professor and Division Head, Division of Preventive Oncology
Department of Oncology
Adjunct Professor, Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
June 22, 2017

Dr. Eduardo Franco  
James McGill Professor  
Minda de Gunzburg Chair  
Director of Cancer Epidemiology  
Gerald Bronfman Department of Oncology  
McGill University  
5100 Maisonneuve Blvd West, Suite 720  
Montreal, Quebec

Dear Dr. Franco,

Re: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non-Thesis

I read with great interest your proposal for integrated graduate program in oncology at the McGill University. The proposal addresses a great need to escalate the skill level of health care professionals allowing them to engage in research, implementation, and leadership in cancer control. The idea to cover the four streams of knowledge: population and global cancer control, psychosocial and palliative care, clinical cancer research, and cancer care services and quality of care optimization is absolutely brilliant as these areas have attracted far less attention and resources than the basic biology.

As a radiation oncologist and Medical Director of the Princess Margaret Cancer Centre, I believe this proposal is an excellent initiative that can provide students with exposure to the entire spectrum of oncology from clinical care to cancer research in various disciplines. This novel program will attract students from across Canada and the world. Future graduates from this program can potentially find employment at numerous institutions in Canada, including my own centre, or abroad devoted to one or more of the many facets of cancer control.

I hope that this proposal will be accepted by McGill University and fully implemented and I wish you all the best in making it the best graduate training program in cancer in the world.

With best wishes.

Yours sincerely,

Mary Gospodarowicz MD
June 13, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
James McGill Professor and Minda de Gunzburg Chair,
Gerald Bronfman Department of Oncology
Director, Division of Cancer Epidemiology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, Canada H3A3T2

Dear Dr. Franco:

Thank you for sharing your proposal for a new Integrated Oncology Program to be launched at McGill University. The program you have planned looks very exciting and will fill current training needs.

With the end of the CIHR-supported Strategic Training Initiative in Health Research (STIHR) several years ago, there has been a dearth of opportunities for graduate education in defined areas such as oncology. Your program will help to fill this void, and provide students with a multidisciplinary experience that will equip them to contribute to cancer research and programs.

Since about half of all cancers are potentially preventable, it is very heartening to see that your program includes a stream for cancer control. This is the major focus in my work as a chair in cancer prevention and director of a UBC centre in this area. I currently supervise (primary supervisor or committee member) 14 students who are doing theses or dissertations in various aspects of cancer control. However, every year, I get many additional queries from potential graduate students who want to work in this area, but I cannot consider them since I am at my maximum supervisory capacity. Your program will provide another avenue for these students, and I will be happy to direct them to you. I believe the interest is there, and you will attract well-qualified students who have a passion for cancer research.

Since cancer is the leading cause of death in Canada, accounting for almost one-third of all deaths, I am confident that an increased focus on cancer research will continue to be a societal priority, with needs for expertise in research, health programming, and policy making. Your program will contribute to producing the vital workforce needed to control cancer and save lives of Canadians. I am delighted to provide my strongest recommendation for your proposal and wish you the best of luck as it moves forward.

Sincerely yours,

Carolyn Gotay, PhD, FCAHS
Professor
Canadian Cancer Society Chair in Cancer Primary Prevention
Interim Co-Director, School of Population and Public Health (SPPH)
Director, Centre of Excellence in Cancer Prevention
Montreal, June 2, 2017

Dr Eduardo L. Franco  
Chair, Department of Oncology  
McGill University  
5100 Maisonneuve Blvd West, Suite 720  
Montreal, QC, Canada H4A3T2

Re: Upcoming graduate program in oncology at McGill University

Dear Eduardo,

I am very excited about your proposal to create an interdisciplinary graduate program in oncology. As a member of the Department of Oncology I believe this program will add great value to the university and to the oncology communities. I am very impressed with the five courses created for this program and the curriculum developed for each stream, providing students with broad knowledge of the field while focusing on a particular area of interest.

As President of the Society of Gynecologic Oncology of Canada I am eager to see this program come to fruition as I believe it will attract clientele from our own membership which includes health care professionals from a range of specialties, as well as from other related organizations across Canada. Furthermore, a student graduating from this program will have the breadth of knowledge in cancer that would be of great value to our organization and others thus increasing their employment opportunities in Quebec, Canada and internationally.

As you prepare for the submission to the Quebec Ministry of Education I wish you all the best. The implementation of this graduate program would be an important milestone in cancer education in Quebec and Canada.

Sincerely yours,

Walter Gotlieb, MD, PhD  
President  
Society of Gynecologic Oncology of Canada
July 8, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC;
James McGill Professor and Minda de Gunzburg Chair,
Gerald Bronfman Department of Oncology;
Director, Division of Cancer Epidemiology,
McGill University; 5100 Maisonneuve Blvd West,
Suite 720; Montreal, QC, Canada H4A3T2;
Phone: +1-514-398-6032;

Dear Dr. Franco,

It is my pleasure to write this letter to express strong support from the National Research Council (NRC)-Human Health Therapeutics (HHT) institute for the establishment of graduate study program in oncology at McGill University.

NRC is the Government of Canada's premier research and technology organization (RTO). We partner with organizations to provide innovation support, strategic research, and scientific and technical services. HHT portfolio has more than 300 researchers, and 3 research programs focusing on development of Biologics and Vaccines against cancer and emerging infections. Furthermore, part of our laboratory housing more than 150 staff is located in Montreal, including bioprocess scale-up production and advanced analytics platforms relevant for cancer research. I lead the Vaccines and Immunotherapeutics program with significant focus on developing next generation cancer therapies.

We are excited about the development of a graduate program in oncology at McGill University. This new interdisciplinary program will integrate knowledge and emerging trends from clinical practice and basic oncology research. The access to researchers and expertise at the various research centres and hospitals will provide a unique opportunity for students to be trained comprehensively in various aspects of oncology research. I think this program will help build the next generation high quality personnel that will be well trained for varied careers in oncology. In particular, at Montreal, we have many research institutions including the NRC focusing on development of novel cancer therapeutics. We often find difficulty in hiring HQPs and training the next crop of such personnel at McGill will provide a good career opportunity for many. Overall, such a program will also provide a great opportunity to support the cancer research ecosystem at Montreal. Lastly, this new program can attract students from outside the province, particularly those interested in translational cancer research.

The development of this new graduate program can bring ample opportunities for collaboration between NRC and McGill. Some of our scientists already have
collaborations with researchers at McGill and such interactions can be strengthened further through our support for training of students in the this new program. We can also provide training opportunity for visiting students at our facilities through collaborative projects.

Sincerely,

Lakshmi Krishnan, Ph.D.
Director R&D Immunobiology
Program Leader, Vaccines & Immunotherapeutics
Human Health Therapeutics
Phone: 613-991-3210
E-mail: Lakshmi.Krishnan@nrc-cnrc.gc.ca

Cc: Bernard Massie
General Manager, NRC-HHT
June 22, 2017

Dear Dr. Franco,

As a member of the Oncology Department of McGill University, and as the Director of the division of Medical oncology and Chair of the Department of Oncology at St. Mary's Hospital, CIUSSS ODIM, I have been aware of the very hard work that has been put into the development of this University program. This has been a great challenge, bringing together many of the departments existent in the University, in an attempt to formulate, for the first time, a coherence approach to the science of oncology.

I find the structure, with divisions representing the various streams in oncology, to be very comprehensive. In addition, I believe that this type of structure will give a greater flexibility to the program, and enable it to react to developments in the knowledge of cancer biology, epidemiology, and treatment. Given the speed with which the science of oncology is constantly producing new knowledge, such a program is really necessary.

I believe it will be of interest to both undergraduates and graduates in the basic sciences. I also believe that it may of intense interest to those pursuing clinical studies in oncology. This type of course will certainly serve to attract students from around the world, who will return to their countries of origin and almost certainly continue their relationships with their colleagues and mentors at this University, thereby building connections for the city and the province worldwide.

As the program develops, I would like to propose that it be integrated into the training of oncology fellows, in all of the cancers' subspecialties. This would provide a rigorous educational component to those programs, which is found at institutions that are considered to be among the premiere cancer centers in the world.

Such a program will train the future leaders in oncology. Indeed ideally, at some time in the future, graduates of this program could be brought on staff at our hospitals, thus completing the circle of education and service to the population.

I support this effort with great pleasure. I congratulate you on being it's "father".

Sincerely,

Adrian Langleben, MD, FRCP(C)
Director of the Division of Medical oncology,
Chair of the Department of Oncology at St. Mary's Hospital, CIUSSS ODIM
Eduardo L. Franco, DrPH, FRSC, FCAHS, OC;  
James McGill Professor and Minda de Gunzburg Chair,  
Gerald Bronfman Department of Oncology;  
McGill University;  
5100 Maisonneuve Blvd West,  
Suite 720; Montreal, QC,  
Canada H4A3T2  

Re: McGill University Graduate Program in Oncology  

Dear Dr. Franco,  

I was truly excited to hear about your proposed interdisciplinary graduate program in oncology. As a longstanding member of Quebec’s and Canada’s cancer research community, I am convinced the curriculum you have developed will enhance the draw of top talent to the University, as well as strengthen Canada’s place as a leader in today’s highly competitive global cancer research environment.  

As Head of Canadian Operations for Precision Oncology Inc, part of the Precision Medicine Group (www.precisionformedicine.com), which was founded with a mission to support next generation approaches to drug development and commercialization, I am thrilled to know that McGill University is paving the path for tomorrow’s leading cancer researchers and clinical trialists. I am also of the opinion that students graduating from this program will have the specialized skills required to be broadly impactful within the drug development industry. They would be welcomed additions to any organization in Quebec, Canada and abroad.  

Cancer is a disease that spares no one, I am confident the Quebec Ministry of Education will share in your vision and recognize the value this program will have for cancer education in Quebec and Canada.  

Respectfully,  

Signed by:  
Roberto Lara  
2017-06-29 16:43:09 -0600  
I am the author of this document Sr. Director of Business Operations, Precision Oncology  

ROBERTO LARA  
Senior Director, Business Operations  
Head, Canadian Operations  
PRECISION ONCOLOGY - www.precisionforoncology.com  
200 Route 31 North, Suite 102 | Flemington, NJ 08822  
+1 514.513.0964 direct
PAR COURRIER ÉLECTRONIQUE

Québec, le 12 juin 2017

Monsieur Eduardo L. Franco
Director, Division of Cancer Epidemiology
5100, boulevard Maisonneuve Ouest
Bureau 720
Montréal (Québec) H4A 3T2

Docteur Franco,

C’est avec enthousiasme que nous déclarons notre soutien pour le développement à l’université McGill, d’un programme intégré d’études supérieures de deuxième cycle en oncologie. Un tel programme répond à un besoin d’éducation pour les membres du réseau de cancérologie du Québec.

L’Organisation mondiale de la santé a reconnu que le progrès dans la lutte contre le cancer repose sur des interventions à tous les niveaux, qu’il s’agisse d’organisation et de politiques de santé, de recherche ou de tout aspect du continuum de soins et de services (prévention, dépistage, diagnostic, traitement, soins de soutien, palliatifs et de fin de vie). Le rehaussement des connaissances en ces matières sera certainement bénéfique, non seulement pour ceux qui suivront ces formations, mais surtout pour les personnes touchées par le cancer.

Il est à prévoir que les finissants pourvus de ce diplôme, issus de plusieurs professions, trouveront un accueil favorable dans le réseau de cancérologie du Québec et, possiblement, ailleurs au Canada ou à l’étranger.

Le corps professoral de l’université McGill dispose de l’expertise nécessaire pour le déploiement des 4 axes proposés pour cette formation. Cette initiative s’intègre harmonieusement dans la démarche du Réseau du Cancer Rossy dont le champ d’intervention recouvre des établissements du Réseau universitaire intégré de santé (RUIS) de McGill.
Nous vous remercions pour cette proposition qui bénéficiera aux personnes touchées par le cancer et vous prions d’accepter, Docteur Franco, l’expression de nos sentiments distingués.

Le directeur général,

Jean Latreille

Jean Latreille, MDCM, FRCPC

N/Réf. : 17-CA-00046
Dr. E. Franco
Chair, Department of Oncology
McGill University

Dear Eduardo:

It is my pleasure to write this letter in support of your proposal for an Integrated Graduate Program in Oncology at McGill University.

I have been a practicing academic medical oncology in Canada for the past 35 years. The proposed Integrated Graduate Program in Oncology is truly unique and innovative. In Canadian universities, Departments of Oncology provide postgraduate clinical training in radiation oncology and medical oncology. Typically, other departments are responsible for providing graduate programs covering aspects of cancer, e.g. epidemiology, molecular biology, ethics and medical physics. At my university, McMaster, if a student wants to study a cancer theme at the graduate level, they enrol in a graduate program offered by the Departments of Clinical Epidemiology & Biostatistics, Biochemistry, Pathology & Molecular Medicine, Medical Sciences or the School of Nursing. This approach has a number of consequences which in my view are less than optimal in terms of cancer education. Cancer experts who reside in the Department of Oncology are teaching about cancer in courses run and controlled by other departments. This is often done for free as the resources remain in the host department. The education can be piece meal and siloed. Having an Integrated Graduate Program in Oncology in the Department of Oncology will ensure that the educational approach on cancer is focused and not fragmented and siloed. It will be a nidus that attracts the best faculty from other departments.

A number of years ago I was a member of a CIHR grant review panel for Integrated Training Programs. The aim was to provide graduate students an educational experience that spanned the continuum from basic science to clinical application and vice versa. This program no longer exists and I do not know how its success was gauged. In all my experiences on grant review panels, I found it the most enjoyable because of the unique transdisciplinary approach which tried to bridge the divide between the lab and clinic. I believe that in a similar manner your
Integrated Graduate Program in Oncology will provide a foundation for building bridges between the laboratory and the clinic.

In Canada currently, malignant disease is a major cause of mortality and morbidity and it will continue to be for the foreseeable future. In fact, it is projected that the cancer burden will continue to increase. Healthcare is changing rapidly around us. Resources are limited. Navigation of the healthcare system is challenging for patients and families. Care is often fragmented. I often wonder about the ability of our health system to cope with all these challenges. How can we prepare our students to meet the clinical, social and societal challenges posed by cancer? To be honest, I do not know if it is possible. However, I feel that the approaches that we have used in the past will not work. It will require a very different approach. Your proposed Integrated Graduate Program in Oncology fits the bill.

The planned program is comprised of four streams: (1) Population and Global Cancer Control; (2) Psychosocial and Palliative Care; (3) Clinical Cancer Research; and (4) Cancer Care Services and Quality. These will cover a wide spectrum of the cancer problem from basic science to health services and policy. Graduates of your program would be ideal candidates for employment in various aspects of cancer control ranging from research to system design and organization in local health regions. Many students, both undergraduate and medical residents, come to me for career advice. They ultimately want to work in the cancer field but are not sure which path to follow. I can see the Integrated Graduate Program as providing them an avenue to this end.

In summary, I feel that the Integrated Graduate Program will result in breaking down silos between disciplines, improving the coordination of care and providing a stronger platform for meeting the healthcare and research challenges facing us now and in the next decade. Congratulations on the innovative concept and designing such a brilliant proposal. As I told you recently in Ottawa, I am transitioning in my career and will be closing my clinical practice this summer. This will allow me to spend more time on education and research. I am so excited by your proposal for an Integrated Program, that I would welcome the opportunity to be involved in the program as a visiting faculty member.

Sincerely,

Mark Levine, C.M., M.D., M.Sc., F.R.C.P.(C), FASCO
Professor and Chair, Department of Oncology
Buffett-Taylor Chair in Breast Cancer Research
McMaster University

ML:Id
Dr Eduardo Franco  
James McGill Professor  
Gerald Bronfman Department of Oncology  
McGill University  
Montreal, Quebec  
Canada H4A 3T2

Dear Dr Franco  
Re: Proposal for Integrated Graduate Program in Oncology

Thank you for informing me of your plan to create an integrated graduate program in Oncology. I have read with interest your 61 page “Proposal for the Creation of an Integrated Graduate Program in Oncology at McGill University”. I endorse your proposal with enthusiasm.

Cancer remains a major health and economic challenge. The development of new, high impact strategies for cancer control will require a coordinated approach, integration of a variety of disciplines, and the training of a new generation of scientists who can move effectively between molecules and data to populations. These individuals will not only require a molecular and cellular understanding of cancer processes, but also related clinical, technical, social, economic and ethical issues.

Your proposed program addresses these components effectively in a comprehensive manner. The four streams plus the 3 required new courses are noteworthy. I am impressed with the caliber and breadth of experience of the faculty who have agreed to participate in this program. I can speak from personal experience that as a former Director of the Interdisciplinary Oncology Program (IOP) at the University of British Columbia, how valuable an integrated training program is in creating a collaborative culture where invention and innovation can flourish. I believe such a culture is essential for training leaders of tomorrow as we move into an era of personalized and precision medicine. I am confident that you will have no trouble attracting outstanding candidates as your proposed program is well-positioned to provide future leaders in oncology research with the skills needed to make a global impact on cancer control.

Sincerely

Victor Ling O.C., O.B.C., Ph.D.  
President and Scientific Director  
Terry Fox Research Institute  
Distinguished Scientist and Professor  
BC Cancer Agency and University of British Columbia
June 8, 2017

Eduardo Franco
McGill University
Faculty of Medicine
Montreal, Quebec

Dear Mr. Franco,

We have reviewed with interest the summary of your proposal received May 24, 2017 of the project entitled “Integrated Graduate Program in Oncology” that you will be submitting to Quebec’s Ministry of Education at the end of June 2017.

At Brain Tumour Foundation of Canada, our mission is to support Canadians who are affected by brain tumours through information, support, education and research. This includes supporting innovative academic work and research in brain tumours which brings hope to our community.

We welcome and support this project and are excited that not only our Foundation yet others elsewhere could be potential employers of graduates of your program. We also believe that this program could attract a clientele of students from our Foundation or affiliated organizations, wishing to expand knowledge base.

We are excited to see this training enhance the knowledge of those who have enrolled by furthering their education and preparing them for careers in cancer research and cancer control policymaking. This will encourage them to take positions of leadership in clinical cancer research. We look forward to hearing of the success of your submission to Quebec’s Ministry of Education.

Sincerely,

Susan D. Marshall
Chief Executive Officer
Brain Tumour Foundation of Canada
smarshall@braintumour.ca
1.800.265.5106, ext. 222
June 14, 2017

Eduardo Franco
James McGill Professor
Minda de Gunzburg Chair
Director, Division of Cancer Epidemiology
Gerald Bronfman Department of Oncology Faculty of Medicine
McGill University
5100 Maisonneuve Blvd West
Suite 720
Montreal, Québec
Canada H4A 3T2

Re: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non-Thesis

As the President of the Canadian Association of Psychosocial Oncology (CAPO), it is my pleasure to provide you with a letter of support for the above named graduate program.

As an organization, CAPO is committed to enhancing our understanding, treatment and study of the social, psychological, emotional, spiritual and quality-of-life aspects of cancer. The proposed program directly aligns with our efforts to foster and encourage interdisciplinary excellence in psychosocial research, education and clinical practice in oncology.

Unfortunately the burden of cancer lays heavily on patients, families and communities across Canada. Current epidemiological trends paint a vivid and compelling picture of this burden, projecting more Canadians will experience cancer in their lifetime, and one in four will die of cancer. Making a difference for patients and families who are faced with an incurable diagnosis of cancer is an important part of improving the person-centeredness of care across the cancer continuum.

The Integrated Graduate Program in Oncology— MSc Oncology, Non-Thesis will appeal to a wide range of health care disciplines. Fostering education in psychosocial oncology and palliative care will build capacity for clinical practice ultimately improving quality of care for cancer patients and families.

Our national membership is comprised of various disciplines that work in psychosocial oncology and palliative care like psychiatrists, psychologists, social workers, spiritual care workers, nurses, dietitians, physiotherapists, primary care physicians and others. We have a very active student membership with
students from various disciplines developing their careers in psychosocial oncology and/or palliative care. Your program will appeal to our membership of health care professionals, administrators and students wishing to further their education in the field.

Your program is also addressing a gap where formal education in psychosocial oncology is not readily available in Canada. Graduates from this program will appeal to employers across the health care systems who are recruiting for their oncology programming.

We look forward to the future graduates of the Integrated Graduate Program in Oncology to join the CAPO in its efforts to advance research and best practices in psychosocial oncology and palliative care with the ultimate goal of improving patient-centred care.

Sincerely,

Carole Mayer, Ph.D., M.S.W.
President, CAPO
Thursday, May 25, 2017

Re: Proposed graduate program in oncology at McGill University

Dear Eduardo,

I was delighted to learn that your proposal for the creation of an interdisciplinary graduate program in oncology has been approved at McGill University. As I mentioned in previous exchanges with you, this program is very much needed for our university, but also for its potential to greatly enhance cancer research capacity in Quebec and in Canada. The creation of such an interdisciplinary program at McGill is greatly overdue. I congratulate you on this superb initiative; I know how hard you worked in leaving this legacy for McGill and for Quebec.

I am also enthusiastic about the new oncology graduate program from my perspective as a leader of Canada’s premier health research funding agency, CIHR. Half of all Canadians will develop cancer at some point of their lives if given the opportunity to reach old age. Even those not touched directly by cancer will be deeply affected by it, as they will have to care for a loved one who harbours this known killer. Preparing and equipping the next generation of cancer researchers who will bring both the new tools to prevent and treat cancer, as well as to new approaches to palliation requires the type of advanced training that your program will provide. CIHR will continue to serve its role in enabling the discoveries that your program’s emerging scientists and policymakers will make.

Given the interdisciplinary nature of your proposed program I am confident that it will be successful in attracting a new clientele of early-career researchers from Quebec and other provinces. Your proposed fourth stream, on quality of care, is also likely to attract American trainees.

I wish you all the best with the submission to the Quebec Ministry of Education. Cancer is a priority to all of us. Educating the next generation of Quebec cancer scientists is a priority.

Sincerely yours,

Roderick R. McInnes, CM, MD, PhD, FRSC
Acting President
Canadian Institutes of Health Research / Government of Canada

Alva Chair in Human Genetics,
Canada Research Chair in Neurogenetics,
Prof. of Human Genetics
Prof. of Biochemistry
McGill University, Montreal
Lady Davis Research Institute / Jewish General Hospital
15 juin 2017

Dr Eduardo Franco
Département d’oncologie Gerald Bronfman
Faculté de médecine
Université McGill
5100 boul Maisonneuve ouest
Montréal, Québec
Canada H4A 3T2

Objet: Programme intégré d'études supérieures en oncologie

Cher Dr Franco,

Je suis très heureuse d'ajouter mon soutien à votre proposition de développer et de mettre en œuvre le nouveau «Programme intégré d'études supérieures en oncologie». Traditionnellement, l’oncologie est enseignée dans différents départements et offre aux diplômés une vision restreinte des défis en oncologie. En effet, beaucoup se concentrent fortement sur la science fondée sur la découverte et ne fournissent pas aux étudiants les compétences nécessaires afin d’explorer les problèmes complexes de transfert des résultats de la recherche au niveau clinique et au niveau de la santé des populations. Comme décrit, votre programme fournirait une approche globale unique pour former la prochaine génération de personnel hautement qualifié qui travaille dans le domaine de l'oncologie.

La récente initiative Oncopole, soutenue par une collaboration entre FRQS et Merck, a identifié la nécessité de développer des programmes de recherche couvrant la découverte, le transfert, la commercialisation et la mise en œuvre. Votre nouveau programme aiderait à former la prochaine génération de scientifiques qui serait bien placée pour contribuer à ces nouvelles initiatives transversales, dont l’Oncopole est un exemple de tendance toujours croissante dans les projets à grande échelle. En effet, s'assurer que les découvertes ne sont pas seulement validées dans les essais cliniques, mais aussi dans le transfert vers les initiatives du système de soins de santé basées sur la population est un enjeu de plus en plus important si nous voulons avoir un impact sur le fardeau que représente le cancer. Au sein de mon propre centre de recherche, nous avons créé le «Carrefour du savoir» qui fournit une plateforme où les chercheurs peuvent interagir tout au long du continuum, du laboratoire scientifique jusque’aux populations. Le programme de formation que vous proposez s'harmonise bien avec les priorités émergentes et les complémente de façon significative.
Enfin, je crois que votre programme intéressera une population étudiante émergente qui n'est pas desservie par les programmes plus traditionnels. Il guidera le spécialiste qui pourra traverser le continuum de la recherche vers une mise en œuvre clinique et d'interface de population. Je vous félicite pour cette initiative intéressante et je suis impatiente de voir vos diplômés s'intégrer dans le riche environnement oncologique qui existe au Québec.

Cordialement,

Anne-Marie Mes-Masson
Professeur, Département de médecine, Université de Montréal
Responsable, Axe Cancer, Centre de recherche CHUM
Directrice Scientifique, Institut du cancer de Montréal
Directrice, Réseau de recherche sur le cancer du FRQS
June 29, 2017

Eduardo L. Franco, MPH, DrPH, FRSC, FCAHS, OC
James McGill Professor and Minda de Gunzburg Chair
Gerald Bronfman Department of Oncology,
Faculty of Medicine, McGill University
Director,
Division of Cancer Epidemiology, McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC H4A 3T2

RE: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non-Thesis

Dear Dr. Franco:

I would like to extend my support of your proposal for the creation of an Integrated Graduate Program in Oncology at McGill University. The four streams: population and global cancer control, psychosocial and palliative care, clinical cancer research, and cancer care services and quality are in close alignment with CCO’s mandate and mission of improving population health, quality of care and value.

By way of background, CCO is the Ontario government’s principal advisor on the cancer and kidney care systems, as well as on access to care for key health services. Our mission is to work together with our many partners to improve the performance of our health systems, by driving quality, accountability, innovation and value. CCO is governed by The Cancer Act and is accountable to the Ontario Ministry of Health and Long-Term Care.

Encompassing Cancer Care Ontario and the Ontario Renal Network, CCO drives continuous improvement in disease prevention and screening, the delivery of care and the patient experience for chronic diseases. We provide tools, resources and evidence-based data to help our healthcare partners improve the delivery of care. CCO directs and oversees approximately $1.9 billion in funding for hospitals and other cancer and kidney care providers, enabling them to deliver high-quality, timely services and improved access to care.

For cancer specifically, Cancer Care Ontario plays an important role in equipping health professionals, organizations and policy-makers with the most up-to-date cancer knowledge and tools to prevent cancer and deliver high-quality patient care. As the government’s principal cancer advisor, Cancer Care Ontario:

- implements provincial cancer prevention and screening programs;
- works with cancer care professionals and organizations to develop and implement quality improvements, standards and accountability for cancer care;
- uses electronic information and technology to increase accessibility to and advance the safety, quality and efficiency of these services;

.../2
works with healthcare providers in Ontario’s 14 Local Health Integration Networks (LHINs) to plan services that will meet the needs of current and future patients;
coordinates, in consultation with the 14 Regional Cancer Programs, the allocation of treatment volumes for radiation and systemic treatment, cancer surgery, genetic testing to inform treatment choices and specialized services; and
conducts research and rapidly transfers knowledge of new research into improvements and innovations in clinical practice and cancer service delivery.

Known for its innovation and evidence-based approaches, CCO leads multi-year system planning, contracts for services with hospitals and providers, develops and deploys information systems, establishes guidelines and standards, and tracks performance targets to ensure system-wide improvements.

CCO is also leading the charge of organizing palliative care in the province. The Ontario Palliative Care Network (OPCN) is a partnership of community stakeholders, including health service providers, health system planners, patients and their families. We are working with our partners and the Ontario Ministry of Health and Long-Term Care to transform palliative care in Ontario. This important work will help to address the gaps within the current system to ensure Ontarians have access to high quality palliative care. Finally, going forward our research framework for the organization will adopt a learning health system to ensure that evidence informs practice and policy.

The four streams of study of the proposed Integrated Graduate Program in Oncology, and their associated course work, will ensure that students graduating from your program receive an education that is relevant to not only conducting health systems research in the cancer community, but will ensure that students have the foundational methods background and skillset required to work with and align to agencies such as CCO. Moreover, the planned curriculum builds capacity in the areas of patient centredness, epidemiology, quality improvement and health systems improvement.

Sincerely,

Nicole Mittmann, MSc, PhD
Chief Research Officer
Research Office, Analytics & Informatics
Cancer Care Ontario
Associate Scientist, Sunnybrook Health Sciences Centre
Assistant Professor, University of Toronto

CCO
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June 9, 2017

Eduardo Franco, DrPH
James McGill Professor and Minda de Gunzburg Chair
Gerald Bronfman Department of Oncology
Director, Division of Cancer Epidemiology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, Canada  H4A3T2

Subject: Letter of Support for the Proposed Integrated Graduate MSc Program in Oncology

Dear Dr. Franco:

On behalf of the Canadian Society for Epidemiology and Biostatistics (CSEB), I reviewed your proposal for the Integrated Graduate MSc Program in Oncology. I am writing this letter to lend enthusiastic support to the proposal. I note that your proposal will appeal to a wide range of health-related professionals in fields such as epidemiology, healthcare management, medicine, nursing, occupational therapy/physiotherapy, psychology, social sciences, biostatistics, and health economics. This broad appeal is essential to tackling the problem of cancer, which remains a fundamental clinical and public health challenge in Canada today. Indeed, the multidisciplinary focus of the proposed program matches nicely with CSEB’s belief that healthcare challenges are best addressed when different disciplines combine their unique talents to solve problems in unison. CSEB’s recent national conference, held between May 30-June 2, 2017, reflected this belief via the theme: ‘Epidemiology: From Molecules to Population’.

An important focus of CSEB is to promote the disciplines of epidemiology and biostatistics. I believe the well-rounded and comprehensive training in the proposed Integrated Graduate MSc Program in Oncology will serve as a springboard for Canadian-based careers in cancer research and control. I strongly encourage the Ministère de l’Éducation et de l’Enseignement supérieur to respond favourably to your proposal and approve the program.

CSEB is a not-for-profit incorporated society of professionals, founded in 1990, for the purpose of fostering epidemiological and biostatistical research and practice in Canada.

Please do not hesitate and contact me at the coordinates below if you require further information.
Sincerely yours,

Mark Oremus, PhD
President, Canadian Society for Epidemiology and Biostatistics
Associate Professor, School of Public Health and Health Systems
University of Waterloo
200 University Ave W, LHN-3731
Waterloo, ON
Canada   N2L 3G1
Tel.: 519-888-4567, x35129
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Eduardo L. Franco, DrPH, FRSC, FCAHS, OC  
James McGill Professor and Minda de Gunzburg Chai  
Gerald Bronfman Department of Oncology  
McGill University  
5100 Maisonneuve Blvd West, Suite 720  
Montreal, QC, Canada H4A3T2

RE: Integrated Graduate Program in Oncology

Dear Eduardo,

This letter is to congratulate you on the initiative to create an Integrated Graduate Program in Oncology at McGill University. As you know, I supported this initiative since its inception 2-3 years ago, when I was the Executive Director of the Research Institute of the McGill University Health Centre.

The history of medical discoveries in oncology at McGill, starting from the discovery in 1965 of the first cancer biomarker CEA, by Dr. Phil Gold, to the development of advanced algorithms for radiation therapy by the medical physics group, provide clear evidence of the depth and strength of the faculty expertise in Oncology. Although for the last 30 years, the Department of Oncology has been the hub to exchange ideas and advance research and education in the field, expertise at McGill exists throughout various Schools, Departments, Centers and affiliated hospitals. The creation of this Integrated Graduate Program in Oncology should provide the mechanism to connect all the dots of excellence in oncology across the campus and hospitals to build a web of knowledge at the service of research, education and service in oncology.

Oncology has evolved into a multidisciplinary and transdisciplinary field where fundamental, clinical and health outcomes research converge to address one of the major healthcare problems of our times, cancer detection, treatment and care. The proposed four streams, namely population and global cancer control, psychosocial and palliative care, clinical cancer research, and cancer care services and quality accurately reflect the healthcare needs in the field of cancer. Interestingly, these are the areas where the society and public’s needs for a highly skilled workforce lie, to ensure quality research and complex care. Graduates of the program will have job opportunities in academia, industry, non-for-profit and government agencies. Graduate programs, as the proposed McGill Integrated Graduate Program in Oncology, will ensure the quality and quantity of this workforce.
I believe that the proposed Program will be of interest to a broad spectrum of candidates/clientele not only from Quebec but also from other provinces, the US and other countries. Moreover, the program will bring together candidates with diverse expertise including, but not limited to biology, medicine, pharmacy, epidemiology, healthcare management, genetics, nursing, psychology, social sciences, statistics, health economics and health policy, who are interested in obtaining a comprehensive overview of the multidisciplinary field of oncology while further developing skills that they can apply to their own professional endeavors.

In conclusion, I strongly support this long overdue initiative.

Best wishes,

Vassilios Papadopoulos, D.Pharm., Ph.D., D.Sc. (Hon)
Dean
School of Pharmacy
University of Southern California
May 25, 2017

Re: Your proposed graduate program in oncology at McGill University

Dear Dr. Franco,

I have read with much interest your proposal for the creation of an interdisciplinary graduate program in oncology at McGill University. You are to be congratulated for the initiative, which will greatly strengthen capacity building in all areas related to cancer prevention and care, as well as creating a multidisciplinary research culture that is in line with the way society must tackle this important disease. I was impressed by the meticulous assessment of the needs for personnel training in Quebec and in other provinces, which formed the basis for the curriculum design.

The University of Toronto Health Network is the largest hub for cancer research and cancer control policy in Canada. Yet, we do not have in Ontario a graduate program that can compare to yours in terms of the eclectic mix of substantive and methodological domains and interdisciplinary content. I am confident that your program will attract a good clientele of prospective students from Toronto and elsewhere in Ontario. More importantly for us, at University of Toronto, is that we will greatly benefit from the workforce that will complete training in your program and find employment in our province.

On behalf of the Division of Medical Oncology at University of Toronto, I wish you and your colleagues all the best in bringing this important graduate program to fruition. It is a first for Quebec. It is a first for Canada. Ontario, Quebec’s largest sister province, will greatly benefit from this important new program in oncology at McGill University.

Sincerely yours,

[Signature]

Kathleen I. Pritchard, MD, FRCPC
Departmental Division Director, Medical Oncology
Clinician Scientist, Sunnybrook Research Institute
Division of Hematology/Medical Oncology,
Sunnybrook Odette Cancer Centre
Professor of Medicine, Department of Medicine
Faculty of Medicine, University of Toronto
Tel: 416-480-4616/Fax: 416-480-6002
kathy.pritchard@sunnybrook.ca
June 15, 2017

Eduardo Franco, MPH, FRSC, FCAHS, OC
James McGill Professor
Minda de Gunzburg Chair
Director, Division of Cancer Epidemiology
Gerald Bronfman Department of Oncology Faculty of Medicine
McGill University
Suite 720, 5100 Maisonneuve Blvd. West
Montreal, Québec
Canada H4A 3T2

Re: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non-Thesis

Dear Eduardo,

I am delighted to provide this letter of support regarding your proposal for an Integrated Graduate Program in Oncology at McGill University, which will be the first in Canada to serve the entire spectrum of professions and aspects of cancer research, policy, and clinical care.

I am an executive at Cancer Care Ontario, which is Ontario’s cancer agency. In my role as Vice-President, Prevention and Cancer Control I am accountable for the provincial cancer prevention and screening programs.

The proposed program will enhance capacity building in oncology for Canada and Quebec. Cancer Care Ontario, which is Ontario’s cancer agency could be a potential employer of graduates from the proposed program, which could also attract trainees from Ontario.

The proposed program will clearly enhance capacity in the field by offering advanced training at the graduate level. It will provide students with exposure to the entire spectrum of oncology from clinical care to cancer research and will fill an existing gap in training. In my view, there is a clear need for this training in cancer control in Canada.

I support your proposal with great enthusiasm and wish you every success. Don’t hesitate to call on me in future if I can assist in any way.

Sincerely,

Linda Rabeneck MD MPH FRCPC
VP, Prevention and Cancer Control, Cancer Care Ontario
Professor of Medicine, University of Toronto
Dr. Daniel Rayson  
Head – Division of Medical Oncology  
4th Floor, Bethune Building  
Queen Elizabeth II Health Sciences Centre  
Nova Scotia Health Authority  
1276 South Park Street  
Halifax, NS B3H 2Y9

Tel: (902) 473-3748  
Fax: (902) 473-6186

May 29, 2017

Dr. Eduardo Franco  
McGill University  
Gerald Bronfman Department of Oncology  
Faculty of Medicine  
546 Pine Avenue West, Room 112  
Montreal, Quebec H2W 1S6

Dear Dr. Franco:

Re: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non- Thesis

Thank you very much for your kind letter as well as the information you provided in regard to your recent proposal to develop a graduate program in oncology at McGill University. As your documentation points out, there are currently very limited options to pursue true multidisciplinary work in oncology at a graduate level in Canada and this is clearly an important need for the on-going development of cancer care and cancer research in our country.

The four streams of education that are proposed are entirely relevant to the cancer community and will no doubt result in the training of well rounded clinicians and researchers that will be prepared to make an impact in terms of cancer care delivery, cancer care organization and cancer research in multiple domains.

In my experience as Head of the Division of Medical Oncology at Dalhousie University as well as Director of the Atlantic Clinical Cancer Research Unit and principle investigator of the Atlantic Node of the Canadian Cancer Clinical Trial Network (CCCTN) I have no doubt in regard to the importance of this initiative that will fill a significant gap within oncology education.

I know that trainees across the country would look to this opportunity for graduate studies very favorably and those within our own program would also be very interested in the course offering of an integrated graduate program in oncology at McGill University.

A different today. A better tomorrow.
Re: Proposal for Integrated Graduate Program in Oncology – MSc Oncology; Non- Thesis

The provincial program for Cancer Care in Nova Scotia would also be very interested in reviewing graduates of this program for potential employment opportunities across the spectrum of cancer system administration and research.

With this, I lend my full support to your and your teams’ efforts to establish this program at McGill University. I have no doubt that it will fill an important need within the cancer training landscape in Canada.

If I can be of any further assistance, please do not hesitate let me know.

Sincerely yours,

[Signature]

Dr. Daniel Rayson, MD, FRCPC, FACP
Head – Division of Medical Oncology
Professor of Medicine, Dalhousie University
Director, Atlantic Clinical Cancer Research Unit (ACCRU)
Nova Scotia Health Authority

DR/emh

A different today. A better tomorrow.
Le 14 juin 2017

Objet: Nouveau programme d’études supérieures en oncologie de McGill

Aux membres du Comité,

J’aimerais vous faire part, en tant que directrice du thème porteur et de l’axe Cancer : biologie, pronostic et diagnostic de la Faculté de médecine et des sciences de la santé de l’Université de Sherbrooke, de mon appui au nouveau programme d’études supérieures en oncologie de l’Université McGill.

Cette initiative de McGill s’avère particulièrement pertinente dans un contexte qui vise à améliorer les besoins éducatifs des communautés québécoises impliquées dans les soins, le contrôle et la recherche sur le cancer. À mon avis, ce nouveau programme sera aussi très attrayant pour les étudiants d’autres institutions du Québec et d’ailleurs. Les perspectives d’emplois des futurs diplômés de ce programme seront excellentes tant dans des organisations au Québec, au Canada et aux États-Unis qui se consacrent à différents volets de la lutte contre le cancer.

Veuillez agréer l’expression de mes sentiments les meilleurs,

Nathalie Rivard, Ph.D.
Professeure
Chaire de recherche du Canada en signalisation du cancer colorectal et de l’inflammation intestinale
Directrice du thème porteur facultaire Cancer : biologie, pronostic et diagnostic
Directrice de l’axe Cancer : biologie, pronostic et diagnostic du CR-CHUS.
June 23, 2017

Dr. Eduardo Franco
Chairman, Department of Oncology
McGill University

RE: Proposed graduate program in Oncology at McGill University

Dear Dr. Franco,

Based on my role as the Scientific Director of the CIHR Institute of Cancer Research and as a Professor in the Department of Oncology at the University of Calgary I was very pleased to read your proposal to establish a unique multi-disciplinary graduate program in Oncology. There are several very strong attributes of the proposed program, first and foremost it represents an unmet need in our graduate education programs in Canada by developing an integrative oncology graduate program that encompasses several disciplines that are often overlooked or provided mere 'lip-service', namely population and global control of cancer, psychosocial and palliative care, clinical cancer research and health services within the cancer control journey. While it is very clear that there are many graduate training opportunities in the biomedical sciences, there are very few if any, that address this specific integrative oncology approach. This program will utilize a wide spectrum of educators and mentors ranging from epidemiologists, clinicians, nurses, occupational therapists, rehabilitation specialists, social scientists, statisticians and other related disciplines, providing a very unique and rich educational environment for the students that enroll in the program.

I see great opportunity for the graduates of this program both in Canada but also globally. As a member of the Governing Council of the International Agency for Research on Cancer (IARC), a research centre that is part of the World Health Organization I could envision the graduates of this program having the opportunity to contribute to the global impact of cancer prevention and control. This is especially germane as non-communicable diseases like cancer and other chronic diseases are becoming a major focus of the WHO. In fact, one may anticipate that as this program develops and matures addressing the health concerns around co-morbidities could become a cornerstone of the program.

I wish you and your colleagues the best of luck in working with the Quebec Ministry of Education to see this vision become reality.

Sincerely,

[Signature]

Stephen M Robbins, Ph.D
Scientific Director/ Directeur Scientifique
CIHR Institute of Cancer Research/ Institut du cancer des IRSC
Professor
University of Calgary
June 15, 2017

Dr. Eduardo Franco
Professor and Chair, Gerald Bronfman Department of Oncology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, Canada H4A 3T2

Re: Letter of support for a proposal for an Integrated Graduate Program in Oncology – MSc Oncology; Non-Thesis (McGill)

Dear Dr. Franco,

I am highly supportive of your efforts as outlined in this proposal and would agree that the implementation of this program will provide an eclectic entry point for a career in cancer research, cancer control policymaking, or for those wishing to take positions of leadership in clinical cancer research.

I believe that McGill is uniquely positioned among universities in Quebec and in Canada to embark on this project. I also agree that it is important to enhance capacity building in oncology for Quebec, and eventually for Canada. I am convinced that both national and international institutions could be potential employers of graduates from your program.

Best regards,

[Signature]

Jack Siemiatycki Ph.D.
Professor of Epidemiology, School of Public Health
University of Montreal
Guzzo-Cancer Research Society Chair in Environment and Cancer
850, rue St-Denis, room S02-422
Montreal (Quebec) H2X 0A9, Canada
31 May 2017

Dr. Eduardo Franco
Director, Division of Cancer Epidemiology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, H4A3T2

Re: Integrated Graduate Program in Oncology at McGill University

Dear Dr. Franco,

I read with great interest your proposal for the creation of a new graduate program in oncology at McGill University. You are to be congratulated for the initiative, which will greatly strengthen capacity building into research related to the entire cancer continuum. Of particular importance is that the new program will build capacity in the areas of population and global cancer control, psychosocial and palliative care, and cancer care services which are not covered adequately in the UBC Interdisciplinary Oncology Program.

On behalf of the BC Cancer Agency, I wish you and your colleagues all the best in bringing this important graduate program to fruition. The BC Cancer Agency, and all of the Cancer Control Organizations across Canada will greatly benefit from this important interdisciplinary program.

Sincerely yours,

John J. Spinelli, PhD P.Stat.
Vice President, Population Oncology, BC Cancer Agency
Professor, School of Population and Public Health, University of British Columbia
(P) 604-877-6068
(E) jspinelli@bccancer.bc.ca
June 22, 2017

Dr. Eduardo Franco  
Chair, Gerald Bronfman Department of Oncology  
Faculty of Medicine, McGill University  
5100 de Maisonneuve Ouest, Suite 720  
Montreal, Quebec H4A 3T2

Dear Eduardo,

**Re: Proposed graduate program in oncology at McGill University**

I was extremely pleased to learn that your proposal for the creation of an interdisciplinary graduate program in oncology has been approved by McGill University.

As you know, according to a recent study published in the *British Journal of Cancer*, in the next 15 years, the overall incidence of cancer is expected to rise by 45% and the number of cancer survivors by 30%. It is essential that major cancer centers in Canada be prepared for this coming crisis in cancer control and address the problem with an interdisciplinary approach.

Given that the Rossy Cancer Network has a strong focus on evidence-based quality improvement initiatives, we are very encouraged to see that one of your major program streams will focus on cancer care quality and will benefit from the Joint MD/MBA program offered by McGill's Desautels Faculty of Management.

As the only program in Canada to offer this area of focus, I am confident that candidates from around the country and abroad will be drawn to this program. Hospitals are increasingly seeking clinicians and administrators with a mindset rooted in quality improvement and the capacity to work outside of silos with an interdisciplinary point of view. Graduates of this rigorous and comprehensive new program are certain to be in high demand and to be well placed to make the kind of contributions that are needed to manage the challenges we face every day.

I wish you all the best with the submission to the Quebec Ministry of Education. This important new program will play an essential role in enhancing quality of cancer care in Quebec and in Canada.

Sincerely,

Tony Teti  
Director of Operations  
Rossy Cancer Network
June 21, 2017

Dr. Eduardo Franco
Gerald Bronfman Department of Oncology
McGill University
720 - 5100 Maisonneuve Boulevard West
Montreal, QC H4A 3T2

Dear Dr. Franco,

On behalf of LLSC and our Medical and Scientific Advisory Committee of our Board of Directors, we are very supportive of your proposal to introduce a graduate program in oncology.

McGill University is well suited to lead this. We are pleased to see teaching segments on hematology as it is of great interest to us to have new investigators qualified to apply and ultimately receive research funds. LLSC currently funds over 40 Canadian researchers in blood cancers in 20 institutions.

We have plans to continue increasing our funding so more new researchers will have access to funds as they begin their research careers.

Attracting new investigators into the field of blood cancer research assists in our mission of finding a cure and advancing treatments.

Your program provides a new opportunity to train Canadian oncology students to advance their careers particularly in our area of interest.

Your international assessment of other programs to explain the uniqueness of your program proposal is very supportive.

Best wishes in your application and congratulations for your insightful leadership.

Sincerely yours,

Shelagh Tippet-Fagyas
President & General Manager
July 24, 2017

Eduardo Franco, MPH, DrPH, FRSC, FCAHS, OC
Director, Division of Cancer Epidemiology
Gerald Bronfman Department of Oncology
Faculty of Medicine, McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC  H4A 3T2

Re: Proposal for Integrated Graduate Program in Oncology

Dear Dr Franco,

This letter is provided in support of the proposal to create a Graduate Program in Oncology at McGill. Cancer is a growing concern in Canada and the increasing burden of disease is putting continued pressures on provincial governments to fund required oncology services. Our aging population means this burden will not be slowing down any time soon.

A program focused on specific issues related to oncology would be very worthwhile. The four streams proposed for the MSc program cover the broad range of relevant topics associated with the cancer control continuum; issues from prevention to diagnostics, treatment, and palliative care.

The interdisciplinary nature of the proposed program is very appropriate and consistent with how oncology services are now being developed. Multidisciplinary teams related to development of treatment plans is the current model and will be for the foreseeable future. Having students from varied backgrounds trained in oncology specific skills will certainly provide an expertise required by teams across the country responsible for developing, implementing and evaluating services.

It is our belief that students with this training, which would be unique in Canada, would have very good job opportunities across the country.

Sincerely,

Dr Jon Tonita
Interim President and Chief Executive Officer
Saskatchewan Cancer Agency
Montréal, le 15 juin 2017

Objet : Proposition de l'Université McGill pour un programme intégré d'études supérieures en oncologie – MSc en Oncologie ; sans thèse

Docteur Eduardo L. Franco,

C'est avec beaucoup d'enthousiasme que nous avons pris connaissance de vos démarches pour offrir un nouveau programme intégré d'études supérieures en oncologie. Nous croyons qu'avec celui-ci, vous offrirez une formation qui permettra à des professionnels d'être mieux outillés pour faire face aux enjeux nombreux et variés liés à la lutte contre le cancer.

Le nombre de personnes qui recevra un diagnostic de cancer pourrait doubler au cours des 15 prochaines années. Il s'agit d'un défi de société qui dépasse la simple approche médicale et la mise sur pied de ce programme multidisciplinaire serait un exemple concret d'approche novatrice nécessaire pour y faire face.

Les diplômés de ce nouveau programme seraient des candidats de choix pour aider notre organisation à remplir sa mission et nous sommes certains que leur formation leur permettrait d'accéder à des emplois de qualité dans le milieu de l'oncologie.

Soyez donc assuré de notre appui à la mise sur pied d'un programme intégré d'études supérieures en oncologie.

Très cordialement,

[Signature]

Nathalie Tremblay,
Présidente-directrice générale

1155, boul. René-Lévesque Ouest, bureau 1705
Montréal (Québec) H3B 3Z7
T 514 871-1717  F 514 871-9797
Sans frais 1 877 990-7171
rubanrose.org
June 12th, 2017

Dr. Eduardo L. Franco, PH, FRSC, FCAHS, OC
McGill University
Director, Division of Cancer Epidemiology,
5100 Maisonneuve Blvd West, Suite 720;
Montreal, QC, Canada

Re: Your proposed graduate program in oncology at McGill University

Dear Dr. Franco,

I am very pleased to provide my support for your proposal to develop an interdisciplinary graduate program in oncology at McGill University. As the Provincial Director of Population Oncology at CancerCare Manitoba I am keenly aware of how important this program will ultimately be to the oncology community in Canada.

The curriculum design is very well planned, stemming from your very thorough needs assessment for personnel training. This program will certainly attract a good clientele of prospective students from Toronto and elsewhere in Ontario; doubtless some of the graduating students will become valuable members of our staff here at CancerCare Manitoba.

Many current graduate programs in oncology focus only on basic or clinical science. Your program fills a much-needed gap in the development of population, prevention and health services cancer research in Canada. With cancer now affecting one in two Canadians over their lifetime, we must produce more bright scientists with the ability to tackle such a predominant health concern.

On behalf of CancerCare Manitoba, I wish you and your colleagues all the best in bringing this important graduate program to fruition. Cancer is a priority to all of us and you are to be commended for your commitment to this initiative, which will ultimately strengthen capacity building in all areas related to cancer prevention and care, as well as creating a multidisciplinary research culture that is in line with the way society must tackle this important disease.

Sincerely yours,

Donna Turner, PhD
Epidemiologist/Provincial Director, Population Oncology, CancerCare Manitoba
ON4027-675 McDermot Avenue, Winnipeg, MB R3E 0V9

Associate Professor, Dept of Community Health Sciences
Faculty of Medicine, University of Manitoba
June 1, 2017

Eduardo L. Franco, DrPH, FRSC, FCAHS, OC
James McGill Professor and Minda de Gunzburg Chair
Gerald Bronfman Department of Oncology
Director, Division of Cancer Epidemiology
McGill University
5100 Maisonneuve Boulevard West
Suite 720
Montréal, Québec H4A 3T2

Re: Proposal for the creation of an Integrated Graduate Program in Oncology at McGill University

Dear Eduardo,

On behalf of the Ontario Institute for Cancer Research (OICR) I am writing this letter of enthusiastic support for the proposal to create an Integrated Graduate Program in Oncology at McGill University.

As a translational research institute dedicated to driving research discoveries into the clinic for both patient and economic impact, OICR epitomizes the values of multi-disciplinary collaboration. Indeed, the only way Canada is going to effectively apply the last century’s incredible scientific discoveries and now vast data generation to health improvement is through integrative problem solving and a learning health system model. It’s critical that we equip the next generation of health and research professionals with a broad understanding of the field of oncology and encourage a multi-disciplinary, collaborative mindset. This is particularly critical in cancer, which is not only a complex disease but an ever-evolving one that requires adaptive prevention, diagnosis, treatment and long-term care strategies.

This program will be the first in Québec and Canada to serve the entire spectrum of professions and areas that cater to cancer research, policy, and clinical care, and will provide students with exposure from clinical care to cancer research in various disciplines. Not only would this program attract students from OICR and other institutions devoted to one or more of the many facets of cancer control and care in Ontario, OICR would support the employment of future graduates and would benefit tremendously from this multi-disciplinary approach to translational research from these future leaders.

On behalf of OICR, I wish you much success with this innovative and much-needed new graduate training program.

Sincerely,

Christine Williams, PhD
Deputy Director
Ontario Institute for Cancer Research

cc: Peter Goodhand, President, OICR
June 8, 2017

Eduardo L. Franco
Department of Oncology
McGill University
5100 Maisonneuve Blvd West, Suite 720
Montreal, QC, H4A3T2

Re: Proposal for Integrated Graduate Program in Oncology

Dear Dr. Eduardo L. Franco,

Upon reviewing the Proposal for the Creation of an Integrated Graduate Program in Oncology at McGill University, on behalf of CARO, I would like to offer my support and general endorsement of the Program. The advancement of oncology through this proposed teaching and training program upholds myself and the Associations’ encouragement for the wider dissemination of knowledge about issues related to cancer control. Although I support and encourage the Program; CARO will not have involvement in the employment of students.

Thank you for opportunity for me to review and support this Program proposal.

Yours Sincerely,

Dr. Eric Vigneault
President, CARO
June 14th, 2017

Re: Proposal for Integrated Graduate Program in Oncology - MSc Oncology; Non-Thesis

Dear Eduardo,

I am delighted to add my voice of support for your proposed MSc (and later PhD) program in Oncology at McGill University. From reading the description of the syllabus, this will fill a clear and important gap in education of aspiring students of oncology, offering a full spectrum from cancer research to contemporary clinical care. At the Lunenfeld-Tanenbaum Research Institute, approximately 40% of our research activity directly relates to cancer and spans discovery science through clinical and genetic epidemiology to health systems, palliative care and clinical trials. I am confident that graduates of this new program will be highly sought, including by investigators and clinician-researchers here at LTRI and Mount Sinai Hospital.

While most of our trainees are at the graduate school level (i.e. MSc or PhD already), we have a vibrant Summer Student program that attracts a significant number of undergraduate students, many of whom are looking for exactly this type of graduate school opportunity. Moreover, as you well know, interdisciplinary experience and understanding of methodology is critical in today’s research environment, as well as in clinical support. It is important that we evolve our teaching to accommodate these trends towards integrative and team-based research.

I commend you on your foresight and organization in assembling this compelling course and know that it will be not only successful but provide a needed service to oncology research and practice in the whole of Canada. I am sure it will also provide a model for integrated education for others to follow in your footsteps.

Sincerely yours,

James R Woodgett, Ph.D.
Director of Research
Lunenfeld-Tanenbaum Research Institute
Sinai Health System

A patient care, teaching and research centre affiliated with University of Toronto
## APPENDIX 3
Graduate Programs in Oncology at Universities in Canada, USA and Europe &
Training Programs in Healthcare Quality

### CANADA

<table>
<thead>
<tr>
<th>University/Institution</th>
<th>Program</th>
<th>Description</th>
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<tbody>
<tr>
<td>University of British Columbia BC Cancer Agency</td>
<td>Interdisciplinary Oncology Program MSc with thesis or PhD Programs</td>
<td>Interdisciplinary program: Molecular and cellular biology, genetics, biophysics, bioinformatics, pharmaceutical sciences, radiological sciences, immunology, molecular pathology, sociobehavioural studies, epidemiology and health economics. Students conduct their thesis research in their chosen home department. Master’s Program Requirements 3-credit core course - Concepts in Oncology; 3-credit core course – Seminars in Oncology; 12 credits – Elective courses chosen from courses offered by other programs at UBC. 12 Credit Thesis. Total 30 credits. PhD Program Requirements: 2 core courses; electives as required, thesis.</td>
</tr>
<tr>
<td>University of Calgary Cumming School of Medicine Arnie Charbonneau Cancer Institute</td>
<td>Medical Science Graduate Program Cancer Biology</td>
<td>Modular format of courses. Courses focused in areas relevant to basic cancer research.</td>
</tr>
<tr>
<td>University of Alberta Cross Cancer Institute</td>
<td>Department of Oncology MSc or PhD degrees in Oncology with thesis Two streams: Cancer Sciences; Medical Physics. 2014/2015 – 27 MSc, 26 PhD Program</td>
<td>Focus on basic and translational research. Mechanisms of cancer causation, detection, imaging, diagnosis, treatment and prevention. Students come from Divisions of Experimental Oncology, Palliative Care, Oncologic Imaging, Radiation Oncology, and Surgical Oncology. Required courses for Cancer Sciences stream: Either 3-credit Tumour Biology course or 3-credit Nutrition and Metabolism Related to Cancer course; Current topics in Cancer Research (two courses for a total of 3 credits). For the MSc an additional course choice. For the PhD program two additional course choices. 8 hours of academic and ethics training required for MSc and for PhD if not done previously.</td>
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</tbody>
</table>
### USA

<table>
<thead>
<tr>
<th>University/Institution</th>
<th>Program</th>
<th>Description</th>
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<tbody>
<tr>
<td>Memorial Sloan Kettering Cancer Center</td>
<td>Gerstner Sloan Kettering Graduate School of Biomedical Sciences PhD Program</td>
<td>60 students enrolled in 2014/2015 One year core course focusing on topics related to basic cancer research; Responsible Conduct of Research course; mini-course on logic and critical analysis; Quantitative and Computational Biology course. Clinical portion of the program: students learn about clinical trials, determining effectiveness of treatment, development of innovative treatments, clinician challenges, clinic observation. Students have a thesis research supervisor as well as a clinical mentor and they attend journal clubs.</td>
</tr>
<tr>
<td>NYU School of Medicine</td>
<td>Molecular Oncology and Tumor Immunology Training Program PhD Program</td>
<td>24 PhD students in 2014/2015 Integrated program focusing on immunology (basic and applied) and molecular oncology and how these two disciplines intersect. Two tracks: Cancer Biology; Tumor Immunology.</td>
</tr>
<tr>
<td>Stanford University</td>
<td>Cancer Biology Program PhD Program</td>
<td>65 students according to website Focus on basic cancer research. Students also will learn about current state of diagnosis and treatment of cancer.</td>
</tr>
<tr>
<td>University of Texas, MD Anderson Cancer Center</td>
<td>Cancer Biology Program PhD Program</td>
<td>50 students according to the website Focus on basic cancer research.</td>
</tr>
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</table>
## EUROPE

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<thead>
<tr>
<th>University/Institution</th>
<th>Program</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>University of Nottingham (UK)</td>
<td>MSc Oncology (1 year program)</td>
<td>The 1-year MSc in Oncology program is geared to scientists and other graduates who want to learn about the science and practice of oncology, and to clinicians and other health care professionals who would like training in the molecular aspects of oncology. The program has a number of core course modules which include topics related to basic science, tumour immunology and physiology, diagnostic pathology, drug development, statistics and epidemiology, and radiation biology. Optional course modules focus on clinical topics such as chemotherapy and systemic therapies. Students will also complete a research project, either laboratory or literature-based (400-450 hours of research, spring and summer semesters). Examples of previous research projects show a focus on basic research.</td>
</tr>
<tr>
<td>VU Amsterdam VUmc School of Medical Sciences (Netherlands)</td>
<td>Master’s Program in Oncology, with thesis 2 years</td>
<td>Six compulsory courses: Oncogenesis; Tumor Immunology; Tumor Biology and Clinical Behaviour; Innovative Tumor Therapies; Writing Scientific English; Biostatistics. A choice of optional courses e.g. Biobusiness; Advanced Molecular Immunology and Cell Biology, Laboratory Animal Course, Policy Management and Organisation in International Public Health, Viral Oncogenesis etc. Students are also required to take a minor internship, a major internship (Master’s thesis) and literature study.</td>
</tr>
<tr>
<td>University of Glasgow (Scotland)</td>
<td>Cancer Sciences MSc (1 year)</td>
<td>1st semester core course – Hallmarks of cancer 2nd semester 6-week core course – Designing a research project: biomedical research methodology Choice of optional courses that run 3-5 weeks: Drug Discovery; Drug Development and Clinical Trials; Viruses and Cancer; Diagnostic Technologies and Devices; Technology transfer and commercialisation of bioscience research; Current trends and challenges in biomedical research and health; Frontiers in Cancer Sciences; Omic technologies for the biomedical sciences: from genomics to metabolomics There also is a 14-week long bioscience research project in the third semester. A scan of previous research projects show that they are focused on basic research.</td>
</tr>
</tbody>
</table>
### Appendix 3 - Graduate Programs in Oncology at Universities in Canada, USA and Europe & Training Programs in Healthcare Quality

<table>
<thead>
<tr>
<th>University/Institution</th>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queens University – School of Graduate Studies</td>
<td>Healthcare Quality MSc</td>
<td>For professionals such as lawyers, engineers, business professionals, healthcare professionals, professional administrators, policy advisors. Courses include: Introduction to Quality, Risk and Safety; Process Improvement in Healthcare; Research and Evaluation Methods to Assess Quality, Risk &amp; Safety; Law, Risk and Healthcare; Organizational Behaviour in Healthcare; Human Factors in Healthcare; Public Policy, Politics, and Quality Healthcare; Project in Healthcare Quality.</td>
</tr>
<tr>
<td>University of North Carolina Gillings School of Global Public Health</td>
<td>Cancer Care Quality Training Program</td>
<td>Pre-doctoral (1-2/year) and post-doctoral (1-2/year) training to clinician and non-clinician scientists. Required courses: Making Equity a Priority in Cancer Care Quality; Disseminating Evidence and Innovation in Cancer Care; PRO Measurement and Research. Cancer Pathobiology and Cancer Epidemiology are strongly recommended for non-clinician fellows whereas clinicians with prior training in oncology can take courses in research methods or health services. Students are required to attend multidisciplinary conferences and tumour board meetings. Postdoctoral fellows must prepare a grant proposal which will undergo simulated peer review. Students will conduct a research project in cancer care quality.</td>
</tr>
</tbody>
</table>
APPENDIX 4
COURSE OUTLINES

1. ONCO 610 D1/D2 – Fundamentals of Oncology and Cancer Research
2. ONCO 620 – Best Practices in Biomedical Research
3. ONCO 630 J1/J2/J3 – Oncology Practicum
4. ONCO 615 – Principles and Practice of Clinical Trials
5. ONCO 625 – Quality Improvement Principles and Methods
Course Outline – Fundamentals of Oncology and Cancer Research

Course #: ONCO 610 D1/D2
Section #:
Term: Fall and Winter
Year: 2018-2019
Course pre-requisite(s): None
Course co-requisite(s): None
Course schedule (day and time of class): TBD
Number of Credits: 6
Course Location: Downtown

Instructor: Dr. Marc Fabian
Email: marc.fabian@mcgill.ca
Telephone number: 514-340-8222 x 28575 (use email above to schedule appointments)
Office hours for students: TBD
Office location: Lady Davis Institute for Medical Research

Instructor: Dr. Melissa Henry
Email: melissa.henry@mcgill.ca
Telephone number: 514-340-8222 x 22252 (use email above to schedule appointments)
Office hours: TBD
Office location: Jewish General Hospital

Course Overview
A multidisciplinary approach to the entire spectrum of principles and practice in all fields of oncology, as well as to its research domains, from basic science to clinical and population health sciences. Content areas will include mechanisms of carcinogenesis, tumour pathology, cancer epidemiology, prevention, screening, diagnosis, treatment, psychosocial support, palliative care, global cancer control and quality of cancer care services. The multidisciplinary nature of cancer research and clinical care and how research findings inform clinical practice and policymaking in cancer control will be illustrated.

Learning Outcomes
By the end of this course students should have acquired knowledge covering the entire spectrum of clinical and research activities in the field of oncology. They will be able to appreciate the full range of principles and practices in population and global cancer control, psychosocial and palliative care, clinical cancer research, and cancer care services and quality. Students will be able to apply internationally recognized standards and definitions of health and disease, as well as display a public policy perspective. They will be able to demonstrate how an integrative interdisciplinary perspective can contribute to innovations in the field of oncology and cancer care.

Instructional Methods
This course will use a variety of instructional approaches including weekly didactic seminars; assigned readings; student presentations; as well as two exams and papers for the course, one mid- and one end-of-year. It is expected that students will attend all classes. Students are expected to come to the classroom prepared to initiate a discussion on the assigned topic for that week. This should consist of preparing one or two integrative questions on the identified topic.
Required Course Materials
Students will be provided with seminar slides at least 24 hours in advance of a lecture. They will also be provided with a list of additional resource reading on each lecture topic, which will be provided on the first day of this course. The course material derives from major textbooks and seminal articles for each topic. The Library provides access to the course materials, both print and online, in its Course Reserve system. The Library can put the course reserve materials on short-term loan at the branch libraries, while also linking to online materials (both e-books and e-journal articles). Course Packs are made available at the library branches, along with print and online links for the materials listed in these Course Packs. Recommended textbooks will be available for consultation at the library.

Optional Course Materials
1. Canadian Cancer Society: Canadian Cancer Statistics 2016, Toronto, Canada, (and previous ones, all accessible as PDF documents from the Canadian Cancer Society’s website).
3. Lyon, IARC (accessible as series of PDF files and custom statistics at the IARC website).

Course Content
A description of the lectures is found below. Topics are arranged in progression from simple to more complex concepts. The order is subject to change based on lecturer availability. An updated schedule for the year will be provided on the first day of each academic year.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1</td>
<td>Overview of the interdisciplinary nature of cancer care and research</td>
<td>1.5 hr</td>
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<tr>
<td></td>
<td>Nomenclature of cancer</td>
<td>1.5 hr</td>
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<tr>
<td></td>
<td>Benign vs malignant neoplasms; general neoplasia terminology; carcinoma vs sarcoma.</td>
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<tr>
<td>2</td>
<td>Tumour pathology</td>
<td>1.5 hr</td>
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<tr>
<td></td>
<td>Grading and staging of malignant neoplasm</td>
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<tr>
<td></td>
<td>Fundamentals of molecular biology</td>
<td>1.5 hr</td>
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<tr>
<td></td>
<td>Identifying and targeting alterations in gene expression programs in cancer cells</td>
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<tr>
<td>3</td>
<td>Mechanisms of carcinogenesis and tumour progression (including viral carcinogenesis)</td>
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<tr>
<td></td>
<td><em>Tumour suppressor/oncogene action, viral-mediated transformation and cancer, EMT and metastasis, DNA damage events</em></td>
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<td>3 hrs</td>
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<td>4</td>
<td>Cancer genetics</td>
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<td></td>
<td><em>2-hit hypothesis of cancer causation; Phenotypes of hereditary cancers involving high penetrance alleles; features of cancer predisposing genes</em></td>
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<tr>
<td></td>
<td>Cancer immunology</td>
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<tr>
<td></td>
<td><em>Immune response during tumourigenesis; immune surveillance hypothesis; inflammation and cancer; cancer immunotherapies.</em></td>
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<td>1.5 hr</td>
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<tr>
<td>5</td>
<td>Molecular heterogeneity of cancer</td>
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<tr>
<td></td>
<td><em>Tumour cell segregation; tumour components; mechanisms involved in intra-tumour heterogeneity and progression; clinical implications.</em></td>
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<tr>
<td></td>
<td>Cancer biomarkers</td>
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<tr>
<td></td>
<td><em>Discovery and validation; common cancer biomarkers; biomarker &amp; targeted imaging; study design for biomarker discovery.</em></td>
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<td>6</td>
<td>Drug Discovery (including pre-clinical and translational)</td>
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<tr>
<td></td>
<td><em>Definition of drug targets; generating diversity; definition of lead structures; qualifying leads for transition to early trials</em></td>
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<td></td>
<td>3 hrs</td>
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<tr>
<td>7</td>
<td>The global burden of cancer</td>
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<tr>
<td></td>
<td><em>Age-specific global contributions of cancer types; cancer trends in global incidences; trends in age-standardized incidence rates of different cancers; health inequalities and standards of care globally.</em></td>
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<tr>
<td></td>
<td>Epidemiologic methods to study cancer etiology</td>
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<tr>
<td></td>
<td><em>Historical perspective; criteria for cause/effect relationship; methods of epidemiology; types of studies</em></td>
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<td></td>
<td>1.5 hr</td>
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<tr>
<td>8</td>
<td>Primary prevention</td>
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<tr>
<td></td>
<td><em>Risk assessment (gail risk model); lifestyle choices; surveillance; chemoprevention; risk-reducing surgeries.</em></td>
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<tr>
<td></td>
<td>Secondary prevention (screening)</td>
<td></td>
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<td></td>
<td><em>Screening and vaccination; guidelines; genetic screening; radiological screening</em></td>
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<tr>
<td></td>
<td>1.5 hr</td>
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<tr>
<td>9</td>
<td>Epidemiologic methods to study cancer survival</td>
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<td></td>
<td><em>Predictors; relapse.</em></td>
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<td></td>
<td>1.5 hr</td>
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<tr>
<td>Course Outcomes</td>
<td>Hours</td>
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<td>--------------------------------------------------------------------------------</td>
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</table>
| **Fundamentals of Palliative Care**  
_History of palliative care; quality of life; symptom control; models of care._ | 1.5 hr |
| **Cancer pain and symptom control**  
_Prevailing total pain concept; pain assessment tools; classification of pain; cancer-related pain syndromes; acute and chronic pain; management of cancer-related pain; barriers to symptom control; models of pain management._ | 1.5 hr |
| **Cancer cachexia and nutrition**  
_Pathophysiology; definition; cachexia vs. anorexia; host/tumour relationship; pharmacological and non-pharmacological approaches; current and emerging therapies._ | 1.5 hr |
| **Exercise and rehabilitation**  
_Overview of disease site- and trajectory-related functional loss; conceptual frameworks/WHO International Classification of Functioning, Disability and Health (ICF); systematic review of exercise and rehabilitative interventions; clinical and public health guidelines._ | 1.5 hr |
| **Behavioural research in psychosocial oncology**  
_Behavioural factors in cancer risk – tobacco use and cessation, diet, exercise, sun exposure; socioeconomic disparities in cancer; psychosocial factors; intervention trials._ | 1.5 hr |
| **Quality of Life: concept and research**  
_Theoretical framework; historical evolution; definition; measurement._ | 1.5 hr |
| **Class Discussion**  
_Review and discussion of concepts learned in above lectures._ | 1.5 hr |
| **Mid-term examination** | 3 hrs |
| **Design and conduct of randomized controlled trials**  
_Fundamentals of RCTs – why and what to randomize; research question; CONSORT statement; outcomes and measurement; sample size and power; data analysis, missing data and data imputation; challenges of RCTs in oncology; pilot data and feasibility studies; bias._ | 1.5 hr |
<table>
<thead>
<tr>
<th>15</th>
<th>Radiation Oncology and Medical Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical and biologic basis of radiation oncology; principles of hyperthermia; intensity modulated radiotherapy; stereotactic radiotherapy; radiosurgery; intra-operative radiotherapy; brachytherapy; radiobiology; photodynamic therapy; basic radiation physics; applied medical radiation physics; radiation protection; imaging and target volume; advances and future directions in radiation oncology and medical physics.</td>
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<td></td>
<td>3 hrs</td>
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<thead>
<tr>
<th>16</th>
<th>Surgical Oncology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Principles of surgical oncology; diagnostic, curative, and palliative procedures; vascular access in cancer patients; robotic surgery; color-coded surgery; ultrasound surgery; anesthesia; surgical complications.</td>
</tr>
<tr>
<td></td>
<td>Cancer care models: breast</td>
</tr>
<tr>
<td></td>
<td>Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.</td>
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<td>1.5 hr</td>
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<thead>
<tr>
<th>17</th>
<th>Cancer care models: colorectal</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.</td>
</tr>
<tr>
<td></td>
<td>Cancer care models: lung</td>
</tr>
<tr>
<td></td>
<td>Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.</td>
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<tr>
<th>18</th>
<th>Cancer care models: prostate</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.</td>
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<tr>
<td>Course Outline</td>
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</tbody>
</table>
| **Cancer care models: hematologic malignancies**  
*Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.* | 1.5 hr |
| 19 | **Cancer care models: gynecologic**  
*Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.*  
Cancer care models: head and neck  
*Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.* | 1.5 hr |
| 20 | **Cancer care models: brain tumours**  
*Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.*  
Cancer care models: dermatologic  
*Prevention and screening, initial presentation; diagnosis and referral; assessment and treatment planning; treatment; surveillance and follow-up care; survivorship; relapse and retreatment; palliative care.* | 1.5 hr |
| 21 | **Cancer care models: pediatric**  
*Basic pathophysiology of hematological disease and cancer in infants, children, and adolescents; differential diagnosis; management; outcome; specific issues.*  
Adolescent and Young Adult Oncology  
*Basic pathophysiology of hematological disease and cancer in adolescents and young adults; differential diagnosis; management; outcome; specific issues.* | 1.5 hr |
| 22 | **Geriatric oncology and cancer care in the community**  
*Treatment considerations; pre-treatment risk assessment; polypharmacy; side-effect management; geriatric assessment; chemotherapy side-effect scoring system; prognostication tools; quality of life; palliative care.*  
Models of cancer care delivery  
*Cancer care delivery models; cost-efficiency; quality of care.* | 1.5 hr |
### Course Outline – Fundamentals of Oncology and Cancer Research

| 23 | Health economics/health services utilization  
*Health care system; determinants of health; health care as a commodity; health care insurance; demand and supply; economic evaluation models; quality-adjusted life-years.*  
Standards of quality in cancer care  
*Quality standards; program accreditation; standardized performance measures; accountability, quality improvement, and surveillance.* | 1.5 hr |
| 24 | Gauging patient satisfaction and trajectory of care  
*Patient satisfaction domains; measures; clinical benchmarks; program evaluation.*  
Survivorship (including community support organizations)  
*Long term and late treatment side-effects; adult survivors of childhood cancers; adolescents and young adults with cancer; managed chronic or intermittent disease; transition into survivorship; fear of cancer recurrence; survivorship care plan.* | 1.5 hr |
| 25 | Whole Person Care  
*Suffering, whole person care, and the goals of medicine; healing; death anxiety; mindfulness.*  
Class Discussion  
*Review and discussion of concepts learned in above lectures.* | 1.5 hr |
| 26 | Final examination | 3 hrs |

**Assignments and Evaluation**

There will be a midterm and a final examination consisting of multiple choice and several short answer questions. The midterm examination accounts for 30% of the final grade and the final examination for 40%. The final examination is considered cumulative. Two student papers (one mid- and one end-of-year) and participation/attendance will account for 25% and 5% of the grade, respectively. The papers will ask that students review and discuss two topics covered during the year. The discussion will need to convey an integrated multidisciplinary perspective as well as comprise public policy elements.

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Course Outline – Best Practices in Biomedical Research

Course #: ONCO 620  
Section #:  
Term: Fall  
Year: 2018  
Course pre-requisite(s): None  
Course co-requisite(s): None  
Course schedule (day and time of class): TBD  
Number of Credits: 3  
Course Location: 5100 de Maisonneuve Blvd West

Instructor: Dr. Eduardo Franco  
Email: eduardo.franco@mcgill.ca  
Telephone number for office appointments: 514.398.8014  
Office hours for students: As needed by students with email consultation  
Office location: Gerald Bronfman Department of Oncology, 5100 de Maisonneuve Blvd West

Course Overview  
Overview of research ethics as well as best practices and guiding principles in planning, conducting and publishing a research investigation. Topics include (i) ethics in biomedical research, (ii) reading and reviewing papers, (iii) research integrity and (iv) scholarly publishing. Examples will be taken from the field of cancer research. The importance of interdisciplinary collaboration in enhancing the value of biomedical research will be illustrated.

Learning Outcomes  
By the end of this course students should be able to:  
1) Appreciate the importance of ethical principles in biomedical research.  
2) Know how to apply ethical principles when conducting research on human subjects and animals as well as in the field of epidemiology and public health.  
3) Read and review a scientific paper.  
4) Understand the importance of integrity in science and of the dangers of plagiarism and fabrication to the scientific record.  
5) Appreciate the steps involved in writing and publishing a scientific paper.

Instructional Methods  
Instructional approaches include a combination of lectures, assigned readings, discussions, and student presentations. It is expected that students will attend all classes.

Required Course Material  
Students will be provided with seminar slides at least 24 hours in advance of a lecture. They will also be provided with a list of additional resource reading on each lecture topic, which will be provided on the first day of this course.
Course Content
A description of the lectures is found below. The order is subject to change based on lecturer availability. An updated schedule for the year will be provided on the first day of each academic year.

Class 1
Topic 1: History of research ethics with human subjects (1.5 hrs)
Description: Nuremberg Code, Declaration of Helsinki, National Research Act (US), Tri-Council Policy Statement (Canada), examples of experiments done before the advent of research ethics (during World War II, thalidomide, Tuskegee Syphilis Study, nutrition experiments in Canadian Residential schools).

Topic 2: Principles of bioethics (1.5 hrs)
Description: Autonomy, non-maleficence, beneficence, justice.

Class 2
Topic: Research on human subjects (3 hrs)
Description: Clinical equipoise, informed consent, drafting a consent form, confidentiality, research ethics boards, reporting serious adverse events, withdrawal from a study.

Instructions for assignment
Topic: Ethics in epidemiology and public health research (3 hrs)
Description: Welfare of the individual, welfare of the public, individual choices, public health resources.

Class 3
Topic: Animal research (3 hrs)
Description: Acquisition of laboratory animals, housing and care, ethical and humane conduct.

Class 4
Assignment is due
Topic 1: Case Studies - research on human subjects (3 hrs)
Description: Studies in epidemiology and global cancer control, psychosocial oncology and palliative care, clinical trials. Group discussion of each case.

Class 6
Mid-term exam (3 hrs)

Class 7
Topic: Reading and reviewing a paper (3 hrs)
Description: Purpose of the study, study design, results, discussion of the results and importance to advancing the field.
Class 8
Topic: Designing a research study (3 hrs)
Description: Ethical considerations, value to the field, feasibility, principles of grantsmanship.

Class 9
Topic: Data collection and management (3 hrs)
Description: Data ownership, misrepresentation of data, ensuring confidentiality, interim data analysis.

Class 10
Topic: The business of scholarly publishing I (3 hrs)
Description: Types of papers (short communication, original research paper, review, commentary, letter), how to write a paper, authorship, plagiarism, understanding citation metrics.

Class 11
Topic: The business of scholarly publishing II (3 hrs)
Description: Choosing a journal, open access, submission process, peer review, conflict of interest, revisions, press releases, publishing from the perspectives of the author, reviewer, and editors.

Class 12
Topic: Student presentations of a paper (3 hrs)
Description: Each student will present a journal article.

Class 13
Final examination (3 hrs)

Assignments and Evaluations
As an assignment students will be required to draft a consent form based on a research study that will be provided to them.

Mid-term exam 30%
Assignment 15%
Student presentation 15%
Final exam 40%

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Course Outline – Oncology Practicum

Course #: ONCO 630 J1/J2/J3
Section #: 
Term: Winter, Summer, Fall
Year: 2018-2019
Course pre-requisite(s): None
Course co-requisite(s): None
Course schedule (day and time of class): Not applicable
Number of Credits: 18
Course Location: Off Campus

Instructor: Dr. John Kildea
Email: john.kildea@mcgill.ca
Telephone number for office appointments: 514-934 1934 x 44154
Office hours for students: TBD
Office location: Cedars Cancer Centre, Medical Physics, DS1.7141, McGill University Health Centre - Glen Site

Course Overview
Involvement in various aspects of the research or quality improvement process with relevance to the students’ chosen stream. Practical experience may include grant applications, experimental design, protocol development, participant screening, data collection, data analysis, literature reviews, quality improvement design, implementation or assessment.

Learning Outcomes
By the end of this practicum students will:
1) Have a better understanding of how to develop, carry out and analyze or assess a research project or quality improvement initiative.
2) Increase their exposure to cancer-related research and clinical projects in other disciplines.

Instructional Method
Practicum

Required Course Materials
Required reading is project-specific and tailored to the learning needs of the student.

Practicum Outline
In consultation with the course instructor students will choose or be given a supervisor.

Students in the streams (i) Population and Global Cancer Control and (ii) Psychosocial and Palliative Care will be involved in various aspects of the research process, such as grant applications, experimental design, data collection and data analysis. In-depth literature reviews, such as meta-analyses or syntheses, are also eligible topics. Their practicum will be conducted at the location of their supervisor.
Students in the Clinical Cancer Research stream will be involved in various aspects of a clinical trial such as protocol development, participant screening, data collection or data analysis. Observational studies of prognostic effects of treatments and patient characteristics will also be acceptable projects. The latter will take advantage of the wealth of clinical data across all McGill teaching hospitals.

Their practicum will be conducted in any oncology-related discipline for example: medical oncology, radiation oncology, surgical oncology, hematologic oncology, gynecologic oncology, head and neck oncology, pediatric oncology, supportive and palliative care, etc. at one of the McGill-affiliated hospitals. Students will benefit from interactions with the cancer-specific clinical trial coordinating offices at the hospitals.

Students in the Cancer Care Services and Quality stream will be involved in various aspects of quality improvement including the design, implementation or assessment of a quality improvement initiative. Their practicum will be conducted in any oncology-related discipline, such as the ones listed above. The training and assignments will be held at one of the McGill-affiliated hospitals.

Student involvement in these activities should be no more than 240 hours spread evenly over three terms. Students will be required to keep a log of their hours which will be monitored by the supervisor.

In the fall term students will give a presentation of their practicum work to their peers in all four streams.

At the end of the fall term students will submit a structured report on their practicum including not only the work they performed but also a summary of the projects in which they were involved. The report should be detailed enough to describe the knowledge gained and how they applied concepts learned in their courses.

**Assignments and Evaluations**

- Practicum Activities 55%
- Presentation 15%
- Report 30%

The supervisor is responsible for grading the student and transmitting the grade to the course instructors.

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Course Outline – Principles and Practice of Clinical Trials

Course #: ONCO 615
Section #: 
Term: September
Year: 2018
Course pre-requisite(s): None
Course co-requisite(s): None
Course schedule (day and time of class): TBD
Number of Credits: 3
Course Location: Downtown

Instructor: Dr. Agnihotram V. Ramanakumar
Email: raman.agnihotram@mcgill.ca
Telephone number for office appointments: 514-934-1934 x 35630
Office hours for students: TBD
Office location: TBD

Course Overview:
An overview of the design, conduct and analysis of clinical trials. Topics include types of clinical trials, study designs, practical considerations when setting up a clinical trial, ethics, regulatory requirements, trial monitoring, data management, investigator responsibilities and statistical analysis.

Learning Outcomes
By the end of the course students should be able to:
1) Understand the different clinical research methods and types of clinical trials.
2) Understand research, statistical, and ethical aspects of clinical trials, including study design, randomization scheme, patient recruitment methods, quality control, ethical conduct, and analysis.
3) Discuss the concepts behind different trials and how to interpret the results.
4) Demonstrate capacity to design clinical trials (Phase I-IV).

Instructional Methods
Instructional approaches include a combination of lectures, assigned readings, discussions, and student presentations. Lectures are designed to introduce major concepts in the planning, conduct, and analysis of clinical trials. Class discussions will focus on assigned readings or a one-on-one interaction with experts in the field. It is expected that students will attend all classes.

Required Course Material
Students will be provided with seminar slides at least 24 hours in advance of a lecture. They will also be provided with a list of additional resource reading on each lecture topic, which will be provided on the first day of this course. The course material derives from major textbooks and seminal articles for each topic. The Library provides access to the course materials, both print and online, in its Course Reserve system. The Library can put the course reserve materials on short-term loan at the branch libraries, while also linking to online materials (both e-books and e-journal articles). Course Packs are made available at the library branches, along with print and online links.
for the materials listed in these Course Packs. Recommended textbooks will be available for consultation at the library.

**Optional Course Material**
2. Food and Drug Administration (USA). Investigator Responsibilities- Regulation and Clinical Trial. 2013

**Course Content**
A description of the lectures is found below. Topics are arranged in accordance with the natural progression of clinical trial design, conduct and analysis.

**Class 1**

**Topic 1:** Phase I and II clinical trials (1.5 hrs)
**Description:** Fundamentals of clinical trials, prerequisites of therapeutic studies in humans, Phase I and II clinical trials

**Topic 2:** Phase III clinical trials – Part 1 (1.5 hrs)
**Description:** Confirmatory trials with focus on Phase III. Their importance in regulatory submissions.

**Class 2**

**Topic 1:** Phase III clinical trials – Part 2 (1.5 hrs)
**Description:** Confirmatory trials with focus on Phase III. Their importance in regulatory submissions.

**Topic 2:** Phase IV – Post-marketing surveillance trials (1.5 hrs)
**Description:** Real world analysis designs, post-marketing trials and Phase IV trials.

**Class 3**

**Topic:** Clinical trial designs (3 hrs)
**Description:** Uncontrolled, before/after, historical, concurrent, non-randomized, randomized, cross-over etc.

**Class 4**

**Topic 1:** Role of biostatistics in the planning of clinical trials (1.5 hrs)
**Description:** Sample size, power calculations, randomization scheme.

**Topic 2:** Group discussion of selected journal articles focusing on concepts learned in the above lectures (1.5 hrs)

**Instructions for Assignment 1**
Class 5

**Topic:** Fundamentals of setting up and managing clinical trials (3 hrs)

**Description:** Infrastructure, setting up the clinical trial team, practical aspects of management of clinical trials.

Class 6

**Topic 1:** Clinical trials regulatory requirements (1.5 hrs)

**Description:** Requirements of national and international regulatory boards.

**Topic 2:** Clinical trial monitoring, audits, quality control (1.5 hrs)

**Description:** Understanding different components of a trial e.g. Case Report Forms (CRF), Data Verification Forms (DVF), Data Management Plan (DMP), Data Validation Plan (DVP), Good Clinical Practice (GCP), Standard Operating Procedures (SOP) etc.

Class 7

**Topic 1:** Managing clinical trial data and investigator/study coordinator responsibilities (1.5 hrs)

**Description:** Generating data, managing data, reporting adverse events, when to stop a trial

**Topic 2:** Group discussion of selected journal articles focusing on concepts learned in the above lectures. (1.5 hrs)

**Instructions for Assignment 2**

Class 8

**Topic 1:** Discussion with a clinical trial manager (1.5 hrs)

**Description:** The role of the clinical trial manager

**Topic 2:** Discussion with a clinical trial nurse (1.5 hrs)

**Description:** The role of the clinical trial nurse

Class 9

**Topic 1:** Analysis – statistics for Phase I-II trials (1.5 hrs)

**Description:** Outcome from parallel non-comparative regimens, randomized selection designs, randomized screening designs.

**Topic 2:** Analysis – statistics for Phase III-IV trials – Part 1 (1.5 hrs)

**Description:** Multiple treatment groups and endpoints, subgroup analysis, interim analysis, meta-analysis of randomized controlled trials.

Class 10

**Topic 1:** Analysis – statistics for Phase III-IV trials – Part 2 (1.5 hrs)

**Description:** Multiple treatment groups and endpoints, subgroup analysis, interim analysis, sequential analysis, meta-analysis of randomized controlled trials.
Topic 2: Adaptive Trials (1.5 hrs)
**Description:** New ways of designing and analyzing clinical trials with adaptations such as dosage, sample size, and patient eligibility, etc.

**Instructions for Assignment 3**

Class 11
**Topic 1:** Measurement of quality of life in clinical trials (1.5 hrs)
**Description:** Identifying a suitable setting to conduct quality of life-related clinical trials, discussing instruments, understanding psychometric properties to assess the quality of life.

**Topic 2:** Group Discussion of selected journal articles focusing on analysis of data (1.5 hrs)

Class 12
**Written proposal is due**

**Topic:** Statistical software (3 hrs)
**Description:** Use of statistical software, how to calculate the sample, run the analysis, etc.

Class 13
**Topic:** Student presentations and discussion (3 hrs)

**Evaluation**
There will be three short assignments that will test the understanding of the concepts learned. Students will also be required to develop a clinical trial proposal in his/her area of interest and present it to the class. The instructor will suggest that the projects are representative of each of the four clinical trial phases. The aim of the presentation is to identify shared objectives as well as differences between the various type of clinical trials.

**Assignment #1 – 15%**
**Assignment #2 – 15%**
**Assignment #3 – 15%**
**Written Proposal – 30%**
**Presentation – 20%**
**Class Participation – 5%**

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Course Outline – Quality Improvement Principles and Methods

Course #: ONCO 625
Section #: None
Term: Fall
Year: 2018
Course pre-requisite(s): None
Course co-requisite(s): None
Course schedule (day and time of class): TBD
Number of Credits: 3
Course Location: Off Campus

Instructor: Dr. Carolyn Freeman
Email: carolyn.freeman@muhc.mcgill.ca
Telephone number for office appointments: TBD
Office hours for students: TBD
Office location: Cedars Cancer Centre, MUHC Glen Site

Course Overview
Basic principles and methodology of quality improvement in health services delivery. Topics include developing and conducting quality improvement initiatives, data collection, data analysis and implementation of change.

Learning Outcomes
By the end of this course students will be able to:
1) Appreciate the value of quality improvement in healthcare and other industries.
2) Distinguish between the different quality improvement methods.
3) Understand the process of developing and conducting a quality improvement initiative.
4) Analyze quality improvement data.
5) Recognize the importance of leadership and engagement of patient partners and other stakeholders in the implementation and sustainability of change.

Instructional Method
Instructional approaches include a combination of lectures, group discussions, assigned readings and workshops, led by local and guest experts in quality improvement, change management and organizational growth. It is expected that students will attend all classes.

Required Course Materials
Students will be provided with seminar slides at least 24 hours in advance of each lecture. They will also be provided with a list of additional resource reading on each lecture topic on the first day of this course. The course material derives from major textbooks and seminal articles. The library will provide access to the course materials, both print and online, in its Course Reserve System. Course packs will be made available at the library along with print and online links for the materials listed in the course packs. Recommended textbooks will be available for consultation at the library.

Optional Course Materials
Institute for Healthcare Improvement: http://www.ihi.org/Pages/default.aspx

Course Content
A description of the lectures is found below. Topics are arranged in accordance with the natural progression of the design, conduct and implementation of Quality Improvement initiatives.

Class 1
Topic: Introduction to Quality Improvement (3 hrs)
Description: What is quality improvement, origins of quality improvement, why quality improvement initiatives are undertaken, types of change processes, examples of seminal quality improvement initiatives that have changed practice in healthcare and other industries.

Class 2
Topic: External factors that can impact quality of healthcare delivery (3 hrs)
Description: Role of personal factors, the physical environment, technology and organization on quality of care and patient safety.

Class 3
Topic 1: Quality Improvement Methods (1.5 hrs)
Description: Clinical practice improvement, root cause analysis, failure mode and effects analysis, lean approach, Plan-Do-Study-Act (PDSA) cycles, systems approach.

Topic 2: Quality Improvement Tools (1.5 hrs)
Description: Cause & effect diagrams, process maps, run charts, control charts, Pareto charts.

Class 4
Topic: Developing a Quality Improvement Initiative Part 1 (3 hrs)
Description: What needs improvement and why, objectives, choosing a team, decision on changes to be implemented (change ideas, change concepts), assessing risk. This lecture will be a combination of didactic teaching using real life examples, and student participation.

Class 5
Topic: Developing a Quality Improvement Initiative Part 2 (3 hrs)
Description: Measures to be used (outcome, process, balancing, PDSA), applying PDSA cycles. This lecture will be a combination of didactic teaching using real life examples, and student participation.

Class 6
Mid-term exam (3 hrs)

Class 7
Topic: Collecting Quality Improvement Data (3 hrs)
Description: Data collection methods (e.g. surveys, interviews, focus groups, literature reviews, record analysis, chart reviews), timing and amount of data to be collected, defining what will be measured – numerator and denominator. This lecture will be a combination of didactic teaching using real life examples, and student participation.
Class 8

**Topic:** Analyzing Quality Improvement Data (3 hrs)
**Description:** Data analysis methods. This lecture will be a combination of didactic teaching using real life examples, and student participation.

Class 9

**Topic:** Quality Improvement workshop (3 hrs)
**Description:** Students (in pairs) will be assigned various tasks from designing a quality improvement initiative to analyzing data. Each pair will present their work to the class.

Class 10

**Topic 1:** Impact of technology and information sharing on quality of healthcare delivery (1.5 hrs)
**Description:** Electronic health records, registries.

**Topic 2:** Value-based care (1.5 hrs)
**Description:** Patient-reported outcomes, quality indicators.

Class 11

**Topic 1:** Building organizational support for change (1.5 hrs)
**Description:** Developing a culture of improvement, building capacity and capability of health care professionals.

**Topic 2:** Patient engagement in the change process (1.5 hrs)
**Description:** Strategies to encourage patient participation, e.g. patient partnership, committees, focus groups, surveys.

Class 12

**Topic 1:** Change management (1.5 hrs)
**Description:** Using a project charter, managing risk

**Topic 2:** Leadership and building capacity and capability (1.5 hrs)
**Description:** Distributed leadership, persuading stakeholders to embrace change, supporting QI teams.

Class 13

Final Exam (3 hrs)

**Evaluation**
Mid-term exam 30%
Quality Improvement workshop and presentation (see above for class 9) 25%
Final exam 40%
Class participation 5%
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MORE Series

The MORE series, which occurs twice a month on Fridays, is an integral component of the Gerald Bronfman Department of Oncology’s Medical, Surgical and Radiation Oncology Residency Training Programs at McGill University. Each session features one to three speakers and focuses on a particular disease site or on areas that cut across all disease sites. Presentations are 30 to 40 minutes (1-2 hours if there is only one speaker) with time allotted for discussion, and covers an overview of standards of clinical or research practice, as well as clinical controversies of significance. Presentations include landmark trials on multi-modality treatment, take-home messages and if possible, a list of suggested readings.

Journal Club

The Journal Club is a joint initiative of the Gerald Bronfman Department of Oncology’s clinical and epidemiology divisions to provide a relaxed environment for our residents, students, fellows, faculty, and academic staff to brush up on clinical research methodology. Each article serves as a case study for an interactive discussion of issues pertaining to study design, ethics, data analysis, and strategies of communicating and interpreting results of clinical oncology research. The substantive message of the paper is less important than the research process. How does the latter contribute to make findings credible and generalizable? Articles are selected from entries in recent tables of contents of popular oncology and general medical journals. The journal club coordinators screen potentially interesting articles to have a broad representation of the types of studies that prevail in the oncology literature, e.g., randomized controlled trials, prospective or retrospective observational studies of cancer survival, investigations of screening or diagnostic interventions, meta-analyses, analyses of the cost-effectiveness of therapeutic interventions, etc. There are no perfect studies; participants should assess each article critically to identify strengths and weaknesses of the investigation, examine the authors’ strategy in communicating the research findings, and the added editorial value of the journal that published it. During the one-hour session a presenter summarizes the article to the audience informally. Audience members are encouraged to ask questions or make comments throughout the presentation in an interactive fashion. Oncology and epidemiology faculty members will be in attendance to moderate the discussion and explain specific study characteristics and research implications.
### Example of MORE Series/Journal Club Schedule

**Multidisciplinary Oncology Residents Education (MORE) Sessions: July 2016 – June 2017**

McGill University – Gerald Bronfman Department of Oncology  
GLEN Room: D02.1312

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>SPEAKERS</th>
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<tbody>
<tr>
<td>July 8, 2016</td>
<td>Basic Science – Molecular Techniques</td>
<td>Dr. Luke McCaffrey – 2 hours</td>
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<tr>
<td>July 22, 2016</td>
<td>Basic Science - Cancer Biology</td>
<td>Dr. Luke McCaffrey – 2 hours</td>
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<tr>
<td>August 5, 2016</td>
<td>Cancer Pharmacology</td>
<td>Dr. Lawrence Panasci - 2hours</td>
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<tr>
<td>August 19, 2016</td>
<td>Journal Club*</td>
<td>Resident – Dr. Arif Awan</td>
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<td>September 9, 2016</td>
<td>Fertility</td>
<td>Drs. Belen Herrero and Peter Chan</td>
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<td>September 30, 2016</td>
<td>Topic : Oncologic Emergencies</td>
<td>Dr. Raghu Rajan (S, I)</td>
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<td>Location</td>
<td>Dr Kristin Popiel (S, I)</td>
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<td>McGill Simulation Center</td>
<td>Dr. Dev Jayaraman (S, I)</td>
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<td>Dr Catherine Pembroke (S)</td>
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<td>Dr. Joanne Alfieri (I)</td>
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<td></td>
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<td>S: Speaker; I: Invigilator</td>
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<tr>
<td>October 14, 2016</td>
<td>Skin Melanoma--Cancelled</td>
<td>Dr. Scott Owen</td>
</tr>
<tr>
<td></td>
<td>Competence by Design – Only Medical</td>
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<tr>
<td></td>
<td>Oncology Residents were invited.</td>
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<tr>
<td>October 28, 2016</td>
<td>Journal Club*</td>
<td>Resident – Dr. Aurelie Garant</td>
</tr>
<tr>
<td>November 11, 2016</td>
<td>Prostate Cancer I – Low risk, high risk,</td>
<td>Med Onc: Dr. Cristiano Ferrario</td>
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<tr>
<td></td>
<td>metastatic</td>
<td>Surg Onc: Dr. Franck Bladou</td>
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<tr>
<td></td>
<td></td>
<td>Rad Onc: Dr. Fabio Cury</td>
</tr>
<tr>
<td>December 2, 2016</td>
<td>Head and Neck Oncology</td>
<td>Dr. Anthony Zeitouni</td>
</tr>
<tr>
<td>December 9, 2016</td>
<td>Sarcomas</td>
<td>Med Onc: Dr. Thierry Alcindor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surg Onc: Dr. Krista Goulding</td>
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<tr>
<td></td>
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<td>Rad Onc: Dr. Fabio Cury</td>
</tr>
<tr>
<td>December 16, 2016</td>
<td>Palliative Care/Cancer Cachexia (cancelled)</td>
<td>Pal Care: Dr. Manuel Borod</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cancer Cachexia: Dr. Antonio Vigano</td>
</tr>
<tr>
<td>January 13, 2017</td>
<td>Colorectal II – Adjuvant therapy for anal</td>
<td>Med Onc: Dr. Raghu Rajan</td>
</tr>
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<td></td>
<td>and colorectal cancers</td>
<td>Surg Onc: Dr. Marylise Boutros</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rad Onc: Dr. Té Vuong</td>
</tr>
<tr>
<td>January 27, 2017</td>
<td>Journal Club*/Cancer Cachexia</td>
<td>Resident: Dr. Atuhani Burnett</td>
</tr>
<tr>
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<td>Lecture: Dr. Antonio Vigano</td>
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<tr>
<td>February 10, 2017</td>
<td>Kidney/Renal Cell Cancer</td>
<td>Rad Onc: Dr. Fabio Cury</td>
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<tr>
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<td>Med Onc: Dr. Raghu Rajan</td>
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<tr>
<td>February 24, 2017</td>
<td>Esophagus/Gastric Cancers</td>
<td>Rad Onc: Dr. Joanne Alfieri</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surg Onc: Dr. Lorenzo Ferri</td>
</tr>
<tr>
<td>March 10, 2017</td>
<td>Cancer Support</td>
<td>Ms. Helen Rossiter (Cedars CanSupport)</td>
</tr>
<tr>
<td></td>
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<td>Ms. Suzanne O’Brien (Hope &amp; Cope)</td>
</tr>
<tr>
<td>March 24, 2017</td>
<td>Cancer Genetics</td>
<td>Dr. William Foulkes</td>
</tr>
<tr>
<td>April 7, 2017</td>
<td>Journal Club*</td>
<td>Resident: Dr. Karyne Martel</td>
</tr>
<tr>
<td>April 21, 2017</td>
<td>Genitourinary Cancers</td>
<td>Surg Onc: Dr. Armen Aprikian</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Med Onc: Dr. Marie Vanhuyse</td>
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<tr>
<td></td>
<td></td>
<td>Rad Onc: Dr. Luis Souhami</td>
</tr>
<tr>
<td>June 2, 2017</td>
<td>Best Practices in Research Protocol Design</td>
<td>Dr. Eduardo Franco</td>
</tr>
<tr>
<td>May 26, 2017</td>
<td>Any Make-up session--</td>
<td>No session</td>
</tr>
<tr>
<td>June 9, 2017</td>
<td>Any Make-up session</td>
<td>No session</td>
</tr>
</tbody>
</table>

*Coordinator: Dr. Eduardo Franco*
Moulay Alaoui-Jamali


Alaoui-Jamali, M. *Molecular profiling of inflammatory breast cancer.* Qatar Foundation. $150,000 per year (2015-2016).


Appendix 6 – Research Funding 2012-2017

Thierry Alcindor

Dancey J, Alcindor T. Canadian Cancer Society Research Institute (CCSRI). $23,800,000 (2017-2022)
Herrero B, Alcindor T. Quality Improvement Initiative Fund grant, Rossy Cancer Network. $50,000 (2015-2016)

Kavan P, Alcindor T. Rossy Cancer Network grant. $50,000 (2015-2016)

Alcindor T, Assouline S, Ferrario C. Canadian Cancer Clinical Trials Network grant. $1,500,000 (2014)

Ferri L, Alcindor T. Rossy Cancer Network grant. $50,000 (2014-2015)


Batist G, Alcindor T. Terry Fox Research Institute operating grant. $1,200,000 (2013-2015)

Batist G, Alcindor T. Québec Consortium for Research in Oncology (Q-CROC) research project. Fonds de la recherche en santé du Québec (FRSQ). $1,500,000 (2009-2012)

Armen Aprikian


Saad F, Aprikian A. Terry Fox – Canadian Prostate Cancer Biomarker Network. (2010-2016)

Jamil Asselah

Appendix 6 – Research Funding 2012-2017

Asselah J. *PEP ACT (Patient Education Program Adherence to Cancer Treatment) - to improve patients’ education and patient adherence to cancer treatment.* $50 000

Laurent Azoulay

Filion KB, Azoulay L. *Incretin-based drugs and the risk of adverse renal outcomes.* Canadian Institutes of Health Research – Project Scheme Grant. $100,000 (2016-2017)


Azoulay L. *The use of highly prolactin-elevating antipsychotics and the risk of ovarian and endometrial cancer.* Canadian Institutes of Health Research – Operating Grant. $117,400 (2012-2014)

Tagalakis V, Azoulay L. *Statin use and the prevention of recurrent venous thromboembolism in the elderly: The STAVENO study.* Canadian Institutes of Health Research – Operating Grant. $63,635 (2013-2014)


Azoulay L. *Creating a mother-child registry using large electronic medical databases from the United Kingdom.* Lady Davis Institute Clinical Research Pilot Project (CliPP). $25,000 (2012-2013)
Azoulay L. 5-alpha reductase inhibitors and the prevention of prostate cancer. Canadian Institutes of Health Research – Operating Grant. $200,797 (2010-2013)


Henry M, Azoulay L. Randomized Controlled Trial of the Meaning-Making Intervention (MMi) in Patients Newly Diagnosed with Advanced Cancer: A Pilot Study. Canadian Institutes of Health Research – Operating Grant. $100,000 (2012-2013)

Mark Basik


Basik M. Circulating nucleic acids in early breast cancer. Merck Sharp Dohme McGill Faculty of Medicine Translational Research Award. $ 200000 (2014-2016)


Basik M. Molecular profiling of drug resistant triple negative breast cancer. Genome Quebec. $ 2148564 (2010-2015)


Gerald Batist

Batist G, Borchers C. iMALDI-based Assays for Protein Activity to Improve Patient Selection for Therapeutic Akt Inhibitors in Cancer Treatment. Genomic Applications Partnership Program (GAPP), Genome Canada. $3,000,000 (2016-2018)


Körner A, Batist G (Co-PI), Spatz A, Rosberger Z, Drapeau M, Thombs B. Réduction de la mortalité chez les patients atteints de mélanome par l'adoption de comportements de santé. FRSQ, Operating grant - Sante des populations. $172,547 (2011-2014)


résistance thérapeutique dans le cancer. FRSQ, Programme du fonds d’innovation Pfizer-FRSQ (#16759). $1,500,000. (2009-2012)

Nathaniel Bouganim


Clemons M, Bouganim N. A Randomized, Phase III Trial of Individualised Care versus Standard Care, in the Prevention of Chemotherapy Induced Nausea and Vomiting in Breast Cancer Patients. CBCF grant. $145 000 (2011-2015)

Robin Cohen


Appendix 6 – Research Funding 2012-2017


Baxter S, Stajduhar K, Cohen SR. Caring about caregivers: a collaborative approach to advancing knowledge and practice for family caregivers. CIHR Knowledge Translation Supplement. $97,250 (2012-2013)


Alice Dragomir

Dragomir A. *Subvention d’établissement de jeune chercheur*. FRQS. $60,000 (2016-2019)


Dragomir A. Educational grant. Astellas Pharma Canada. $50,000


Dragomir A. *Quantitative assessment of the number of mCRPC prostate cancer patients with poor prognostic factors and/or demonstrating rapid progression or non-response to abiraterone among a Quebec cohort of post-docetaxel abiraterone patients*. Study Sponsor: Sanofi Canada. (Unrestricted grant). $13,000 (2014)

Dragomir A. Cost and budgetary impact analysis of the use of different LH-RH antagonists on overall treatment costs among locally advanced and metastatic castration resistant prostate cancer patients treated in the province of Quebec. Study Sponsor: Sanofi Canada. (Unrestricted grant) $15,600 (2014-2015)


Dragomir A. Estimation of Out-of-Pocket costs incurred by patients with prostate cancer. Study Sponsor: Sanofi Canada, Study Partner: Prostate Cancer Canada. $20,000


Marc Fabian


Fabian MR. Action of the CCR4-NOT complex in mammalian gene silencing networks. Canadian Foundation for Innovation — Infrastructure Grant. $150,000 (2013)

Sonenberg N, Fabian MR, Duchaine T. Mechanism of miRNA action in translation and mRNA decay. Canadian Institutes of Health Research — Operating Grant. $785,000 (2009-2014)

William Foulkes


Appendix 6 – Research Funding 2012-2017

Foulkes WD, Tonin PN, Majewski J, Rousseau F. *The genetics of breast cancer in Quebec populations: twenty years after BRCA1/2*. Quebec Breast Cancer Foundation (QBCF). $500,000 (2015-2018)


Foulkes WD, Witcher, M. *Towards a biological understanding of small cell carcinoma of the ovary, hypercalcemic type*. CCSRI. $200,000 (2014-2016)

Foulkes WD, Kovacs K, Horvath E, Albrecht S, Priest J. *DICER1 and pituitary blastoma: Keys to understanding pituitary development and tumorigenesis*. CCSRI. $200,000 (2013-2015)

Foulkes WD. *DICER1, microRNAs and pediatric cancer: an emerging story*. Alex’s Lemonade Stand Foundation. $250,000 (2013-2015)

Foulkes WD. *Identification de nouveaux gènes de susceptibilité à la néoplasie colorectale*. MESRST, SIIRI. $200,000 (2013-2016)


Foulkes WD. *Hereditary breast cancer: cause and effect*. Susan G Komen for the Cure Komen Scholar. $1,150,000 (2010-2016)


Mes-Masson, A, Foulkes WD et al. *Budget alloué dans le cadre du projet FRQS-Réseau de recherche sur le cancer (Axe banque de tissus et de données)*. FRQS. $280,000 (2009-2016)

**Eduardo Franco**

Franco E, Szyf M. *DNA Methylation Markers as Predictors of Lesion Grade Progression in Cervical Cancer*. Merck, Sharpe & Dohme Corporation/McGill Faculty of Medicine Grant for Translational Research. $200,000 (2016-18)


Appendix 6 – Research Funding 2012-2017


Franco E, Burchell A, Coutlée F, Tellier P. Randomized Controlled Trial of the Efficacy of Carrageenan as a Topical Microbicide Against HPV Infection. Canadian Institutes of Health Research (MOP-106610). $668,050 (2010-15)


Angela Genge

Genge A. Educational Grant for Community-based Dried Blood Spot Testing of Rare Diseases. Genzyme Canada, Investigator Initiated Trial. $75,000 (2017-2018)

Genge A. REALS: Testing the safety of repurposed Enoxacin for the treatment of Amyotrophic Lateral Sclerosis. E-Rare-3 Joint Transnational Call (2016) competition. $800,000 (2017-2020)


Genge A. Novel MRI biomarkers for monitoring disease progression in ALS. ALS Canada and Brain Canada, Arthur J. Hudson Translational Team Grant. $2,946,303 (2015-2020)


Genge A. Health Care resource utilization a comparison between Aubagio, Lemtrada and other DMTs in MS. Genzyme Canada, Investigator Initiated Trial. $300,000 (2015-2016)

Genge A. Magnetic resonance imaging of neurodegenerative disorders. CIHR, operating grant. $841,747 (2012-2017)
Genge A. *Magnetic resonance imaging biomarkers in ALS*. CIHR, Operating Grant $1,097,906 (2012 – 2017)


Genge A. *Comparison of DBS and muscle biopsy for the diagnosis of late onset Pompe’s disease*. Genzyme Canada, Investigator Initiated Trial. $30,000 (2013-2014)

**Walter Gotlieb**


Gotlieb W (Local PI). *Axe banque de tissus et de données*. FRQS-Réseau de recherche sur le Cancer. $480,000 (2004-2016)

Gotlieb W. *Trajectory of Care and cost analysis of robotic surgery for ovarian cancer*. Intuitive Fellowship. $84,000 (2016-2017)


Gotlieb W. *Analysis of abnormalities in Homologous Recombination and correlation with outcome in patients with high grade pelvic serous cancers*. Astra-Zeneca. $270,000 (2015-2016)

Gotlieb W. *Sequential therapeutic targeting of ovarian cancer harboring dysfunctional Brca1*. CCRS. $120,000 (2015-2017)


Appendix 6 – Research Funding 2012-2017

Gotlieb W. Phenomenome Discoveries: Clinical Validation of a Novel Metabolomic Screening Test for Ovarian Cancer Risk. $100,000 (2013-2014)

Gotlieb W. Adiponectin and BRCA1/2 ovarian cancer. Lady Davis Institute of Research. $100,000 (2013-2014)

Gotlieb W. A Pan-Canadian platform for the development of biomarker-driven subtype specific management of ovarian carcinoma. Terry Fox Research Institute, COEUR (canadian ovarian pan-canadian program). $1,102,000 (2012-2013)

Gotlieb W. Changing patterns of care among the elderly population following robotics. FRSQ/RQRV. $10,000 (2012-2013)

Gotlieb W. Reseau de recherché sur le cancer. FRSQ. $120,000 (2011-2014)

Gotlieb W (Co-Invesgtigator. CoHIPP study (Colposcopy vs HPV testing to identify persistent Precancers). Terry Fox Foundation. $1,200,000 (2009-2014)

Gotlieb W. Sexuality and related issues in elderly following cancers of the female genital tract. FRSQ/RQRV. $15,500 (2011-2012)

Gotlieb W. Changing patterns of care among the elderly population following robotics. FRSQ/RQRV. $12,500 (2011-2012)

Melissa Henry


Gagnon P, Henry M. Reseau Thematique FRQS: Reseau Quebec de recherche en soins palliatifs et de fin de vie. Quebec Health Research Fund (FRQS) – Reseau Thematique FQRS. $1,000,000 (2017-2021)


in patients newly diagnosed with advanced cancer: Full trial. Canadian Institutes of Health Research (CIHR) $683,365 (2015-2020)

Henry M, Hier M. Implementing and Evaluating a novel Interdisciplinary Team-Based Care Approach (ITCA-ThyCa) for people newly diagnosed with thyroid cancer: A Quasi-Experimental Study. Sanofi-Genzyme $143,980 (2015-2016)


Henry M. Building a solid knowledge foundation: A research program to innovate psychosocial care and reduce health care costs for head and neck cancer patients. Fonds de Recherche du Quebec – Santé (FRQS), FRQS Clinician-Scientist Salary Award $45,000 (2014-2017)


Henry M, Hier M. Developing and implementing a novel Interdisciplinary Team-Based Care Approach (ITCA-ThyCa) for people newly diagnosed with thyroid cancer patients: Pilot study. Genzyme Canada, a division of Sanofi-Aventis Canada Inc. $121,484 (2013-2015)


**Tarek Hijal**

Hijal T, Kildea J, Hendren L. MUHC Users Committee Grant. $6000 (2017)

Grover S, Hijal T. *The Breast Cancer Healthy Aging Program- Developing an e-health Program to Increase Daily Exercise and Reduce the Fatigue Associated with Breast Cancer Therapy.* Rossy Cancer Network QI Award. $100,000 (2016)

Hijal T, Alfieri J, Freeman C. *Proposal for a Quality Improvement Training Program in Radiation Oncology.* MUHC Centre for Medical Education Class of ’77 MedEd Innovation Grants Program 4000$ (2016)


Faria R, Hijal T. *Looking Forward; The Impact of a Supportive Re-entry Phase Program Tailored By and For Patients Completing Cancer Treatment.* Rossy Cancer Network QI Award. $100,000 (2014)

Law S, Stern D, Hijal T. *Women’s experiences of breast cancer.* Rossy Cancer Network QI Award. $100,000 (2014)

Ferri L, Hijal T. *Streamlining the Trajectory for Oesophago-gastric Patients with Cancer – The STOP-Cancer Initiative.* Rossy Cancer Network QI Award. $100,000 (2014)

Kildea J, Hendren L, Hijal T. *Addressing the pain of waiting through the use of technology.* MUHC Q+ Challenge Award. $150,000 (2014)

Kildea J, Hijal T (Co-PI). *Pilot project of self check-in kiosks in radiation oncology.* Rossy Cancer Network Quick Win Award. $25,000 (2014)


Hijal T. *Single Pre-Operative Radiation Therapy for breast cancer project.* McGill University Health Centre Research Institute Simone and Morris Fast Award in Oncology. $40,000 (2013)

Hijal T. *Single Pre-Operative Radiation Therapy for breast cancer project.* Awarded by the McGill University Health Centre Research Institute Simone and Morris Fast Award in Oncology. $40,000 (2012)
Nada Jabado


Jabado N. *Role of chromatin remodeling in the genesis of pediatric and young adult astrocytomas.* Canadian Institutes of Health Research. $788,500 (2013-2018)

Jabado N. *Identification and characterization of genes involved in the genesis and progression of pediatric astrocytomas.* Canadian Institutes of Health Research. $707,975 (2011-2016)

Sorensen P, Jabado N (PI). *Whole genome sequencing of pediatric high-grade astrocytomas.* Genome Canada (Genome Canada/CIHR) ATID-132-PED. $650,000 (2011-2013)

Jabado N. *Uncovering genetic defects in primary immune deficiencies.* Canadian Gene Cure Foundation. $90,000 (2011-2013)

Boycott K, Jabado N. *Exon sequencing of rare deficiency.* Genome Canada (RAF/CIHR/Genome Canada Advancing Knowledge). $75,000 (2011-2012)

Jabado N. *Validation of genetic defects identification in primary immunodeficiency.* McGill University Health Centre. $125,000 (2011-2012)

Jabado N, Rak J. *Stem Cell Research Suite for the Penny Cole Lab.* Cole Foundation - Commitment to the Penny Cole Lab (Equipment) $1,500,000 (2008-2013)

Thomas Jagoe


Appendix 6 – Research Funding 2012-2017

Baracos VE, Jagoe T. Canada-International network on Cancer associated cachexia. CIHR-Network Grant (#115557) $381,000 (2011-2014)


Petr Kavan


Kavan P. Xelox versus Folfox in colorectal cancer. Sanofi Aventis grant. $30 000 (2012-2013)

Vuong T, Bujold A, Edelstein K, Faria, J, Kavan P, Liberman A, Niazi T, Tu D, Optimizing treatment strategy for T4 recto-sigmoid cancer, CIHR $160,000 (2012-


Phase 2, Folfirinox downsizing protocol. Sanofi Aventis. $250,000 (2011-2013)

John Kildea


Kildea J, Seuntjens J. Addressing the risk from secondary neutrons in radiotherapy. CNSC student support grant. $15,000 (2016-2017)


Appendix 6 – Research Funding 2012-2017


Hendren L, Hijal T, Kildea J. *Realistic, knowledge-based waiting times in radiotherapy—Addressing the pain of waiting*. MUHC Challenge Q+ Award. $150,000 (2015-2016)

Kildea J, Seuntjens J. *Addressing the risk from secondary neutrons in radiotherapy*. CNSC student support grant. $15,000 (2015)

Kildea J. *Validation of the National System for Incident Reporting—Radiation Treatment*. CPQR student support grant. $19,750 (2015)

Kildea J, Seuntijens J. *Photoneutron research in radiotherapy*. CNSC student support grant. $15,000 (2014), $12,000 (2013)


**Pierre Laneuville**


Pelletier J, Laneuville P. *Engineering chromosome translocations to recapitulate primary events of human cancer*. Cancer Research Society. 2014-2016 ($120,000)


**Bernard Lapointe**


Carmen Loiselle


Loiselle CG, Gotlieb W. Acceptability, usability and implementation potential of a mobile health application called BELONG as perceived by health care providers and women with gynecological cancer. Gloria's Girls. $25,000 (2016-2017)


Thombs B, Benedetti A, Loiselle CG. Improving depression screening in medically ill patients by reducing bias and including individual patient characteristics in accuracy estimates: An independent patient data meta-analysis of the Hospital Anxiety and Depression Scale (HADS). Canadian Institutes of Health Research (Knowledge Synthesis grant). $100,000 (2016)

Appendix 6 – Research Funding 2012-2017


Christine Maheu


Lambert S, Côté J, Laizner AM, Henry M, Maheu C, Faria R, Thibodeau K, Cooke A, Bitzas VB. *Adapting a self-directed coping skills intervention for caregivers of patients with


Lambert S, Maheu C, Laizner A. *The effectiveness of culturally adapted health education interventions among CALD patients with a chronic illness: A systematic review and meta-analysis.* Réseau de recherche en interventions en sciences infirmières du Québec (RRISIQ) Special call for the pilot project. $15,000 (2015)


Lambert S, Laizner A, Maheu C, Dubois S, Folch N, Gélinas-Phaneuf E. *A qualitative study of the information and support needs of patients with a chronic illness from culturally and linguistically diverse backgrounds*. Réseau de recherche en interventions en sciences infirmières du Québec (RRISIQ) Pilot projects for McGill University and Université de Montréal. $15,000 (2015)


Zanchetta M, Maheu C, Montgomery C, Xenocostas S, Thelusma Remy M, Kaszap M, Talbot Y, Jbilou J, Racine L, Parada H, Mohamed M. *Develop, pilot testing and refine a questionnaire about Francophone’s population systemic barriers, social capital and cultural assets to access health services*. Daphene Cockwell School of Nursing, Ryerson University – Seed Grant $5,000 (2012-2013)

**Ari Meguerditchian**

Squires J, Arnaout A, Meguerditchian A. *A multifaceted knowledge translation intervention to reduce inappropriate preoperative use of magnetic resonance imaging (MRI) in early stage breast cancer: A pilot study*. Canadian Cancer Society Research Institute. $100,000 (submitted)


Meguerditchian A. *Challenges in Breast Cancer Care Quality: Harnessing the Potential of Health Information Technology*. Fonds de recherche en santé du Québec (FRSQ) Establishment Grant. $30,000 (2010-2013)

Meguerditchian A. *Adjuvant endocrine therapy in breast cancer: are we doing as good as we think?* Canadian Society of Surgical Oncology. $25,000 (2010-2012)


Schricker T, Meguerditchian A. *Enhancing the Anabolic Effect of Perioperative Nutrition by Insulin and Maintenance of Normoglycemia*. Canadian Institutes of Health Research – Operating Grant. $139,981

Narod S, Quan ML, Meguerditchian A. *Towards better outcomes for young women with breast cancer: A pan Canadian collaborative*. Canadian Institutes of Health Research-Canadian Breast Cancer Foundation. $5,695,303

Huang A, Meguerditchian A. *Computerized Solutions for Managing Medications from Hospital to Home: Can we do Better?* Canadian Institutes of Health Research - Café Scientifique. $3000

Tamblyn R, Meguerditchian A. *Improving Patient Safety and Chronic Disease Management with a New Generation of Health Information Technologies*. $1,388,735

Tamblyn R, Meguerditchian A. *Using Novel Canadian Resources to Improve Medication Reconciliation at Discharge*. Canadian Institutes of Health Research: Operating Grant. $616,000 (2010-2014)

**Wilson Miller**


Miller W. *Understanding the role of the Mnk-elf4E axis in the response and resistance to BRAF inhibitors*. Canadian Institute of Health Research, Operating grant. (2015-2020)


Appendix 6 – Research Funding 2012-2017


Miller W. *Functional role of eIF4E in breast tumor metastasis and epithelial to mesenchymal transition (EMT)*. Cancer Research Society, Operating grant. (2012-2014)

Miller W. *Targeting the eukaryotic translation initiation factor eIF4E with ribavirin in breast cancer*. Canadian Institute of Health Research, Operating grant. (2011-2014)


Ward B, Miller W. *Molecular mechanisms of retinoid action in respiratory virus infections: potential for both benefit and harm*. Canadian Institute of Health Research, Operating grant. (2009-2014)


Miller W. *Identification et validation de biomarqueurs de résistance thérapeutique dans le cancer colorectal métastatique*. Fonds de recherche en Sante de Quebec (FRSQ). (2009 -2012)

**Belinda Nicolau**

Nicolau B. Public Health Agency of Canada Operating Grant. $100,000 (2017-2019)

Nicolau B. Canadian Institutes of Health Research (CIHR) Transitional operating grant. $100,000 (2015-2016)

Nicolau B. FRQS Network for Oral and Bone Health Research (FRQS-RSBO) Support for organization of conferences. $2,500 (2015-2016)

Nicolau B. Network for Canadian Oral Health Research (NCOHR) Summer Research Institute Grant. $20,000 (2015-2016)


Nicolau B. Canada Foundation for Innovation (CFI) Infrastructure grant. $196,766 (2012-2015)


Nicolau B. CIHR Operating Grant. $562,064 (2011-2015)

Nicolau B (Co-Investigator). NCOHR Summer Research Institute Grant. $20,000 (2014-2015)

Nicolau B. CIHR Operating Grant. $306,720 (2009-2014)

Nicolau B. RSBO Access aid for research services/infrastructures. $16,825 (2013-2014)

Nicolau B (Co-Investigator). Cancer Research Society Operating Grant. $120,000 (2012-2014)

Nicolau B (Co-Investigator). CIHR Operating Grant Bridge Funding. $100,000 (2012-2013)

Nicolau B. CIHR Dissemination Events - Cancer Research. $25,000 (2012-2013)

Nicolau B (Co-Investigator). FRQS-RSBO Knowledge Translation Grant. $20,000 (2011-2012)

Nicolau B (Co-Investigator). CIHR Operating Grant. $225,676 (2009-2012)

Nicolau B. CFI Infrastructure Grant. $339,257 (2010-2012)

Nicolau B (Co-Investigator). MDEIE Operating Grant (PSR-SIIRI). $250,000 (2009-2012)

Alex Orthwein

Orthwein A. Canadian Institutes of Health Research Project grant. $852,975 (2017-2022)
Orthwein A. **From genetic diversity to genomic instability: Insight into B-cell biology and lymphomagenesis.** Cancer Research UK Career Development Fellowship (C55536/A20734). £ 2,500,000 (2016-2022) (Declined); Sir Henry Dale Wellcome Trust Fellowship (109374/Z/15/Z). £1,500,000 (2016-2021) (Declined); Cancer Prevention and Research Institute of Texas Fellowship. US $2,000,000 (2016-2020) (Declined).

Orthwein A. The Cole Foundation Transition Grant. $200,000 (2016-2019)

Orthwein A. Canadian Foundation for Innovation (CFI) Leaders Opportunities Fund Award. $331,000 (2016)

Orthwein A. Cancer Research Society Operating Grant. $180,000 (2016-2018)

Orthwein A. Canadian Institutes of Health Research Project grant. $1,008,000 (2016-2021)

Orthwein A. Lady Davis Institute Start up grant. $350,000 (2016-2018)

**Kevin Petrecca**

Leblond F, Petrecca K (Co-PI), Wilson B. *Development and clinical translation of a Raman spectroscopy imaging technique to increase the extent of tumor resection in glioma surgery.* Canadian Institutes of Health Research. $176,619/year (2016-2019)

Petrecca K. *Establishing DRR as a master regulator of glioblastoma stem cells.* Cancer Research Society. $120,000 (2015-2017)


Petrecca K. *Development of novel therapeutics to prevent brain cancer invasion.* Canadian Cancer Society Research Institute - Innovation Grant. $174,000 (2014-2016)

Petrecca K. *Development of novel therapeutics to prevent brain cancer invasion.* Brain Tumor Foundation of Canada. $25,000 (2013-2014)

Jabado N, Petrecca K (collaborator), et al. *Epigenomic and Genomic Regulation of Brain Cancer.* Genome Canada. $5,600,000 (2013-2018)
Appendix 6 – Research Funding 2012-2017

Petrecca K. *Translating DRR into a therapeutic target to prevent brain cancer invasion.* Industry Canada – Centre of Excellence for Commercialization. $70,000 (2013-2014)


Petrecca K. *Identification of novel compounds inhibiting brain cancer invasion.* Canadian Institutes of Health Research. $120,775 (2011-2012)


**Michael Pollak**

Pollak M (Co-PI). *Clinical trial: McGill IGF-I receptor blocking antibody Phase Ib study.* Pfizer. $80,000 (2005-)

Pollak M (PI). *Clinical trial: McGill LBQ707A-2102 Phase Ib Study.* Novartis $100,000 (2004-)


Pollak M. *Development of novel biguanides for cancer treatment.* ImmunoMet Therapeutics Inc. $36,000 (2015-2016)

Topisirovic I, Pollak M. *Defining metabolic vulnerabilities in colorectal cancer.* Canadian Cancer Society $199,590 (2015-2016)


Giguere V, Pollak M et al. *Oncometabolism and the Molecular Pathways that Fuel Cancer”*: *Translational Control of Metabolism: the role of eIF4E and mTOR and MAPK signaling pathways.* Terry Fox Research Institute (TFRI) in partnership with the Fondation du cancer du Sein du Quebec (FCSQ) – The Terry Fox New Frontiers Program Project Grant. $4,762,936 (2015-2019)
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Steinberg G, Pollak M. *Defining the roles of systemic and direct tumor effects of biguanides to optimize treatment.* Canadian Cancer Society Research Institute. $200,000 (2014-2016)


Pollak M. *Translational research on endocrinologic and antineoplastic effects of abiraterone.* Janssen Inc $90 000 (2013-2014)

Pollak M. *Murine models to study the effects of diabetes and diabetes treatments, including insulin analogues, on cancer behaviour.* Novo Nordisk $600,000 (2012-2014)


Tremblay M, Pollak M et al. *The Terry Fox New Frontiers Program Project on Defining and Applying “Oncometabolism”.* CIHR $1 300 000 (2011-2014)

Pollak M. *Influence of insulin on androgen production.* Prostate Canada Cancer. $115,000 (2011-2013)

Pollak M. *Effects of metformin on colorectal epithelial cell proliferation.* Canadian Cancer Society. ($195 000 (2011-2013)

Pollak M. *Murine models to study the effects of diabetes and diabetes treatments, including insulin analogues, on cancer behaviour.* Novo Nordisk $400 000 (2010-2012)

Pollak M. *Research concerning insulin-like growth factors and cancer.* Pfizer Canada. $650,000 (2010-2013)

Marie-Claire Richer

Lavoie-Tremblay M, Richer M-C, Aubry M, Glinas C, Kilpatrick K, Frechette J. *La contribution d’un modèle de gestion de projets intégré de la performance et de l’amélioration continue au Centre intégré universitaire de santé et de services sociaux de l’Ouest-de-l’Île-de-Montréal (CIUSSS-OIM) Projet Pilote. Réseau de recherche en interventions en sciences infirmières du Québec (RRISIQ).* $20,000 (submitted)

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Richer M-C, Lavoie-Tremblay M et al. *An innovative strategy in organizational transformation: The creation and implementation of a Transition Office in a university-affiliated multi-site healthcare centre*. Canadian Health Services Research Foundation (CHSRF) – Linking Evidence to Action on Decision (LEAD) (#LEA 2038) $520,000 (2009-2012)

Nader Sadeghi


Alan Spatz

Spatz A. *Standardization of ddPCR detection of ctDNA for T790 EGFR screening in NSCLC*. Astrazeneca. $30 000 (2016)

Spatz A. *COSMET (COllecting, analyzing, and screening Skin MElanoma for best combination Therapy)*. FRQS-NSFC joint program. $375 000 (2016-2018); ICRF $150 000 (2016-2017)


Spatz A. *The McGill Centre for Quantitative Pathology*. Hydro-Québec Foundation. $1,000,000 (2012)

Spatz A. *Evaluation of FoxP3 variants expression as a predictive biomarkers for Ipilimumab*. BMS investigator initiative. $258 000 (2012)
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Ivan Topisirovic

Topisirovic I. *Investigating the role of eIF2β in translation reprogramming in cancer*. CIHR Program Grant. $1,070,300 (2016-2021)

Ronai Z, Topisirovic I. *Control of Protein Synthesis by the UPS Under Stress*. NIH RO1 Grant. US$2,247,790 (2016-2021)


Topisirovic I. *Identification and characterization of novel substrates of the mammalian target of rapamycin complex 1 (mTORC1)*. CIHR Operating grant. (2011-2016)

Larsson O, Topisirovic I. *The role of MAPK and mTORC1-dependent translational control in stromal-epithelial interactions during prostate development and cancer*. Institutional Grant: The Swedish Foundation for International Cooperation in Research and Higher Education (STINT). 775,000 SEK (2012-2016)

Topisirovic I. *The role of RACK1/JNK/eEF1A2 mediated surveillance of newly synthesized polypeptides in breast cancer*. Cancer Research Society (CRS) Operating Grant. $119,980 (2014-2016)

Topisirovic I. *Élucidation des mécanismes moléculaires impliquant a la signalization en aval de mTORC1 dans la cancer*. La subvention d'établissement de jeune chercheur. Fonds de la recherche en santé du Québec (FRSQ), Canada. $45,000 (2012-2015)

Park M, Jones R, Topisirovic I. *Defining and Applying "Oncometabolism": A team approach in understanding and translating the Warburg effect from oncogenic and tumour suppressing activities*. Team Grant: Terry Fox New Frontiers Program in Cancer/CIHR Bridge Funding. $34,000 (2014-2015)

Tremblay M, Topisirovic I. *Defining and Applying "Oncometabolism": A team approach in understanding and translating the Warburg effect from oncogenic and tumour suppressing activities*. Team Grant: Terry Fox New Frontiers Program in Cancer/CIHR Bridge Funding. $34,000 (2014-2015)
activities. Team Grant: Terry Fox New Frontiers Program in Cancer/CIHR. $3,800,000 (2011-2014)


Topisirovic I. *The role of mTOR singaling and translational control in cancer.* Sir Mortimer B. Davis - Jewish General Hospital. $200,000 (2011-2013)

**Josie Ursini-Siegel**

Ursini-Siegel J, Huang S. *Targeting tyrosine kinase signalling networks to reverse STAT family–driven breast cancer immune suppression.* Canadian Cancer Society Research Institute Innovation Grant (CCSRI). $441,000 (2017-2020)

St-Pierre J, Ursini-Siegel J (Co-PI). *ShcA-coupled receptor tyrosine kinase signaling exposes PGC1α-dependent metabolic vulnerabilities in cancer progression and therapy.* Canadian Institutes for Health Research Open Operating Grant (CIHR) $925,045 (2016-2021)

Ursini-Siegel J, Witcher M. *p66ShcA as a prognostic biomarker for responsiveness to PARP inhibitors in poor outcome breast cancers.* Canadian Cancer Society Research Institute Innovation Grant (CCSRI) $200,000 (2015-2017)

Ursini-Siegel J. *Defining the mechanisms and therapeutic potential of ShcA-mediated angiogenesis and metabolism that fuel breast tumourigenesis.* Canadian Institutes for Health Research Open Operating Grant (CIHR) (MOP-111143). $817,643 (2011-2016)

Ursini-Siegel J. *Defining the molecular mechanisms and clinical implications of p66ShcA as a driver of the epithelial to mesenchymal transition in breast cancer.* Canadian Institutes for Health Research Open Operating Grant (CIHR) (MOP-133670). $685,520 (2013-2018)

Ursini-Siegel J. *Molecular mechanisms governing breast cancer immunosuppression.* Canadian Cancer Society Research Institute Innovation Grant (CCSRI). $200,000 (2013-2016)

Ursini-Siegel J. *Mechanisms through which ShcA integrates tyrosine kinase signaling to promote breast cancer progression.* Canadian Institutes for Health Research Open Operating Grant (CIHR) (MOP-111143). $681,335 (2011-2016)

Ursini-Siegel J. *Functional role of the p66ShcA isoform during mammary tumourigenesis.* Cancer Research Society Operating Grant (CRS). $120,000 (2012-2013)
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Ursini-Siegel J. *Role of tumour cell derived ShcA in regulating the adaptive immune response during breast cancer progression.* Susan G. Komen Foundation Career Catalyst Grant (KG110197). $450,000 (2011-2013)

Ursini-Siegel J. *Mechanisms through which ShcA integrates tyrosine kinase signaling to promote breast cancer progression.* Canadian Institutes for Health Research Open Operating Grant (CIHR) (MOP-111143). $681,335 (2011-2016)

Hallett M, Ursini-Siegel J. *Next generation predictive signatures for breast cancer.* Genome Quebec (Team Grant). (#10643). $1,500,000 (2010-2012)

Ursini-Siegel J. *Role of ShcA in the establishment of a productive tumour microenvironment that facilitates breast cancer progression.* Canadian Foundation for Innovation (CFI-LOF). $300,000 (2010-2013)

**Antonio Vigano**


Vigano A. *Cancer Prehabilitation Study at the Glen Site: Improving outcomes in patients with hepatobiliary and pancreatic cancers with a nutritional and physical conditioning prehabilitation program.* Cedars Cancer Foundation. $100,000 (2016-present)

Vigano A. *Unrestricted educational fund in support of CERTUM.* Helsinn SA, Switzerland. $50,000 (2013-2014)

Vigano A. *From Predicting to Preventing the Surgical Risk in Older Cancer Patients: The Pre-Operative Risk Estimation For Oncogeriatric Patients at McGill (PREOP-M) protocol (Phase II).* Helen McCall Hutchison Award for Geriatric Research, Research Institute of the McGill University Health Centre. $15,000/year (2011-2012)

**Té Vuong**

Vuong T (PI), Batist G. *A phase III study testing two dose escalation strategies to increase the population of complete responders after radiation therapy in the context of organ preservation for patients with rectal cancer.* CIHR Operating Grant: PHSI for Cancer Control Funding Opportunity. $19,981 (2016)

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Vuong T. A phase II study randomizing patients with advanced operable rectal cancer on the timing of FOLFOX chemotherapy. Sanofi-Aventis. $1,160,000 (2009-2014)

Doreen Wan-Chow-Wah


Wan-Chow-Wah D (Co-Investigator). Systematic review of factors that influence older adults to accept or refuse cancer treatments proposed by their physician. CIHR grant. $51 328 (2012-2015)

Beatrice Wang

Wang B. Canadian Dermatology Foundation Research Grant. $5000 (2015)


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la Recherche en Santé du Québec (FRSQ) Subventions de recherches cliniques ou recherches en santé des populations. $172,547 (2011-2014)

Gillian Bartlett-Esquilant


Barnett T, Bartlett-Esquilant G. Investigating the influence of neighbourhood characteristics and obesity on asthma outcomes in children and adolescents. CIHR Operating Grant. $300,143 (2012-2017)


Gagnon MP, Bartlett-Esquilant G. Un portail d'échange de connaissances sur le dossier de santé personnel électronique. CIHR. $9,922 (2015)

Johnson K, Bartlett-Esquilant G. Preventing Childhood Sexual Violence in Inuit Communities in Canada. CIHR Operating Grant. $100,000 (2013-2015)
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Pluye P, Bartlett-Esquilant G. Toward a Patient Information Aid: In primary health care, what are the outcomes associated with using online consumer health information? A participatory systematic mixed studies review. CIHR Knowledge Synthesis. $99,971 (2013-2014)


Macaulay A, Bartlett-Esquilant G. What are the key processes associated to outcomes of Participatory Research with Health Organizations (PRO)? A participatory knowledge synthesis. CIHR Knowledge Synthesis Grant. $99,998 (2012-2013)

Dolovich L, Bartlett-Esquilant G. The feasibility of using a patient controlled health record to monitor the safety and effectiveness of medications in older adults. CIHR Primary Care Catalyst Grant. $99,668 (2012 - 2013)

Bartlett-Esquilant G. Empowering Patients: Making the personal health record accessible and relevant for primary care. CIHR Primary Care Catalyst Grant. $99,974 (2010 - 2013)

Rosenberg E, Bartlett-Esquilant G. Is control of cardiovascular disease risk factors better in immigrants not proficient in English or French when there is a professional interpreter? Heart and Stroke Foundation of Canada. $73,982 (2010 - 2013)

Bartlett-Esquilant G. Small in numbers, big in knowledge: CIHR Café Scientifique for Rural Southern New Brunswick Part II. CIHR Café Scientifique. $3,000 (2012-2013)

Daskalopoulou S, Bartlett-Esquilant G (Knowledge User). Methods of Assessing blood pressure: identifying threshold and target values (MeasureBP). CIHR Knowledge Synthesis Grant. $100,000 (2012-2013)


Bartlett-Esquilant G. Building International Collaborations for Education in Primary Care Genomics. CIHR International Planning Grant. $17,500 (2010 - 2012)


Dolovich L, Bartlett-Esquilant G. The Patient Controlled Health Record: Transforming and impacting health and healthcare in Canada now. CIHR Meetings, Planning and Dissemination Grant. $26,444 (2011-2012)
Ahmed S, Bartlett-Esquiland G. Empowering patient decision-making and health management: evaluating individual preferences and willingness to adopt health information technologies. CIHR Social Dimensions of Aging Catalyst Grant. $48,341 (2011 - 2012)


Quan H, Bartlett-Esquiland G. Assessment of hypertension occurrence, management and outcomes in Canada. CIHR Operating Grant. $926,097 (2009 - 2012)


Yves Bergevin

Bergevin Y. Evaluation of a Program of Radio Serial Dramas in Zambia to be carried out by the Population Media Center (PMC), Burlington, VT, USA. A Cluster Randomized Trial and Qualitative Study of the Impact of Radio Serial Dramas on Knowledge, Intentions and Use of Family Planning and Contraception in Zambia, a Mixed Methods Approach. United States Agency for International Development (USAID). $3,886,837 (submitted)

Bergevin Y. Towards the Triple Aim of Better Health, Better Care and Better Value for Canadians: transforming regions into high performing health systems. Canadian Foundation for Healthcare Improvement (CFHI); Initiative sur le partage des connaissances et le développement des compétences (IPCDC); in-kind; remuneration provided by RAMQ. $250,000 (2014-2016)


Joseph Cox


Lebouché B, Cox J et al. *A Hepatitis C Virus Rapid Assessment Clinic (HCVRAC) to Improve* *HCV Care Engagement*. CIHR Canadian HIV Trials Network – Pilot Studies Program. $50,000 (2017-2018) (under review)

Cox J, Kronfli N. *Evaluating the feasibility of a clinically informed algorithm to identify and re-engage HIV positive patients lost to follow-up*. ViiV Healthcare. $181,500 (2017-2019)


Roy E, Cox J (Co-PI), Bruneau J. *Advancing methods to examine PrEP use among people who inject drugs – evaluating feasibility among providers and users*. OHTN. $30,000 (2017-2018)


Klein M, Cox J, Lebouche B. *TriiADD Study. A Phase IV, multicentre randomized prospective open label study to evaluate whether switching from current cART to Trii in addition to adherence support will enhance virologic control and adherence in vulnerable populations*. GSK/ViiV. $730,135 (2015-2017)


Cox J, Brouillette M-J, Klein M, Bilmore N. Evaluating the acceptability and practicality of integrating a community outreach liaison officer into a case management care model for HIV-infected patients living with substance use disorders. ViiV Healthcare PIHVOT Program. $59,000 (2013-2014)


Adrien A, Cox J, Leclerc P. Surveillance de deuxième génération du VIH auprès des communautés montréalaises originaires d’Afrique subsaharienne et des Caraïbes anglophones. Public Health Agency of Canada $244,822; Ministère de la santé et des services sociaux (MSSS) $28,997 (2012-2014)


Cox J, Hapanowicz M, Lambert G, Lacombe E, Monteith K. To evaluate a social network approach to increase HIV testing among MSM in Montreal. CIHR $33,000 (2010-2012); MSSS $20,500 (2011-2012)


Nandini Dendukuri

Gobbi G, Dendukuri N. Adolescent cannabis consumption and risk of depression. An evidence-based approach. CIHR. $100,000 (2016)

Dendukuri N. Cardiovascular resynchronization therapy for patients with heart failure or heart block in Quebec. INESSS. $50,000 (2014)

Brisson M, Dendukuri N. Reducing the burden of hospital-associated Clostridium Difficile infections in Canada through optimal prevention policies: A multidisciplinary individual-based modeling approach. CIHR. $475,368 (2014-2018)


Brophy J, Dendukuri N. Comparative effectiveness research for the drug treatment of atrial fibrillation. CIHR. $81,548 (2013-2015)

Dendukuri N. Bayesian methods for epidemiologic studies. NSERC. $55,000 (2013-2018)

Fellows L, Dendukuri N. Understanding and Improving Brain Health in HIV Now. CIHR. $2,492,705 (2012-2017)

Dendukuri D, Dendukuri N. Fabric Chips: A versatile platform for low-cost, rapid and multiplexed diagnostic tests. Grand Challenges Canada. $50,000 (2011-2014)
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Hanley J, Dendukuri N. Methods to measure (and measures of) the (actual) mortality reductions produced by cancer screening. CIHR. $188,250 (2011-2014)


Blaine Ditto


Ditto B et al. Identifying Barriers and Enhancing Confidence in Young Adults Contemplating Blood Donation. Canadian Institutes of Health. $74,498/year (2010-2015)

Bertrand Jean-Claude


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Jean-Claude B. Brain penetrability and in vivo potency of novel. Brain Tumour Foundation of Canada. $25,000 (2011-2012)

Beste Kucukyazici

Kucukyazici B. Looking beyond the walls of the emergency departments for the delays in the emergency departments: modeling associations with the hospital and post-acute care and exploring the promising interventions. Fonds de Recherche du Quebec- Sante (FRSQ), Operating Grant on Emergency Services Issues and Continuum of Care. $269,479 (2016-2018)

Gotlieb W, Kucukyazici B. Improving the trajectory of care for ovarian cancer patients, with focus on institutional resource use and patient-centered well-being. Rossy Cancer Network. $10,000 (2015-2016)


Kucukyazici B, Ciampi A, Mah R, Belzile E. A Regional/Provincial Approach for Understanding and Tackling ED Crowding. Marcel Desautels Institute of Integrated Management Faculty Fellowship, McGill University. $4,650 (2014-2016)


Eric Latimer


Hodgins, S, Latimer E. *The lifetime costs of criminal offenders: a Canadian study of a sample of males followed from age 6 to 30.* Social science and humanities research council. $240,196 (2012-2016)

Latimer E, Roy L. Services professionnels pour effectuer une enquête complémentaire sur les personnes en situation d’itinérance à Montréal. Ville de Montréal. $75,000 (2015)


Vasiliadis, H-M, Drapeau M, Latimer E, Lesage A. Assessing the system level costs and benefits of improving equity in access to psychological services for depression in Canada. Canadian Institutes of Health Research, Operating grants. $180,180 (2012-2014)


Strumpf E, Tousignant P, Borgès R, Latimer E. Are Primary Care Teams Effective? Canadian Institutes of Health Research, Operating grants. $100,000 (2012-2013)


Vasiliadis, H-M, Latimer E, Préville M. The per capita excess societal costs attributable to common mental disorders and the inappropriate use of medication in the elderly living in the community. Canadian Institutes of Health Research Operating grants. $179,478 (2009-2012)
Tibor Schuster

Lamber S, Schuster T. *Adaptive Internet-Based Stress Management: A Pilot Sequential Multiple Assignment Randomized Trial (SMART) Design*. Canadian Institutes of Health Research (CIHR). $99,998.00 (2017)


Eckstein H-H, Schuster T. *Angioplasty or Bypass Surgery in Intermittent Claudication (ABC)*. German Research Foundation (Deutsche Forschungsgemeinschaft, Germany): Angioplasty or Bypass surgery in intermittent Claudication (ABC Trial). €508,975 (2010-2014)


Farhad Shokoohi


Shokoohi F. *Likelihood Inference in Small Area Estimation and its Application to Unemployment Rate*. Statistical Research and Training Center, The Statistics Center of Iran. $1,500 (2011-2012)

Patricia Tonin


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Tonin P. *Genetic analyses of emerging ovarian cancer susceptibility alleles.* Department of Medicine, McGill University. $25,000 (2015-2016)

Tonin P, Ragoussis I. *Assessment of Pan-Canadian platform for known/proposed cancer susceptibility genes.* Ovarian Cancer Canada. $50,000 (2015-2016)


Foulkes WD, Majewski J, Tonin P, Riazalhosseini Y, Rousseau F. *The genetics of breast cancer in Quebec populations: twenty years after BRCA1/2.* Quebec Breast Cancer Foundation. $600,000 (2015-2018)

Tonin P. *The implications of double heterozygotes for BRCA1 and BRCA2 mutations in French Canadian cancer families.* Cancer Research Society in partnership with the Quebec Breast Cancer Foundation. $120,000 (2013-2014)


Tonin PN, Mes-Masson A-M, Provencher D. *Elucidating the tumor suppressor genes involved in reprogramming an ovarian cancer cell line model modified by chromosome 3 transfer.* Canadian Institutes of Health Research. $404,578 (2010-2013)

Greenwood C, Tonin PN. How to measure the impact of copy number aberrations in ovarian cancer. Lady Davis Institute for Medical Research. $38,866.87 (2011-2012)

Tonin PN. Evaluating the contribution of BRCA1 and BRCA2 in French Canadian ovarian cancer cases. Cancer Research Society. $60,000 (2010-2012)

**Jian Hui Wu**


Jian Hui Wu. Development of novel GATA2 inhibitors for breaking the critical AR-GATA2 feedback loop in castration-resistant prostate cancer. Prostate Cancer Canada, Movember Discovery Grant. $193,000 (2016-2018)

Name of P.I.:


Jian Hui Wu. Chemical inhibitors of androgen receptor splice variants lacking the ligand-binding domain as novel agents for castration-resistant prostate cancer. CIHR, Operating grant. $365,862 (2011-2014).
Moulay Alaoui-Jamali


Silva SD, Alaoui-Jamali MA, Hier M, Soares FA, Graner E, Kowalski LP. Cooverexpression of ERBB1 and


**Thierry Alcindor** (* denotes a trainee as first author)


Armen Aprikian

Zakaria AS, Santos F, Dragomir A, Kassouf W, Tanguay S, Aprikian AG. Health services utilization during the last six months of life among patients with bladder cancer who underwent radical cystectomy in Quebec, Canada. Urologic Oncology, May 4, 2017


Bell M, Brimo F, Jung S, Aprikian AG. Sclerosing epithelioid fibrosarcoma metastasizing to the penis. Canadian Urology Association Journal Nov 2016


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Brimo F, Dauphin-Pierre S, Aprikian A, Kassouf W, Tanguay S, Ajise O, Dongo C, Begin LR. Inverted urothelial carcinoma; a series of 12 cases with a wide morphological spectrum overlapping with the large nested variant. Human Pathology; October 2015


Santos F, Dragomir A, Zakaria AS, Kassouf W, Aprikian AG. Health care services utilizations and costs and costs associated with radical cystectomy for bladder cancer: a descriptive population-based study in the province of Quebec, Canada. BMC Health Services Research. August 5, 2015


Klotz L, Drachenburg D, Singal R, **Aprikian AG**, Fradet Y, Kebabjian M, Zarenda M, Chin J. An open-label phase 2 trial of bicalutamide dose escalation from 50 mg to 150 mg in men with CAB and castration resistance. Prostate Cancer and Prostatic Diseases, 17(4), 320-4, 2014

Luz MA, Dal Pra A, Tu Hy, Duclos M, Cury FL, Bachir BG, **Aprikian AG**, Tanguay S, Kassouf W. Does transperitoneal minimally invasive radical prostatectomy increase the amount of small bowel receiving salvage radiation? Canadian Urologic Association Journal, 7(11-12), 444-8, 2013


Alrabeeah K, Alkhayal M, **Aprikian AG**, Bladou F. Robotic assisted radical nephrectomy for renal angiomyolipoma with vena caval thrombus extension. Urologic Annals 6(2), 176-8, 2014


Chan SW, Chevalier S, Aprikian AG, Chen J. Simultaneous quantification of mitochondrial DNA damage and copy number in circulating blood: a sensitive approach to systemic oxidative stress. Biomedical research Int, 157547, 2013


Jamil Asselah
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Sarit Assouline


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with acute myeloid leukemia or high-risk myelodysplastic syndrome from the National Cancer Institute of
Canada Clinical Trials Group: trial IND.186. Leuk Lymphoma. 2013 Apr;54(4):760-6

M, Shpilberg O, Yee K, Schmieder G, Silverman JA, Thomas D, Deitcher SR, Kantarjian H. High-dose vincristine
sulfate liposome injection for advanced, relapsed, and refractory adult Philadelphia chromosome-

Shawi M, Chu TW, Martinez-Marignac V, Yu Y, Gryaznov SM, Johnston JB, Lees-Miller SP, Assouline SE,
Autexier C, Aloyz R. Telomerase contributes to fludarabine resistance in primary human leukemic

Nielsen TH, Johnson N, Garnier N, Kwan S, Yao L, Cocolakis E, Hébert J, Morgan RA, Paquet E, Callahan
KP, Jordan CT, Assouline S, Miller WH Jr, Mann KK. Monitoring Response and Resistance to the Novel

Jagoe RT, Batist G. Systemic cancer therapy: achievements and challenges that lie ahead. Front Pharmacol.
2013 May 7;4:57.

M. A phase 1 study of obinutuzumab induction followed by 2 years of maintenance in patients with relapsed

Laurent Azoulay (* denotes a trainee as first author)

Filion KB, Azoulay L, Yin H, Yu OH, Suissa S. Sulfonylureas and the risk of adverse cardiovascular events among

*Hicks BM, Klil-Drori A, Hui Y, Campeau L, Azoulay L. Androgen deprivation therapy and the risk of anemia in
men with prostate cancer. Epidemiology.

Davidson MA, Mattison DR, Azoulay L, Krewski D. Thiazolidinedione drugs in the treatment of type 2 diabetes
mellitus: past, present and future? Critical Reviews in Toxicology.

Comparing Clinical Characteristics and Outcomes of Young Onset to Late Onset Colorectal Cancer, An

Azoulay L, Suissa S. Sulfonylureas and the risks of cardiovascular events and death: A methodological meta-

*Hicks BM, Hui Y, Sinyavskaya L, Suissa S, Azoulay L, Brassard P. Metformin and the incidence of viral

*Klil-Drori A, Yin H, Abenhaim HA, Galbaud du Fort G, Azoulay L. Prolactin-elevating antipsychotics and the

Greenaway C, Azoulay L, Allard R, Cox J, Tran VA, Abou Chakra CA, Steel R, Klein M. A population-based
study of chronic Hepatitis C in immigrants and non-immigrants in Quebec, Canada. BMC Infect Dis. 2017 Feb
13;17(1):140.

*Khosrow-Khavar F, Rej S, Yin H, Aprikian A, Azoulay L. Androgen deprivation therapy and the risk of dementia

*Mandilaras V, Bouganim N, Yin H, Asselah J, Azoulay L. The use of drugs acting on the renin-angiotensin system

*Klil-Drori A, Azoulay L, Pollak MN. Cancer, obesity, diabetes and antidiabetic drugs: is the fog clearing? Nat Rev


*Fournier JP, Yin H, Yu OH, **Azoulay L**. Metformin and low levels of thyroid-stimulating hormone in patients with type 2 diabetes mellitus. CMAJ 2014;186(15):1138-45.*


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Mark Basik


Appendix 7 – Publications 2012-2017


Bendavit G, Aboulkassim T, Hilmi K, Shah S, Basit G. Nrf2 transcription factor can directly regulate mTOR; linking cytoprotective gene expression to a major metabolic regulator that generates redox activity. Journal of Bio Chem 2016 Dec 2;291(49):25476-25488


Gerald Batist


Bendavit G, Aboulkassim T, Hilmi K, Shah S, Basit G. Nrf2 transcription factor can directly regulate mTOR; linking cytoprotective gene expression to a major metabolic regulator that generates redox activity. Journal of Bio Chem 2016 Dec 2;291(49):25476-25488


Vladimir Lazar et al including Gerald Batist, A Simplified Interventional Mapping System (SIMS) for the Selection of Combinations of Targeted Treatments in Non-Small Cell Lung Cancer, OncoTarget, 2015 June 10;6(16):14139-52


C Butts, S Kamel-Reid, G Batist, S Chia, C Blanke, M Moore, MB Sawyer, C Desjardins, A Dubois, J Pun, K Bonter, FD Ashbury. Title: Benefits, issues and recommendations for personalized medicine in oncology in Canada. Current Oncology-Vol 20, Number 5, October 2013


Shinder GA, Paradis PE, Posman M, Mishagina N, Guay MP, Linardos D, Batist G. Patient and work flow and costs associated with staff time and facility usage at a comprehensive cancer centre in Quebec, Canada -- a time and motion study. BMC Health Serv Res. 2012 Oct 29;12(1):370


Manuel Borod


Nathaniel Bouganim


Couraud S, Dell’Aniello S, Bouganim N, Azoulay L. Cardiac glycosides and the risk of breast cancer in women with chronic heart failure and supraventricular arrhythmia. Submitted JCO June 2014


Robin Cohen (* denotes a trainee as first author)


*Stevenson M, Achille M, Liben S, Proulx MC, Humbert N, Petti A, Macdonald ME, Cohen SR. Understanding how bereaved parents cope with their grief in order to inform the services provided to them. Qualitative Health Research 2017; 27(5): 649-664. DOI: 10.1177/1049732315622189


Alice Dragomir (* denotes a trainee)


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Marc Fabian


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William Foulkes
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Foulkes WD, Gore M, McCluggage WG. Rare non-epithelial ovarian neoplasms: Pathology, genetics and treatment. Gynecol Oncol. 2016 Apr 19 [Epub ahead of print]


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Foulkes WD. Preventing ovarian cancer by salpingectomy. Curr Oncol. 2013 Jun;20(3):139-4


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