



Radiation Oncology
UNIVERSITY OF TORONTO

DRO
ANNUAL REPORT
2007-2008

Vision

excellence and leadership

in radiation medicine research,
education, and clinical practice

to advance the science
and practice of

Mission

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Letter from the Chair



*Mary Gospodarowicz,
MD, FRCPC, FRCR (Hon)
Professor and Chair*

It gives me great pleasure to present to you the University of Toronto, Department of Radiation Oncology Annual Report (UT DRO) for the academic year of 2007–2008. Our Department continues to strive for excellence and leadership in radiation medicine research, education, and clinical practice. This year we are experimenting with a new format for our report, sharing with you the highlights and success stories about our faculty and students. For the detailed Annual Report, see the CD at the back of this booklet or visit UT DRO publications at www.dro.facmed.utoronto.ca.

Our faculty continue to provide expert clinical care to cancer patients from Toronto, other regions of Ontario, and from across Canada at the Odette Cancer Centre (OCC) and Princess Margaret Hospital (PMH). Both institutions have expanded provincial and international partnerships in clinical care research and education.

It is with pride that we announce our new Master of Health Science in Medical Radiation Sciences (MHScMRS) in partnership with the Institute of Medical Sciences at the University of Toronto, which will open in January 2009. With the addition of the MHScMRS Program and our new postgraduate program in clinical physics, we now offer a full slate of professional and research training programs.

We are also very proud of our large international Clinical Fellowship Program that continues to attract fellows from all over the world. Our Medical Radiation Sciences (MRS) Program underwent a major curriculum redesign that was implemented in September 2007. The redesign includes several new interprofessional courses that focus on communication professionalized collaborative patient care and leadership in health care research. UT DRO is leading the joint Ontario Ministry of Health and Long Term Care and Cancer Care Ontario Advanced Practice in Radiation Therapy Project.

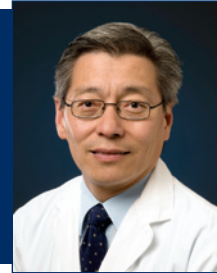
The Department continues to thrive under the leadership of its three Vice-Chairs: Professor Pamela Catton, Professor David Jaffray, and Professor Shun Wong. They share their thoughts in the full report.

This spring, we welcomed our new Administrative Manager, Effie Slapnicar MBA, who joined us from the Canadian Arthritis Network. Effie's energies are focused on facilitating departmental programs with innovative practice.

Mary Gospodarowicz, MD, FRCPC, FRCR (Hon)
Professor and Chair

Vice-Chair Highlights

Clinical Affairs



The Vice-Chair of Clinical Affairs is responsible for policy and program issues pertaining to the Department's relationships with clinical sites and clinical faculty. This portfolio oversees the appointment, three-year review, and promotion of members of UT DRO. It also ensures that the recruitment and medical workforce plan at the clinical sites is aligned with the academic plan of the Department.

*Shun Wong, MD, FRCPC
Vice-Chair, Clinical Affairs*

During the reporting period of July 1, 2007 to June 30, 2008:

- Both PMH and OCC benefited from strong philanthropic support from their respective hospital foundations.
- The Department continued to provide education and clinical support to many academic and community hospitals both within and outside the central Local Health Integration Network (LHIN).
- **Dr. Joyce Nyhof-Young** was promoted to the rank of associate professor. **Dr. James Brierley, Dr. Jean-Philippe Pignol, and Dr. Richard Tsang** were promoted to the rank of full professor.
- Other new appointments include Drs. **Arjun Sahgal**, Assistant Professor; **Shao Hui (Sophie) Huang**, Lecturer; **Andrew Hope**, Assistant Professor; **Bradly Wouters**, Professor; and **Marianne Korizinsky**, Assistant Professor.

Academic Affairs



The Vice-Chair of Academic Affairs is responsible for overseeing the educational and financial activities of UT DRO and works to build strong educational programs that serve the professional and research training needs of all professional radiation disciplines in an environment of fiscal responsibility.

*Pamela Catton, MD, FRCPC, MHPE
Vice-Chair, Academic Affairs*

During the reporting period of July 1, 2007 to June 30, 2008:

- **Dr. Peter O'Brien**, Program Director of the Medical Physics Residency Program, and his team fulfilled the highest requirements for accreditation by the Commission on Accreditation of Medical Physics Education Programs.
- **Nicole Harnett**, Graduate Program Director, and her team received an outstanding external review for their proposal to start a two-year professional Master's program in radiation therapy.
- Two new leadership positions in education were established: **Dr. Jean-Pierre Bissonnette** in Physics and **Dr. Bradly Wouters** in Biology.

Academic Programs



The Vice-Chair of Academic Programs is responsible for overseeing research activities and works to build academic pursuits that bridge the faculty, facilities, and programs of UT DRO. This past year was particularly rich with successes and endeavours, demonstrating the scope and depth of this dynamic department.

*David Jaffray, BSc, PhD
Vice-Chair, Academic Programs*

During the reporting period of July 1, 2007 to June 30, 2008:

- October marked the opening of the Spatio-Temporal Targeting and Amplification of Radiation Response (STTARR) Innovation Centre in the MaRS tower.
- **Dr. Bradly Wouters** was recruited to the Department with the support of the Ontario Institute of Cancer Research (OICR) to advance our understanding of radiation response and the microenvironment.
- **Dr. David Hodgson** received a Level 1 Cancer Care Ontario Research Chair.
- **Dr. Kristy Brock** was awarded a Level 2 CCO Research Chair.
- Research grants held by the Department grew, totalling an amount approaching \$20 million per annum (2006–07).

To read the complete Department Chair reports, see CD at the back of this booklet or visit UT DRO publications at www.dro.facmed.utoronto.ca.

Engineering a **Future** in **Radiation Oncology**

The Department of Radiation Oncology at the University of Toronto has long fostered the exposure of undergraduate medical students to the radiation oncology discipline. Through various electives, guest lectures, clinical and research observerships, research projects, workshops, studentships, and a website (www.radiationoncology.ca), the faculty at UT DRO familiarizes students with and informs them about radiation oncology to encourage them to choose a future in this specialty.



Dr. May Tsao with undergraduate medical student and Ivan Smith Memorial Studentship recipient Philip Tsang.

Philip Tsang, a second-year UT undergraduate medical student, is one of the talented recipients of the Ivan Smith Memorial Studentship, named for the late Dr. Ivan Smith, an internationally renowned radiation oncologist.

“Prior to attending a guest lecture from a DRO resident and then getting involved in the Ivan Smith Studentship at the Odette Cancer Centre, I didn’t have a real understanding of radiation therapy practices. With my background in engineering and physics, an elective in this area was a great fit!”

The Ivan Smith Memorial Studentship, supported by CCO, gives exceptional undergraduate medical students exposure to radiation oncology and an opportunity to learn at one of several regional cancer centres across Ontario. Tsang explains that his experience at the OCC has been thoroughly enjoyable, with faculty members really taking the time to slow things down and ensure that he is able to extract the most from his time with the hospital.

“Having the exposure to the field, interacting with such a cohesive team, has really opened up the possibility of a future for me in radiation oncology.”

VERO: **A Virtual Experience in Radiation**

Students interested in radiation oncology should visit VERO—the Virtual Experience in Radiation Oncology — at www.radiationoncology.ca. The VERO website was developed by radiation oncology professionals and medical students. The site offers important information about the radiation profession through a virtual multimedia experience. Students can explore several modules, including a video on communication with Dr. Robert Buckman and radiation treatment through the diary of a patient.

VERO was made possible by the generous support of the Radiological Society of North America (RSNA) and the University of Toronto.



Inspiration + Perspiration = MRS Graduation



Tatiana Rabaglino pursuing her goal to become a radiation therapist.

When she completed her Bachelor of Science degree at the University of Toronto in 2008, Tatiana Rabaglino wasn't sure what her next career step would be. However, mere months after receiving her joint degree/diploma in Medical Radiation Sciences (MRS) from UT DRO and The Michener Institute for Applied Health Sciences, Tatiana believes that things couldn't have gone any better.

Her journey into medical radiation began with a volunteer placement at OCC. She worked as a receptionist for an evening clinic in radiation therapy and later became the receptionist for the day clinic. While working at OCC,

Tatiana gained a better understanding of the process behind radiation therapy. But what she enjoyed most was interacting with the patients and being inspired by their stories.

“After spending a year away from the clinic, I realized that I was missing the patients—seeing them every day and being a part of their recovery process.”

That is when she knew she wanted to become a radiation therapist.

Tatiana chose the MRS Program because it offered the three options of specialization during the three-year joint degree/diploma program: nuclear medicine, radiation therapy, and radiological technology. The MRS Program delivers a well-rounded education, providing graduates with the proper tools and experience to deliver exemplary medical radiation technology service to patients. The faculty includes radiation therapists, radiation oncologists, and radiation physicists, offering students exceptional mentorship with world-class practitioners.

Medical Radiation Sciences Program

The MRS Program is a three-year, second-entry health professional diploma/BSc program. The Michener Institute and the University of Toronto established the combined program to provide graduates with degree status for nuclear medicine, radiation therapy, and radiological technology. In 2001, UT DRO assumed academic oversight of the three disciplines of medical radiation sciences. Recently the MRS Program underwent a curriculum redesign. The new interprofessional courses focus on communication, professionalism, collaborative patient care, and leadership in healthcare and research.

Building a Bridge from Toronto to South Asia

Pursuing excellence takes commitment. After listening to a lecture by Mary Gospodarowicz, Chair of UT DRO, a talented group of young physicians at Tata Memorial Hospital in Mumbai, India, knew that to provide optimal radiation therapy to their patients, they would have to begin with a journey across the world. Their hospital had new, cutting-edge technology, but it didn't have the expertise to use the equipment and ensure its proper implementation into standard treatment practice.



Drs. Gaurav Bahl, Nikhilesh Patil, Jayant Goda, and Supriya Chopra studying in Toronto.

Gaurav Bahl, Supriya Chopra, Jayant Goda and Nikhilesh Patil decided to learn from North America's best—the faculty at UT DRO. As clinical fellows at UT DRO, they knew they would be stationed at one of the leading radiation treatment and research facilities in the world, and would be able to interact with renowned

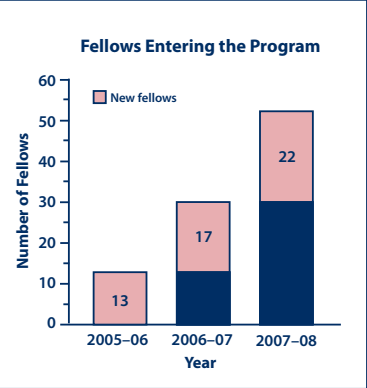
subject-matter experts. Travelling to Canada to draw on the expertise and experience of the faculty of UT DRO is only the beginning. These doctors will take home expertise, skills, and understanding to teach and share with professionals from Pakistan, Bangladesh, Sri Lanka, and beyond. Dr. Bahl confirms:

“With the recent economic boom and increasing purchasing power in India, more machines and new technology are increasingly available in our hospitals. Hence, there is an increasing need for professionals educated (and experienced) in newer radiation technologies back home. Our training here will definitely help fill in this demand. With more professionals educated to utilize these technologies, patients from the cities to the rural areas will see benefits.”

Fellowship Program

The UT DRO Fellowship Program is one of the largest and most successful fellowship programs in North America. It has two streams: a one-year clinical research program and a two-year research program.

During the one-year Clinical Research Program, fellows acquire clinical expertise in one or two radiation oncology disease sites and complete a research project. The two-year Research Fellowship Program emphasizes training in the principles and conduct of scientific research. Fellows co-register in a relevant department at the School of Graduate Studies at UT.



Reflections on Residency



Dr. Christiaan Stevens, a 2008 graduate of the Residency Program.

UT DRO offers an exceptional five-year Residency Program in radiation oncology.

Dr. Christiaan Stevens, a 2008 graduate of the Program, was drawn to UT DRO by the opportunity to train with national and international leaders in radiation oncology. Dr. Stevens reflects that

“the Department...offers such excellent clinicians who are not only influential in their field, but also incredibly well-qualified educators.”

He was equally impressed by the Program’s focus on advancing radiation oncology research and that enrolment ensures that there are enough radiation oncologists to meet the demand of the healthcare sector.

Dr. Stevens took on numerous research roles during his residency, ranging from investigating prostate cancer treatment wait times with

Dr. Andrew Loblaw at OCC to studying the use of small molecules called vascular endothelial growth factor (VEGF) inhibitors in brain metastasis in combination with stereotactic radiosurgery with Dr. Anthony Brade and Dr. Cynthia Menard. Dr. Stevens’ interest in head and neck cancers led him to a Clinical Research Fellowship at UT DRO under the supervision of Dr. Jolie Ringash. Dr. Stevens explains,

“My experience with the Department has been incredibly positive. For such a large training program, the staff, faculty, and fellow students made a real effort to promote a cohesive group atmosphere, emphasizing teamwork. And the benefits were enormous. I really look forward to continuing my education with UT DRO.”

Residency Program

In the 2007–2008 academic year, 27 residents were enrolled in the UT DRO Residency-training Program in radiation oncology making it one of the largest programs in Canada. This five-year Canadian Resident Matching Service (CaRMS) entry program is structured to not only exceed the Royal College of Physicians and Surgeons of Canada (RCPSC) specialty requirements, but also to train the academic leaders of tomorrow.

The Program offers:

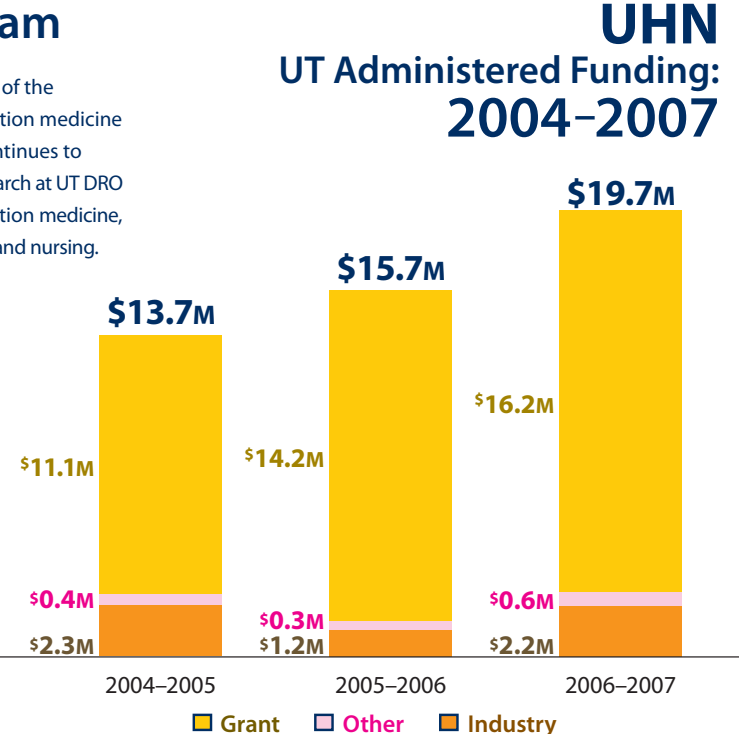
- Flexible, tailored education
- Multidisciplinary and inter-professional teaching faculty and clinical environment
- 100% pass rate on national RCPSC certification examinations for over a decade
- Leading international experts for teaching, mentoring, and career counselling
- Supportive educational environment and collegial peer group
- Great research opportunities and variety of research training options
- All the advantages of living in a large multicultural city

Research Highlights

2007–2008

Research Program

The UT DRO research program, one of the pre-eminent multidisciplinary radiation medicine research programs in the world, continues to grow and strengthen its profile. Research at UT DRO is conducted in all domains of radiation medicine, including radiation physics, therapy, and nursing. The scope includes clinical, quality of life, health services and outcomes research; basic and translational studies related to radiation response; and advanced high-precision radiation and imaging. Research is performed in collaboration with other clinical and basic-science departments and with extra-departmental units, including hospital research institutes, both within and outside UT.



- **Dr. David Hodgson** was awarded a Level 1 CCO Research Chair in the first CCO Research Chair competition for studies of patient and provider characteristics associated with the provision of optimal cancer care, and on identification and quantification of long-term outcomes of cancer treatment, particularly the evaluation of late toxicity among survivors.
- **Dr. Kristy Brock** was awarded a Level 2 CCO Research Chair based on her international reputation for pioneering work in deformable image registration, multi-modality imaging for radiation therapy, quantification and evaluation of organ motion, and deformation and assessment of treatment response.
- **Dr. Barbara Bachtiary** was awarded the Whiteside Award of the Institute of Medical Science, given annually to a graduating IMS Master of

Science student who has made outstanding scholarly contributions. Dr. Bachtiary is a 2003–05 PMH and UT DRO research fellow and a trainee with the EIRR21 (Excellence in Radiation Research for the 21st Century) Training Program, supervised by **Dr. Anthony Fyles & Dr. Fei-Fei Liu**.

- **Ian Poon, Curtis Caldwell, James Wright, Peter Jager, Andrei Pugachev, Kevin Higgins, and Danny Enepekides** received an OICR Award (\$689,814 over three years) for their study “The Individualization of Radical Radiation Treatment with the Use of Intra-treatment 2-(F-18)Fluoro-2-deoxy-D-glucose (FDG) Positron Emission Tomography in Advanced Head and Neck Cancer.”
- The Innovation Award from CCO and the Canadian Cancer Society was awarded to **Michael Sharpe,**

Gavin Disney, Paul Homer, Igor Svistoun, Terry Michaelson, Stuart Rose, and David Jaffray for the development of Web Publishing, a secure web-based software application that provides comprehensive centralized storage of patient-specific radiation treatment information.

Yearly Research Funding

Research awards have continued to increase to 388 in 2004–07 (from 318 in 2003–06), with increased total annual research funding of \$19.0 million in 2006–07 (up from \$15.7 million in 2005–06).

Treating DCIS: Walking the Tightrope



Dr. Eileen Rakovitch with Marguerite, a patient diagnosed with DCIS, a form of breast cancer with excellent long-term survival rates.

(Photo: Doug Nicholson—Media Source, Sunnybrook)

Dr. Eileen Rakovitch is one of Canada's leading researchers in ductal carcinoma *in situ* (DCIS). Currently, she is heading the world's largest cohort and only population-based study of DCIS with full description of treatment and outcomes, entitled "Predictors of Local Recurrence in Ductal Carcinoma *in Situ*: A Population-based Outcomes Analysis."

As more and more women receive mammographic screening for breast cancer, the number being diagnosed

and treated for DCIS is also increasing. Dr. Rakovitch explains that although these women have excellent survival rates, it's important to review whether or not they are receiving the best treatment for their condition.

"Much effort has been invested in determining the most effective treatment of breast cancer—the best technologies, drugs, therapies. What needs to be done now is an extensive and in-depth look into how these recommendations are being incorporated into practice and what the real outcomes are for women diagnosed with DCIS."

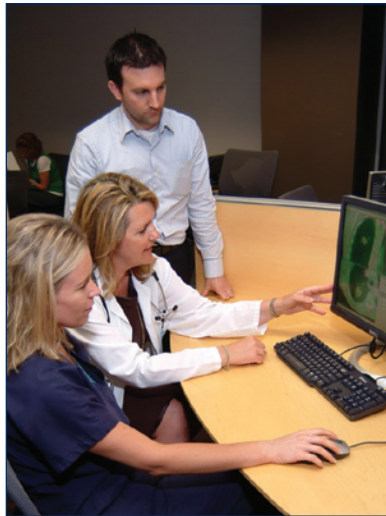
As the members of the study team at OCC review all cases of DCIS diagnosed in Ontario between 1994 and 2003, they strive to understand the pathologic and molecular changes in DCIS that may predict which women will develop invasive and potentially life-threatening forms of breast cancer. These answers will help steer treatment plans for those at greatest risk of recurrence and help avoid unnecessary overtreatment of women with DCIS.

The study is funded by the Canadian Breast Cancer Research Alliance. In 2007, the team received a five-year renewal of a three-year grant for \$1.3 million to continue their work.

In the News

In July 2007, Dr. Rakovitch was featured in MacLean's Magazine, highlighting her research. In the interview, she explains common misconceptions about DCIS and helps to clarify some of the issues that can arise from media reports about the diagnosis and treatment of this disease.

Cutting-edge Research in SBRT



Dr. Andrea Bezjak (centre) with Tom Purdie, medical physicist, and Jane Higgins, radiation therapist.

Stereotactic body radiation therapy (SBRT) for lung cancer is a novel radiation therapy technique that capitalizes on new technologies to challenge the boundaries of radiation oncology. Developed using 4D computed tomography (CT) planning and cone-beam CT, SBRT administers highly precise and extremely potent radiotherapy to target lung lesions. UT DRO faculty members, led by Dr. Andrea Bezjak, have accumulated vast experience using SBRT to treat patients with inoperable early-stage lung cancer.

“SBRT, in addition to being a significant advance in the treatment of primary lung cancers,” Dr. Bezjak emphasizes, “may also be an effective alternative to surgical resection of lung metastases in selected patients with controlled primary tumours whose only active disease is in the lung. Our ongoing studies aim to eradicate metastases and prolong survival in this group.”

The clinic at PMH—Canada’s first SBRT lung cancer program—has treated 100 patients since its inception in 2004. The Program has now expanded to treat patients with one to three lung metastases.

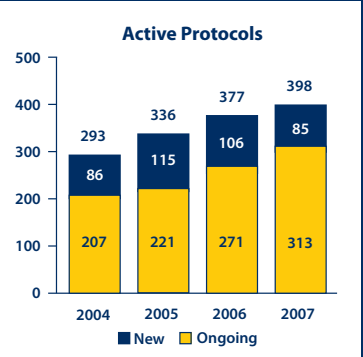
Both the PMH and OCC SBRT lung programs will disseminate their knowledge about recent SBRT treatment advances at a joint workshop during CARO’s Annual Scientific Meeting in September 2008. UT DRO also plays a role in sharing these new developments and knowledge through its Clinical Research Fellowship Program. Dr. Max Dahele, a clinical fellow who worked closely with Dr. Bezjak and her team at PMH, explains,

“The explosive combination of physicists, therapists, and radiation oncologists represents such a depth of knowledge and experience. This creates a critical mass within the field, pushing the limits of treatment. I can’t say I would have had the opportunity to be involved in such cutting-edge research anywhere else in Canada.”

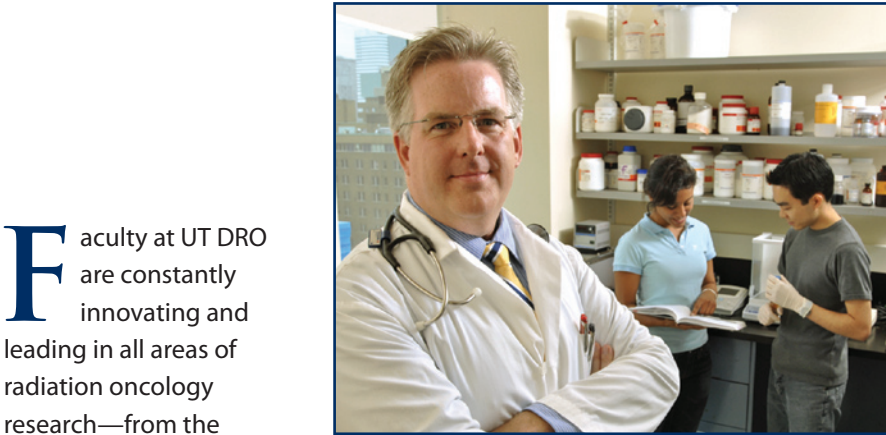
Summary of Funding Review

For the three-year review period from 2004 to 2007:

- UT DRO investigators received an increased total number and value of awards.
- Funded investigators were awarded an average of \$1.0 million each. More than 75% was peer-reviewed funding.
- UT DRO investigators have increasing numbers of ongoing and total active UHN-Review Ethics Board-approved protocols, with fluctuating numbers for new protocols over the period. New protocols represent approximately two-thirds of total active projects.



STTARR Researcher



STTARR's Cellular Core is under the direction of Dr. Robert Bristow.

Faculty at UT DRO are constantly innovating and leading in all areas of radiation oncology research—from the preclinical to clinical stages. Dr. Robert Bristow, an associate professor and clinician scientist at PMH, sets the bar high for other faculty members when leading his STTARR team in translational prostate cancer research.

Using the exceptional technology at the STTARR facility, Dr. Bristow and his team are using advanced microscopy

and gene analysis to study DNA repair in normal and cancerous cells from biopsies of men with prostate cancer. These new technologies allow the Bristow team to spy into the nucleus of individual cells and see the DNA breaks being initiated and then repaired following radiotherapy.

“Our project is designed to gain a better understanding of the differences in the DNA repair pathways in cancer cells compared to normal cells. We want to find the ‘Achilles heel’ of the cancer using genetic and microscopic tests. This will hopefully create new diagnostic tools to best predict a patient’s sensitivity to radiotherapy and other cancer therapies. A patient-specific treatment plan can then be designed to both enhance the effectiveness of cancer treatment and minimize the side-effects for any given patient.”

Dr. Bristow believes that the results of his research will improve the use of precision radiotherapy alone or in combination with novel molecularly targeted drugs, particularly those that target DNA repair deficiencies specifically in cancer cells.

The transition from research in Dr. Bristow’s lab to the treatment of patients is the epitome of a bench-to-bedside research program.

“We want to use the patient’s own tissues to tell a story and then help write the final chapter of that story by determining the best treatments for them to maximize cancer cure and quality of life.”

About STTARR

The Spatio-Temporal Targeting and Amplification of Radiation Response Program maximizes the development of effective cancer treatment strategies, including high-precision radiation therapy, by integrating cellular, preclinical, and human research. The research aims to understand the dynamics of tumour and normal tissue as it responds to radiation.

In October 2007, STTARR opened its new Innovation Centre, located in the MaRS tower. This \$22 million facility was supported by investments from industry, government, and philanthropy. For more information, visit www.sttarr.ca.

STTARR's Four Research Cores

- CELLULAR CORE
- PRECLINICAL CORE
- CLINICAL CORE
- COMPUTATIONAL CORE



Northern Exposure

The strength of knowledge and expertise is in the sharing. The Thunder Bay Regional Research Institute—formerly the Molecular Medicine Research Centre—is a cross-Ontario collaboration linking researchers from OCC and Sunnybrook Research Institute (SRI) in Toronto with colleagues at the Thunder Bay Regional Health Sciences Centre (TBRHSC) and Lakehead University.



*Dr. John Rowlands,
Founding Scientific Director of
the Thunder Bay Regional
Research Institute.*



As Founding Scientific Director of the TBRRI, John Rowlands extends his expertise from Southern Ontario to the northwestern region of the province. Dr. Rowlands, senior scientist at the SRI and head of medical physics

research at OCC, will oversee the infrastructure and resource sharing of this research collaboration.

The TBRRI is engaged in several research projects. The premier project involves high-intensity focused ultrasound (HIFU) equipment, guided by magnetic resonance imaging (MRI), which uses heat to destroy cancers deep in the body without surgery. A clinical trial studying HIFU in the treatment of uterine fibroids is expected to start within the year, followed by research in liver cancer. Two other projects involve the development of novel injectable agents that light up when paired with conventional scanners, and development of a new generation of positron emission tomography (PET) scanners that produce higher-resolution images at a lower cost.

TBRRI, along with TBRHSC and the Northern Ontario School of Medicine, completes the region’s medical triumvirate, offering a research element together with clinical work and teaching. Dr. Rowlands affirms,

“Partnering an established institution such as Sunnybrook with the fledgling Thunder Bay research initiative creates a collaboration that will benefit patient care and ultimately improve national cancer prevention and outcomes.”

Summary of Publications

- *UT DRO investigators published a substantial number of papers—215 papers in 2007 compared with 179 in 2006, an increase of 20%.*
- *From 2004 to 2007, 722 papers were published and 24.8% were highly cited, comparable with peers at UBC and U Texas/M.D. Anderson.*

Clinical Report

The past 12 months have witnessed the continuing growth of the clinical, research, and educational activities of the Radiation Medicine Program at SHSC and PMH. In the fiscal year 2007–08, over 14 000 new radiation oncology patients were seen.

The Program benefited from a large philanthropic contribution from Mr. Edmond Odette to enhance its academic objectives, specifically in imaging research and image-guided radiation therapy (IGRT).

We welcomed new members to the Program and offer our congratulations to the many award recipients during this past year.

- **Dr. Juhu Kamra** was appointed Head of Radiation Oncology of Royal Victoria Hospital, but will remain a consultant at Sunnybrook.
- Faculty members successfully secured a number of multi-year external peer-reviewed grants. Most notably, large awards were given to **Drs. Ian Poon**, OICR; **Greg Czarnota**, US Army; and **Jean-Philippe Pignol**, Canadian Breast Cancer Foundation.
- **Dr. Edward Chow** was awarded the Co-op Student of the Year Employer Award by Education at Work Ontario for education leadership.

The Program continues to foster its regional leadership role in cancer care.

- A temporary radiation treatment facility, a partnership between the Royal Victoria Hospital and the Radiation Treatment Program at OCC, began operation in April 2008.
- Radiation oncologists continued to participate in peripheral clinics at Royal Victoria Hospital, Toronto East General Hospital, and North York General Hospital.
- **Dr. Michael Milosevic** became President of the CARO for the 2007–09 term.
- **Dr. Padraig Warde** was appointed Chief of the Radiation Medicine Program at the Southlake Regional Cancer Centre and Chair of the Radiation Oncology Provincial Advisory Committee.
- PMH faculty provided consultations in many collaborating institutions, including St. Michael's and St. Joseph's hospitals in Toronto and the Southlake Regional Cancer Centre in Newmarket.
- The research programs in CT PET simulation, MR simulation, and IGRT continued to make excellent progress with a very successful symposium, "Magnetic Resonance Comes of Age," led by **Dr. Cynthia Menard**, at the combined 2007 CARO-COMP Annual Scientific Meeting.
- Professors **Bernard Cummings**, **Mary Gospodarowicz**, and **Brian O'Sullivan** were named Fellows of the American Society of Therapeutic Radiology and Oncology.

SPECIAL THANKS TO THE EXTERNAL RELATIONS COMMITTEE, ESPECIALLY
DR. ANTHONY BRADE, IN MAKING THE PUBLICATION OF THIS ANNUAL REPORT POSSIBLE.

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