CULTIVATING SUCCESS
One Seed at a Time

DEPARTMENT OF MEDICINE
2010–11 Annual Report
Tracy Serafini
Communications & Public Relations
Department of Medicine
501 Smyth Road, Box 206
Ottawa ON K1H 8L6

613 737 8765

Available on the Web in PDF format, at thinkOttawaMedicine.ca

Ilesh Parmar
Parmar-Serafini Graphic Designers, Inc.

Trevor Lush
Trevor Lush Photography

Copyright © 2011, Department of Medicine, University of Ottawa, The Ottawa Hospital

All persons profiled in this Annual Report have agreed to their appearance and have approved their individual stories.
CULTIVATING SUCCESS
One Seed at a Time
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A MESSAGE FROM THE CHAIR</td>
<td>1</td>
</tr>
<tr>
<td>A MESSAGE FROM THE CHIEF ADMINISTRATIVE OFFICER</td>
<td>3</td>
</tr>
<tr>
<td>A MESSAGE FROM FINANCE</td>
<td>5</td>
</tr>
<tr>
<td>CLINICAL CARE</td>
<td>9</td>
</tr>
<tr>
<td>AN INTERVIEW WITH DR. KAYVAN AMJADI</td>
<td>12</td>
</tr>
<tr>
<td>MEDICAL EDUCATION</td>
<td>29</td>
</tr>
<tr>
<td>AN INTERVIEW WITH DR. ANNA BYSZEWSKI</td>
<td>34</td>
</tr>
<tr>
<td>RESEARCH</td>
<td>39</td>
</tr>
<tr>
<td>AN INTERVIEW WITH DR. SHAWN AARON</td>
<td>50</td>
</tr>
<tr>
<td>PATIENT QUALITY &amp; SAFETY</td>
<td>55</td>
</tr>
<tr>
<td>AN INTERVIEW WITH DR. ALAN FORSTER</td>
<td>58</td>
</tr>
<tr>
<td>GLOBAL HEALTH</td>
<td>63</td>
</tr>
<tr>
<td>AN INTERVIEW WITH DR. BILL CAMERON</td>
<td>68</td>
</tr>
<tr>
<td>DIVISIONAL REPORTS</td>
<td>73</td>
</tr>
<tr>
<td>ALL DIVISIONS LISTED ALPHABETICALLY</td>
<td>73</td>
</tr>
</tbody>
</table>
The Department of Medicine is an innovative academic health care leader focused on advancing, developing and delivering cutting-edge medical research, outstanding patient care and high-quality education that prepares future generations of health care professionals.

Through strong and visionary leadership and with its exceptional people, the Department of Medicine is creating outstanding opportunities for current and future health care practitioners. By building bridges that link expertise, learning, knowledge and hands-on practice the Department of Medicine is improving patient care locally, nationally and internationally.

As a major department within The Ottawa Hospital and valued partner of the University of Ottawa Faculty of Medicine, the Ottawa Hospital Research Institute and the local health care community, Ottawa’s Department of Medicine actively brings together close to twenty sub specialty medical divisions, physicians, researchers, educators, administrators and future health care professionals in an open, inclusive, supportive and inspiring culture.
DEPARTMENT OF MEDICINE
EXECUTIVE COMMITTEE
From left to right:
Dr. Alan Karovitch (Vice Chair, Finance)
Ted Waring (Chief Administrative Officer)
Dr. Claire Touchie (Vice Chair, Education)
Dr. Philip Wells (Department Chair)
Dr. Gary Garber (Vice Chair, Patient Quality & Safety)
Dr. Kevin Burns (Vice Chair, Research)
Dr. Michele Turek (Vice Chair, Clinical Services)
Dr. Philip S. Wells, Professor, Chair and Chief, Department of Medicine, University of Ottawa and The Ottawa Hospital
A MESSAGE FROM THE CHAIR

To Colleagues and Friends,

It is with great pleasure and pride that the Department of Medicine at the University of Ottawa publishes its 2010–2011 Annual Report. I am most fortunate to be Chair of this outstanding Department of Medicine, which generates approximately 80% of the research dollars at The Ottawa Hospital, provides 35% of the undergraduate and postgraduate teaching at the University of Ottawa and is responsible for over 25% of all clinical care provided at The Ottawa Hospital.

Ours is a very strong academic department, and we are striving to be the first-choice department of medicine in Canada for students, residents, fellows and faculty. In 2010–2011 we have undertaken efforts to make the department more visible and to celebrate our successes more so than in the past. In conjunction with our partners, The Ottawa Hospital and the University of Ottawa, we have launched the website ThinkOttawaMedicine.ca, which is part of our initiative to increase this visibility and recognition.

All members of the department are committed to our stated departmental values of respect, quality, collaboration and accountability. These values are of fundamental importance to our success and guide us. I personally am committed to assisting all department members in their goals of achievement and success, and to creating an ideal working environment where success is nurtured.

We are encouraging the development of a culture within our Divisions in which the importance of a strong united Department is never lost sight of, all the while recognizing and supporting the individual Divisions in their unique challenges and requirements. As participants in health care, particularly as academic participants, we understand that there will be challenges ahead of us, including difficult financial ones as well as changes in care delivery, with targeted safety and quality outcomes. These challenges will be met through our engagement with the University and the Hospital and by sharing goals and priorities. We are more than ready to meet these challenges.
In the pages of this report, it is my hope that the reader will come to appreciate the remarkable achievements, unique programs and special individuals in the Department of Medicine. The report provides a summary of our activities in the areas of research, education and clinical services and also gives a snapshot of some of the community efforts we champion, our contribution to community health and our commitment to global health. It also profiles some of the special individuals who have contributed in these areas. I hope that as you read through these pages, you will appreciate that we indeed have a very special faculty and staff in this department and we will continue to be a shining light for the University and The Ottawa Hospital.

Dr. Philip S. Wells  MD FRCPC MSc
Professor of Medicine
Chair and Chief, Department of Medicine
A MESSAGE FROM THE CHIEF ADMINISTRATIVE OFFICER

The past year has been one of transition and renewal in the Department of Medicine Administration.

In late 2009, the Department worked with all levels of membership to develop a new vision and mission. With input from its Divisions, Executive Team and several members of The Ottawa Hospital Senior Management Team, the Department set its future direction and outlined its priorities for the coming years. As a result, in 2010, the Department executive was restructured and expanded to ensure adequate leadership in these priority areas. In addition, the Department increased the number of members in leadership roles both within The Ottawa Hospital and the Faculty of Medicine, University of Ottawa.

To further demonstrate that the Department was committed to effecting change, a new administrative structure was designed to support these initiatives. The position of Chief Administrative Officer was created to oversee the strategic implementation of the Department’s vision and to redevelop all of the Department’s administrative roles and systems.

A Communication and Public Relations Officer was hired to seek broader input from stakeholders and to improve departmental identity and communications. A new recruitment campaign was initiated that included the development of the thinkottawamedicine website. All of the Department’s events were rationalized, refocused and improved.

Administrative support for the Department’s priority committees continued to expand and included the implementation of mandatory external reviews for division heads seeking renewal of their terms. Seven search & selection committees were organized and fully supported by the staff in the administrative office. Department of Medicine staff did all the planning and arranging of travel and interviews for applicants with potential.

The Department continued to foster interdepartmental projects and initiatives. Once again, it initiated substantial improvements to the interface and functionality of STAR (Staff Activity Reporter). The STAR program was conceived by this Department in 2002 in order to facilitate the tracking of teaching and research activities. Through a strategic partnership with a local software company STAR has become almost ubiquitous in Canadian medical schools. The Department also initiated and successfully led a campaign to raise $80,000 to renovate the physician lounge at the General Campus.
The Department continued to invest in its employees by supporting attendance at continuing education events, conferences and career-based training. More than 50 staff took advantage of these opportunities and several others volunteered as organizers of both regional and national conferences. In a major undertaking, all of the full-time Department and UMA (its largest practice plan) employees became eligible to join the Hospitals of Ontario Pension Plan (HOOPP). This Department is the first physician group in Ontario to provide this benefit directly to its staff. In addition, the Department’s Human Resources office conducted reviews of all Department job descriptions and the competitiveness of existing compensation and benefit plans.

The Department worked closely with its aligned physician groups to standardize its policies and to foster awareness and inclusiveness among employees. Several new processes were co-developed in order to increase accuracy of reporting and reduce duplication of effort.

In addition to Departmental internal activities, we had to adjust to significant policy changes within the University and The Ottawa Hospital. As the largest clinical department in both the Faculty and Hospital, these changes continue to challenge us. Measures to increase transparency and accountability in financial matters were implemented. The Faculty deployed the Stipends Database, which greatly increased the accuracy of teaching activities and permitted the Department to expedite the payment of undergraduate teaching stipends. The Department worked closely with the Faculty of Medicine in the creation of the new Policy on Clinical Appointments. The appointment process check lists and Letters of Agreement were completely overhauled to reflect the new accountabilities.

In closing we would like to acknowledge the past contributions of long-time Administrative Director Leonor Ward, who moved to be with her family, and our Academic Coordinator, Marilyn Bradford, who retired in July, 2010. We thank them for their dedication over the years and wish them well in the future.

Ted Waring
Chief Administrative Officer
A MESSAGE FROM FINANCE

Finance within the Department of Medicine is quite complex. Some divisions participate in their own unique financial structures while the majority of members are represented by the University of Ottawa Medical Associates (UMA) practice plan. This report will focus on the latter.

Decisions regarding finances fall under the governance of the UMA board, the Department Head and the Department Executive. The UMA board is comprised of elected members from the representative divisions within the department.

The Department has several sources of income. They include funds from the provincial Alternate Funding Plan for academic centres, the University of Ottawa, and The Ottawa Hospital. In addition, all member physicians of UMA contribute a portion of their clinical income to the practice plan.

A generous proportion of these funds is used to support a variety of academic and clinical activities. For example $4.5 million was allocated as salary support for clinical researchers last year, while $3.8 million was used to support educational endeavours. These include educational research, resident and student teaching and CME to name just a few. Funds are also used to support strategic recruitment of physicians and quality/safety initiatives. A major priority of the UMA practice plan is to promote academic achievement while maintaining generous incomes for the membership.

The UMA practice plan also allows for a very generous benefits package for physicians. Some of these benefits include sabbatical leave support, medical/dental plans and maternity leave.

In the past year, two new financial initiatives have benefitted the department. A pension plan for our administrative assistants has started. This will help to recruit and retain the best support for our physicians. In addition, UMA has committed to help fund a clinical non-teaching unit within the hospital. This project has been instrumental in protecting the academic and educational structure of our core residency program and clinical teaching units.

Dr. Alan Karovitch MD FRCP C.M.Ed.
Associate Professor of Medicine
Vice-Chair Finance
## DEPARTMENT FACULTY PROMOTIONS

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louise Balfour</td>
<td>Associate Professor</td>
<td>Infectious Diseases</td>
</tr>
<tr>
<td>Marjorie Brand</td>
<td>Associate Professor</td>
<td>Hematology</td>
</tr>
<tr>
<td>Jeffrey Dilworth</td>
<td>Associate Professor</td>
<td>Neurology</td>
</tr>
<tr>
<td>Michael Gollob</td>
<td>Associate Professor</td>
<td>Cardiology</td>
</tr>
<tr>
<td>Scott Laurie</td>
<td>Associate Professor</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>Marcel Ruzicka</td>
<td>Associate Professor</td>
<td>Nephrology</td>
</tr>
<tr>
<td>Luc Sabourin</td>
<td>Associate Professor</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>Alexandre Stewart</td>
<td>Associate Professor</td>
<td>Cardiology</td>
</tr>
<tr>
<td>R. Glenn Wells</td>
<td>Associate Professor</td>
<td>Cardiology</td>
</tr>
<tr>
<td>Xiaohui Zha</td>
<td>Associate Professor</td>
<td>Endocrinology &amp; Metabolism</td>
</tr>
<tr>
<td>Nahid Azad</td>
<td>Full Professor</td>
<td>Geriatrics</td>
</tr>
<tr>
<td>Pierre Cardinal</td>
<td>Full Professor</td>
<td>Critical Care</td>
</tr>
<tr>
<td>Greg Knoll</td>
<td>Full Professor</td>
<td>Nephrology</td>
</tr>
<tr>
<td>Robert Reid</td>
<td>Full Professor</td>
<td>Cardiology</td>
</tr>
</tbody>
</table>
NEW FACULTY POSITIONS

Lyall Higginson  
Cardiology

Jennifer Beecker  
Dermatology

Dalia Mikhael  
Dermatology

Harinder Dhaliwal  
Gastroenterology

Liliana Oliveira  
Gastroenterology

Karim Abou-Nassar  
Hematology

Christopher Bredeson  
Hematology

Mark Tyndall  
Infectious Diseases (Division Head)

Loree Boyle  
Internal Medicine

Catherine Gray  
Internal Medicine

Delvina Hasimja-Saraqini  
Internal Medicine

Natalie Briscoe  
Neurology

Dar Dowlatshahi  
Neurology

Valerie Gratton  
Palliative Care

Kwandwo Kyeremanteng  
Palliative Care

Jill Rice  
Palliative Care
CLINICAL CARE

“The task of medicine: cure sometimes, relieve often, care always.”

—Ambroise Paré
Every research dollar procured and utilized, every hour spent teaching and mentoring, every new program developed and implemented creates a healthier community and improves the lives and well-being of our patients. However, at its core, the fundamental focus of this Department of Medicine is patient care.

Mindful of the provincial benchmarks for the delivery of quality patient care as well as the smooth and efficient flow of patients within the hospital system, our members support The Ottawa Hospital’s drive to adhere to these metrics by leading new initiatives and by striving to ensure an academic and patient centered focus for any changes. Additionally, the Department’s own Clinical Services committee meets regularly to make certain that each division participates in, and is aware of patient care issues. Based at all 3 campuses of The Ottawa Hospital as well as the Rehabilitation Centre, The University of Ottawa Heart Institute and Bruyère Continuing Care, the Department’s members contribute widely. Many members also participate in outreach programs, consult within the Champlain District LHIN and service communities such as Nunavut through the Baffin Program.

Within The Ottawa Hospital, the Department of Medicine provides about 40%\(^1\) of the direct inpatient care and a substantial proportion of ambulatory visits, including diagnostic and therapeutic procedures. Dedicated specialty clinics are designed for rapid-referrals and model multidisciplinary care. Innovative cutting-edge procedures provide care in outpatient settings instead of long term inpatient stays. The design and implementation of best practices that are provided to our patients often derive from the clinical questions that are created by day-to day patient care and serve as the

---

\(^1\) Figure based on Adult Bed Utilization Report by Portfolio/Service, The Ottawa Hospital
nidanus for clinical research and novel teaching. This occurs in spite of the very high volume of services provided and is a testament to the dedication and resourcefulness of our members.

It seems increasingly likely that the traditional teaching hospital model, based on resident support for patient care, will change in the future. Consequently, the Department has now developed a non-teaching service to complement the CTU teams that functions with the help of Physician Assistants (PA’s). These PA’s provide continuous quality inpatient care under the supervision of General Internists. Their role is sure to expand.

With the constant challenges the health care system continues to face, our role as Department of Medicine clinicians — who care for the majority of patients within the hospital system — will take on even more importance in the next few years.

Michele Turek MD, FRCPC
Associate Professor of Medicine
Vice-Chair, Clinical Services
Socializing at a fine restaurant in the company of his wife Bess is one of the ways Kayvan Amjadi chooses to relax and recharge. With a schedule as busy as his, taking time for himself doesn’t come often and, as such, he derives great pleasure from it.
AN INTERVIEW WITH
DR. KAYVAN AMJADI
MD, FRCPC

Kayvan Amjadi is an Assistant Professor of Medicine with the Faculty of Medicine, University of Ottawa, and a practicing physician in the Department of Medicine, Division of Respirology, The Ottawa Hospital. He is also cross appointed to the Division of Palliative Care. He is the medical leader of both the PleurX Clinic at the Cancer Assessment Centre, General Campus and the new Dyspnea Clinic at the Cancer Centre.

There could hardly be a better ambassador for extraordinary patient care than Dr. Kayvan Amjadi. Adored by patients and colleagues alike, he is described as the consummate professional physician and represents everything the health care system stands for—putting the needs of the patient first. Dr. Amjadi instantly strikes you as a person of great kindness, humility, and warmth with both unique clinical and interpersonal skills and an extremely sensitive level of caring.

Kayvan is an interventional pulmonologist, the only interventional pulmonologist in the area as a matter of fact, and as such has his pager on him 24/7. He can be found any time day or night tending to patients with urgent problems such as hemoptysis or pleural effusion. His dedication to them is extraordinary and his quest to improve the quality of their lives is unwavering. According to the President of Medical Staff, Dr. J. Bormanis, “Since arriving at The Ottawa Hospital in 2006 Dr. Amjadi has almost single-handedly revolutionized the care of advanced lung cancer.”

Interventional pulmonology is a relatively new field within pulmonary medicine that focuses on the use of advanced diagnostic and therapeutic techniques and palliative procedures to treat patients with lung cancer, benign airway disorders and pleural diseases. As a 3rd year medical student it seemed like the ideal career path for Kayvan. “I liked the procedural aspects of ICU—the acuity—and the physiological aspects of patients in the pulmonary function lab. The combination was very exciting.”

In 2005 Kayvan travelled abroad to complete a fellowship in Brussels where he trained with Mark Noppen, a world expert in the field. Armed with skills connected to central airway obstruction and advanced knowledge of the pleural space and related procedures, he returned to Ottawa and began to duplicate some of the programs Mark had set up. He introduced endoscopic
ultrasonography as a safer and more accurate diagnostic modality for patients with mediastinal and parenchymal lung disease.

He also established a PleurX clinic (detailed later in this section) to help individuals with pleural effusions by relieving the symptoms of their condition. In an outpatient setting he began inserting pleurex catheters to remove the abnormal collection of fluid that accumulates between the lung and the chest wall. Once again, this type of procedure was much less invasive than traditional chest tube insertions, did not require hospitalization and allowed drainage of the fluid by the patient in the home setting. He has since expanded his PleurX program (now called the CARE Program) to include treatment of both benign and malignant abnormalities including malignant ascites.

Certain malignant conditions can now be effectively treated with endoscopic procedures, providing alternative options to surgical resection, specifically in patients who are poor surgical candidates due to their comorbidities. Therapeutic modalities now include argon laser, electrocautery, cryotherapy, stenting and brachytherapy. His program has significantly reduced diagnostic wait times and saved the hospital countless admissions. But more importantly, it has enabled cancer patients to live at home, spending treasured time with their family and friends during the final months of their lives. Over the past 5 years Dr. Amjadi has single-handedly cared for over 950 patients and now has the largest pleural effusion clinic anywhere in the world.

Kayvan is incredibly modest about the positive impact he has had on the lives of others. When asked how he felt about winning the 2010 Ottawa Hospital Physician Clinician Recognition Award, he replied, “It was a humbling experience for sure…I think someone made a mistake somewhere. I’m still waiting for them to come back and say it was someone else—sorry.” The drive to build these new programs comes from his genuine concern for improving the lives of his patients but also from the enthusiasm and dedication of the people he works with. “Having a group of individuals that share the same passion and vision certainly helps develop these ideas. It is a combined effort on many people’s behalf. It was a shared vision as opposed to my vision.”

He attributes much of his success to the support of others and gives credit to people like Dr. Shawn Aaron, Head of the Division of Respiratory for being receptive to the possibility of such a program and to Dr. Phil Wells, Department Chair who offered his time and knowledge, facilitating the acquisition of funding for a research coordinator. This addition, says Kayvan, has moved the program forward in a very short period of time.
He also credits the home care system. “We were lucky to start these programs at a time when home care was willing to add new services through Palliative Care funding”. The program has provided numerous training sessions with nursing teams from various hospitals, environments and home care services on how to manage these patients.

When asked to identify his greatest achievement Kayvan replied, “I think it’s yet to come. I would say that we’re in the process of getting there, we haven’t reached so-called cruising altitude yet. The CARE Program has been highly successful so far and hopefully we’ll get even better.”

Interventional pulmonology is a growing field and will continue to explore and develop therapies. “Intrapleural or intralesional therapies may become an important tool in the management of various diseases in the future. The use of thermoplasty to treat asthmatics…that might be coming up in the next couple of years…new surgeries or techniques might be useful for patients with COPD. At this point we are mainly managing symptoms and offering diagnostic tools but it is an evolving field and we are exploring various other outcomes in patients with non-malignant conditions.”

Dr. Amjadi clearly understands that no matter how much you may already know, there is still so much more to learn.

Now that both the program and patient population have successfully been established, the group have begun to conduct research to find further ways to improve the care of patients with effusion. A study is currently underway to determine whether or not adding a chemical sclerosing agent through the indwelling catheter into the pleural space in an out patient setting will expedite pleurodesis. Another study evaluating the quality of life of patients with pleural effusion was just presented at the Chest 2011 Conference in Honolulu.

Q&A with Dr. Kayvan Amjadi

**What one invention would most improve your life?**
*Bigger biopsy forceps that could take multiple bites so I don’t have to keep going back in and out. An instrument that could work through a flexible scope only 6 mm in size.*

**If you wrote an autobiography, what would be the title?**
*Seeking Healing Opportunities…is that too cheesy?*
What is your idea of a perfect day?
I'm very much a generalist so I enjoy a lot of things... certainly spending the day with my wife and daughters [7 and 10]. Doing anything with them would be just perfect... they're so funny and they mean so much to me.

What keeps you awake at night?
The future of my children and how I could be a better dad.

If you could have dinner tonight with a famous person of your choice (dead or alive), who would it be?
François-Marie Arouet (aka Voltaire) writer, historian and philosopher, famous for his wit and advocacy for civil liberties.

If you could be a super hero, what power would you like to have?
My super heroes are my teachers, mentors and parents. What I admire most about them is their incredible sense of humor and their communication skills. I would choose a great sense of humor as my super power to enhance my communication skills.

What was the last book you read?
"Why Orwell Matters" biography of George Orwell by Christopher Hitchens

What actor would play you in a movie about your life?
Javier Bardem

If you could take a trip anywhere for 30 days, with money not being a consideration, where would you go and what would you do?
I always wanted to go to a few places, so I could probably fit them all into 30 days. I always wanted to land in Valencia, drive all the way down to Saville and to Lisbon and then go up to Madrid and back. I'd love to visit Santorini in Italy but I can't sit on the beach for too long, I'd get bored. I'm still very much a city tourist, I enjoy looking at architectural monuments. It would have to be a mix of beach and city.

What's the one thing about you few people know?
That I am a Respirologist, and not the Thoracic surgery resident.
CLINICAL CARE KEY INITIATIVES

TOH Chronic Ascites and Recurrent Effusion (CARE) Program
(Previously the PleurX Program)

Management of malignant pleural effusions previously required repeated thoracentesis or inpatient admissions for chest tube insertion and pleurodesis, resulting in substantial morbidity. Repeated thoracentesis is resource intensive and provided only temporary symptom relief. Chest tube insertion and pleurodesis required a 16 day average length of stay at The Ottawa Hospital. The Chronic Ascites and Recurrent Effusion or CARE Program (previously the Malignant Effusion or PleurX Program) began in May 2006 as an Ottawa pilot for outpatient management of malignant pleural effusions via the insertion and drainage of a specifically designed tunneled catheter (PleurX).

Since that time the CARE program has evolved into a comprehensive LHIN-wide regional program encompassing both pleural effusion and ascites management. The Champlain Community Care Access Centre (CCAC) works collaboratively with the program to provide the required nursing care in the home setting, a critical factor in our program’s success.

The CARE Program has shifted the management of malignant pleural effusions to the outpatient setting. Patients are seen for an initial assessment and insertion visit followed by outpatient visits at 2 weeks and 6 weeks. The remainder of the patient’s care is provided in the home setting by specifically trained palliative care community nurses. The patients and community care providers have a single point of contact via phone and/or pager should problems arise. For this population of patients with an average life expectancy of approximately 3 to 6 months, the CARE program has significantly improved quality of life by providing rapid, effective symptom control, greater patient empowerment and reduced the need for hospitalization. The main measure of program success is in the shifting of care to the home setting for this palliative group of patients, allowing increased quality of life and increased access to enhanced symptom control and support in their last few months of life.

Recently the program expanded to include the use of the same tunneled catheter to manage chronic ascites. In the oncology patient population, malignant ascites is a symptom that also portends a shortened life expectancy (3–6 months). Previous management at The Ottawa Hospital entailed repeated large volume paracenteses to drain the accumulated fluid.
Although this relieved symptoms, it provided only temporary relief with patients frequently undergoing multiple procedures and waiting until symptoms were severe before undergoing the procedure. Since the malignant effusion program had been successfully established, a pilot project using the PleurX catheter was initiated. The CARE program now encompasses both pleural effusions and ascites using the same processes with care provided in the home setting by CCAC.

The use of tunneled catheters for the management of both pleural effusions and chronic ascites is now the standard of care across the Champlain LHIN. As of April 2011 the program has placed 867 pleural catheters and 282 abdominal catheters with a high success rate of reducing symptoms, low complication rates and very high patient satisfaction. The Ottawa Hospital has the largest formal outpatient program in North America. We have shared our results locally, provincially, nationally and internationally via presentations and publications. As a leader in this clinical area we have mentored others to develop pleural effusion programs. There is now a program at Grand River Cancer Centre in Kitchener and we are working with clinicians in Toronto, Mississauaga and Kingston to implement similar programs.

Acute Cardiac Intervention

The University of Ottawa Heart Institute Coronary Care Unit (CCU) manages the most critically ill cardiac patients in the Champlain LHIN. Over the last decade, the landscape of the CCU has changed considerably due to a significant rise in the level of acuity relating to the management of certain critical illnesses. Patients who are comatose with return of spontaneous circulation (ROSC) after cardiac arrest are at an extreme risk of dying during the hospital admission. This major medical emergency is now commonly managed in our CCU. We believe that early recognition and quick mobilization of resources is key to improving survival and reducing morbidity in these patients.

It has become understandable that a multidisciplinary approach is now required to improve patient outcome in these patients. We are now in the process of formalizing the cardiac arrest program, which will specifically address our goals of early recognition and early intervention in these patients for our region. The project will build partnerships between cardiac surgery, cardiology, anesthesiology, neurology, physical rehabilitation, and the emergency medical services (EMS).
Patients who have a comatose state after resuscitation from a cardiac arrest with ROSC are candidates for therapeutic hypothermia (TH). Cooling patients down to 32–34°C increases survival and improves neurological outcome in these patients. In the last few years, we have developed TH protocols in selective patients. However, there is currently no formal program that gives directives to the region for transferring patients to the Ottawa Heart Institute for TH. There are 400 patients who suffer a cardiac arrest yearly in the city of Ottawa due to a cardiac cause and remain comatose after ROSC. In attempt to resuscitate these patients in the field, less than 50% survive to reach an emergency department and only 8% of these patients will survive to hospital discharge. Our pilot data indicates that comatose patients with STEMI who are treated with TH have survival rate of 69%, findings were presented at the Canadian Cardiovascular Society and American Heart Institute this year. The success rate of primary PCI in this population was better than 95% and the survival was 69% at 6 months. Amongst these patients, 89% of the survivors were discharged to their home.

There is now momentum worldwide at developing centers of excellence for patients that are post cardiac arrest. The Ontario Ministry of Health and Long Term Care is aware of the acceptable modalities of treatment for cardiac arrest patients such as therapeutic hypothermia. However, presently, there are no standardized response and assessment for these patients in our community and to the best of our knowledge, no standardized protocols in other Canadian provinces. We believe this project is innovative as it has the definite potential to impact on health care delivery of patients. We have established a multidisciplinary team which has assisted in the organization and development of this program making it feasible to initiate within the terms of this grant. In addition, the experience and results gained from this initiative have the potential to be translated into standard clinical practice both here at the Ottawa Heart Institute as well as other centers across Canada.

Tools for Transition Program™

The epidemic of diabetes has increased pressure on specialized services. At the Foustanellas Endocrine and Diabetes Centre (FEDC) of The Ottawa Hospital, there are approximately 20,000 patient visits per year for diabetes and a wait list of approximately six months for routine consultations. Seeing patients in follow-up reduces the capacity for seeing new referrals, and wait lists grow. It is essential to improve the transition of stable patients back to their primary care provider to reduce the logjam in multidisciplinary clinics.
The Tools For Transition™ (TFT™) Program was initiated to develop and evaluate tools to facilitate the transfer of patients with type 2 diabetes from FEDC specialist care back to the care of their primary care physicians (PCP) once diabetes management was optimized.

An extensive needs assessment/environmental scan was completed to gain a thorough understanding of the needs of all stakeholders — PCP, specialist team members and patients. This included PCP surveys and focus groups, a specialist team survey and chart audit. Semi-structured interviews with patients are underway at present. Results of a survey of 177 PCP, focus groups with 22 PCP, a survey of 23 specialist team members and the audit of 199 diabetes clinic charts have been published or presented at national conferences. Based on our work and an extensive review of the literature, a set of 5 tools for transition was developed.

The Tools For Transition™ tool set includes:

1. A Structured, Customized Discharge Consult Letter
2. A Rapid Re-entry Process and Rapid Re-entry Form
4. A Diabetes Clinic Discharge Note (to the patient)
5. A 3-month Reminder Post-card

Since July 2010, each tool in the Tools for Transition™ tool set has been progressively implemented as a quality improvement project at the Foustanellas Endocrine and Diabetes Centre. Several evaluation projects are either underway or planned to assess the feasibility and effectiveness of the Tools For Transition™ tool set. For example:

A study called the ‘Quality and efficiency of dictated discharge letters before and after implementation of a structured template: a quality improvement project’ is currently underway. Discharge letters (30 pre-template and 30 post-template) are being evaluated using the Discharge Letter Audit Form.

Data are currently being collected regarding the utilization of the Structured, Customized Discharge Consult Letter and the Rapid Re-entry Process.

A study to evaluate the effectiveness of the Tools For Transition™ Program is in the planning phase. We will be working with the Institute for Clinical Evaluative Sciences to collect health utilization data on patients 12 months post discharge as per the TFT™ Health Care Utilization Data form.
A chart audit is planned for 18 months post-implementation of the Tools For Transition™ Program to determine the effect on our discharge, defaulting and retention rates of patients with type 2 diabetes.

**Viral Hepatitis Program: A Model of Care that Sets the Standard**

Born from a need to provide viral hepatitis care for disenfranchised patients in the region, The Ottawa Hospital Viral Hepatitis Program was born in 2000 under the leadership of Drs. Gary Garber and Curtis Cooper from the Division of Infectious Diseases. Today, over 3000 patients benefit from the care provided by our clinical and research program.

From the start, our multidisciplinary team has maintained a focus on providing care for patients who face barriers to care including those living with HIV, mental health illness, substance abuse, poverty and language barriers. Hepatitis C and hepatitis B affects people from all socioeconomic strata in our community and we try to provide compassionate, non-judgmental care to all our patients, no matter who they are or where they come.

Our team initially consisted of two physicians and a clinic nurse. Over the years it has expanded to three infectious disease specialists, one hepatologist, one nurse coordinator, three clinic nurses, a social worker and mental health support from a psychiatrist and psychologist. This has been possible in part due to provincial funding obtained within the last fiscal year.

The mental health and social work component of our team is unique in Canada and serves as a model for other clinics in the Province and beyond. Our work in treatment preparedness in the provision of support during the course of therapy has allowed for increased access to treatment initiation, a higher treatment completion rate, and has maximized the likelihood of achieving virologic cure on treatment. With recent support from a Ministry of Health Innovation Grant, our program has become a national leader in research evaluating the management of mental health issues before and during hepatitis C antiviral therapy. Funded by a grant obtained in 2010, Jennifer Daley has focused on developing a system of support to ensure that patients living with hepatitis B have an opportunity to receive therapy if required. This multidisciplinary model is now being established in 12 locations in Ontario based after The Ottawa Hospital pilot success.

Our program also consists of a world class research program which is actively involved in the development of new antiviral therapies for hepatitis C. The exciting new HCV treatments that our research team are currently
developing will soon provide for far more effective, shorter duration therapy that will be free of interferon and its multiple side effects. Our research team and support staff approach our research with the same degree of thoughtfulness and compassion that is characteristic of our program. With cure rates expected to reach 70% with newer therapies, our ability to control and eradicate hepatitis C is expanding which then prevents the complications of advanced liver disease, liver failure, cancer and death.

Our clinic has grown to well over 3000 patients living with hepatitis C. Approximately 350 of these are co-infected with HIV. We also follow approximately 500 hepatitis B infected patients. This increasing number of patients has required flexibility in the way we provide care. However, we have risen to the challenge and look forward to soon adding a community liaison position to our multidisciplinary team. This individual will work with our partners in the community to reduce patient loss to follow up and to facilitate the delivery of viral hepatitis care jointly between our clinic and the community clinics that are closer to our patient’s home. Not only will this collaboration provide more convenience for those under our care but will also allow us to meet the increasing consultation demand to see patients who are in need of evaluation and care for viral hepatitis infection. We already have developed a joint practice model with several clinical sites in the region including Cornwall and Pembroke. Furthermore, we have recently integrated the provincial telehealth medicine system into our program to provide care to those living in remote regions of the Province and for those who are incarcerated.

The Ottawa Hospital Viral Hepatitis Program will continue to serve as a successful model of care for delivering difficult treatment to a heterogeneous and often disenfranchised population. We will continue to energetically pursue our mission to provide multidisciplinary treatment, education and support to those living with viral hepatitis in a compassionate, non-judgmental fashion within a rapidly changing treatment environment.

Neurology Clinical Care

Patients suffering from acute cerebrovascular ischemia may be losing as many as 2 million neurons per minute. Stroke patients receiving t-PA within 4.5 hours have a 30% better chance of achieving normal or near-normal function at 3 months post stroke. Within this narrow 4.5 hour time window, there is a clear benefit for achieving the earliest safe administration—time is brain. Until 2009, although our program achieved adequate compliance with overall administration rates, it was lagging with regard to the door-to-needle time benchmark.
Funded in part through the Champlain Regional Stroke Program, a multidisciplinary working group was formed, with wide representation from all stakeholders and support staff. In order to streamline acute stroke processes, every aspect of t-PA administration was carefully scrutinized and carefully analyzed. The task force tracked the time required for key laboratory tests (INR, CBC, platelets for example), transportation to and performance of the CT scan, arrival of the neurology consultant, as well as access and administration of t-PA. Key systems failures and potential barriers were identified and addressed. Among systems improvements, the following deserve particular mention: creation of stroke code records for data collection, streamlining of stroke code document packages, implementation of “porter prompt cards”, establishment of recognition letters to clinical teams that delivered stroke codes less than 40 minutes. In addition, spreadsheet and data collection processes were designed for timely evaluation and monthly reporting to the group and senior management.

In 2010, this led to a greater sense of urgency in acute stroke care delivery and this translated into substantial improvement of door-to-needle time: from an historical value of 74 minutes down to an average of 53 minutes, now consistently meeting the benchmark of 60 minutes of the Canadian Best Practice Recommendations. Our institution is now ranked 2nd in the Province of Ontario, and has also set the National Record for t-PA door-to-needle time — 14 minutes! Through the Champlain Regional Stroke Network, we are able to share what we have learned and our lessons for success with other hospitals who administer t-PA. We have already shared our acute stroke code protocols and other documents regionally with other hospitals, and provincially, as part of the Telestroke program.
IMPACT ON COMMUNITY

Last year, thousands of members of our community were provided medical care by the Department of Medicine with an enormously positive influence on their health. While the number of patients cared for is easily quantified we will use specific scenarios to paint a more vivid picture.

Venous thromboembolism is the third leading cause of cardiovascular death, and over 20% of patients who die from pulmonary embolism (PE) are not diagnosed before death. The Ottawa Hospital Thrombosis Program provides world leading care, education and research in all aspects of thromboembolic disease. To our knowledge we are the only thrombosis program in the world to see patients in outpatient clinics 365 days a year.

Over the course of the last 15 years the Ottawa Hospital Thrombosis Program has been a world leader in designing and testing new strategies for managing blood clots including diagnostic prediction rules (Wells PE and Wells DVT Models), outpatient management of DVT and PE, and peri-operative anticoagulant bridging strategies that permit the safe and cost-effective care management of patients. Our goal is to provide the same high quality of care to our entire health region (Champlain LHIN). To that end we provide an anticoagulation clinic with unprecedented warfarin care, with over 80% time in therapeutic range using e-mail, internet, lab networking and interactive voice recognition strategies to communicate with patients.

Earlier this year the program launched a new Telethrombosis clinic for patients in the region at the Pembroke Regional Hospital (PRH) and Montfort Hospital. People with suspected thromboembolic events are first identified in local emergency departments or their doctor’s office. If they do not require immediate admission they are referred to The Ottawa Hospital Telethrombosis Clinic and then seen by a physician specializing in Thrombosis management the next business day. The program is expected to reduce hospital admissions by safely managing patients recovering from thromboembolic events in outpatient clinics and in some cases, at home through telephone support. Additional clinics are planned for Hawkesbury and Cornwall. We are grateful for the $417,224 in support received from a Ministry of Health Innovation Fund for our program “Building a Regional Anticoagulation Management Program for the Champlain LHIN”. This program is delivering the world-leading 80% time in therapeutic range for patients on warfarin (compared to 55% time in therapeutic range average for our LHIN) mentioned above.
In 2011, the Thrombosis Program successfully secured funding from the regional health authority (LHIN) that will extend its services from the 700,000 people in Ottawa to the 1.2 million in our 18,000 km² region. Anticoagulation management is growing from 1100 patients at the program start to 5000 patients. This past year the Program published over 30 peer-reviewed publications and secured over $2 million in new peer reviewed grant funding. With the success of the program comes national and international attention. The Thrombosis Fellowship Program has just welcomed three new fellows from the UK, Argentina and Calgary.

The Department of Medicine has been a key player in the development of the Thrombosis Program. The Department has provided funding to protect time for the thrombosis program scientists to lead the development of these innovations and has funded fellowship training and curricular development that has trained over 20 current leaders in Thrombosis.

**Enriching a Community’s Quality of Life**

In 2010–11 the Department and its divisions continued to develop and support many programs aimed at improving health care services in and around our community.

The GEM (Geriatric Emergency Management) program continued to grow and mature and in 2010–2011 GEM services saw over 3100 patients that were assessed in the Emergency Departments of all of the hospitals in Ottawa including The Ottawa Hospital, the Montfort and Queensway Carleton Hospital.

Drs. Paul MacPherson and Louise Balfour in collaboration with Drs. Pipe and Reid at the Ottawa Heart Institute developed and pilot tested a new smoking cessation program for HIV+ patients. An astonishing 40-60% of HIV+ individuals smoke cigarettes, two to three times the national average. The smoking cessation program developed in the Division of Infectious Diseases and supported in part by funds from the Department of Medicine recognizes some of the unique needs and obstacles faced by HIV+ individuals when they try to quit smoking. The pilot study lead by Drs. MacPherson and Balfour has achieved a 28% smoking cessation rate, comparable to the most successful cessation programs for the general public and higher than the 10% success rate published by other investigators focused on the HIV+ population. Drs. MacPherson and Balfour have now received CIHR funding to further develop their smoking cessation program and deliver it to HIV clinics across the country. Knowledge transfer workshops have already taken place or are scheduled in Halifax, Quebec City, Montreal,
Kingston, Toronto, Hamilton and Edmonton. Drs. MacPherson and Balfour are currently applying for additional CIHR funds to conduct an RCT comparing their program to standard smoking cessation protocols.

Drs. Susan Dent and Michele Turek obtained a TOHCC foundation grant to study cardiac issues in oncology patients. This will span a host of conditions from cancer drug toxicity to cancer involvement of the heart. There has been initial discussion with MD Anderson Hospital in Houston, Texas to build a strong collaboration between the Ottawa clinic and MD Anderson. This clinic will be used as a research tool to study cardiac disease in this patient population.

The Champlain Regional Palliative Hospice Palliative Care Program was inaugurated, in collaboration with the Champlain LHIN, in November 2010. The role of the Program is to coordinate palliative care services and ensure quality and standards for hospice palliative care across the Champlain LHIN region. Dr. Pereira initiated the process to develop the Program and co-led its development and implementation. The Program has already launched several projects, including the Ottawa Hospice Services Plan and the Alavida Website (www.alavidapalliativehelp.org) for patients and health professionals.

Family Health Team Palliative Care Project: The Division (through the Bruyère PPSMCS) has been working closely with the academic family medicine clinics in Ottawa to support them (through consultation, resources, education and resident support) in increasing their involvement in providing primary level palliative care. The number of family physicians providing palliative care has increased significantly at the Élisabeth Bruyère and Primrose Clinics and has started to increase at the Civic Clinic. This 3-year project is funded by an Innovations grant from Bruyère Academic Medical Organization.

Pallium LEAP Education Program: Using the courseware developed by the national project Pallium Canada (co-founded in 2001 by Dr. Pereira), the Division has trained over 80 primary care doctors, nurses and pharmacists to provide primary-level palliative care. Each Division member has undergone a ‘Train the Trainer Program’ to become facilitators of this 3-day interactive small-group case-based program.

Dr. Lynne MacGregor worked with representatives of the Canadian Paraplegic Association (CPA) and TOHRC staff to develop a resource for patients with Spinal Cord Injuries to access services/learning resources in their community. She has also worked with the out-patient department in providing access to the Women's Breast Health Centre for women with disabilities who require regular gynecologic assessments.
Dr. Gonzalo Alvarez has initiated widespread public health and public awareness programs in Nunavut to decrease the incidence of Tuberculosis and smoking-related diseases in Northern Canadian communities. This work is funded by the Public Health Agency of Canada.

The first annual National Capital Bone and Joint Health Day for family physicians was held at the Hampton Inn on June 3, 2011. Evening education sessions for patients and families with diseases such as SLE, Sjogren’s and scleroderma are held 3-4 times a year and presented by Dr. Doug Smith and a variety of visiting speakers.

Over 10 years ago, Jeff Turnbull, General Internist in the Department of Medicine and current Chief of Staff at The Ottawa Hospital and a number of like minded colleagues had concerns that amongst the chronically homeless shelter users, those with complex health needs and frequent users of health services, were not well cared for. In April 2001, funding from the federal Supporting Community Partnerships Initiative (SCIPI) was secured for the pilot project. This was the beginning of what eventually became Ottawa Inner City Health, Inc.

Ottawa Inner City Health coordinated and integrated health care services so that homeless individuals in Ottawa could receive the same quality of health care as other Canadians. OICH has special health care units, which are located within local homeless shelters creating a safe environment where health care can be provided. These special units are staffed by personal support workers and supported by visiting nurses and doctors. They are operated through a partnership between the shelters. This model has been well accepted by homeless clients and provides health outcomes, which are comparable to the Canadian standard.

A major milestone in May 2011 was the opening of the Cornerstone Housing for Women. Ottawa Inner City Health is a partner in the 314 Booth Street Housing program, which provides health services for 20 senior women who have experienced homelessness. Despite Inner City’s humble beginnings, after 10 years the program has grown in capacity and function to care for over 120 individuals on any given day, attending to well over 4000 homeless men and women in Ottawa.
MEDICAL EDUCATION

“Things that matter most must never be at the mercy of things that matter least.”

— JW von Goethe
The Department of Medicine recognizes that education remains an integral academic priority for faculty members. As a proud part of the University of Ottawa, Faculty of Medicine family, its education mission encompasses the training of medical students and residents, the support and encouragement of clinical teachers and educators, the provision of evidence-based continuing medical education for the community that we serve and the development of scholarship in medical education.

The Department supports medical education through the Medical Education Executive Committee led by Dr. Claire Touchie in her role as Vice-Chair, Education. The team enables the Department to fulfill its vision as the best educational environment in Canada. Committee members are Dr. Cathy Code, Internal Medicine Program Director, Dr. Anna Byszewski, Director of Continuing Professional Education and Dr. Susan Humphrey-Murto, Director of Medical Education Research. Joining the committee this year are Dr. Heather Clark as Director of Undergraduate Education and Dr. Stephanie Hoar as Director of Postgraduate education.

Our activities are supported financially, mostly through funds from the University of Ottawa Medical Associates. This funding has allowed us to support major leadership roles, teaching activities, career awards and medical education research/innovation activities. In 2010–2011, eight career awards were given to departmental members who are actively involved in medical education research locally, nationally and internationally. 2010-2011 recipients were Drs. Pierre Cardinal, James Chan, Pippa Hall, Susan Humphrey-Murto, Heather Lochnan, Anne McCarthy, Debra Pugh and Claire Touchie.
The academic year 2010–2011 was fuelled by renewal in preparation for new endeavors. This report highlights new faces in key leadership positions; new curricular developments for students, residents and faculty; new ways of recognizing achievement; and new places providing exciting opportunities for learning and research.

Leadership Changes

Dr. Melissa Forgie has changed her role within the Dean’s leadership team stepping down as Assistant Dean of Student Affairs and assuming the role of Associate Dean of Undergraduate Medical Education for the new academic year.

Other Departmental members assuming important leadership roles at the Faculty include Dr. Jolanta Karpinski as Director of Postgraduate Evaluation and Accreditation and Dr. Robert Bell, who was named Director of the Distinguished Teacher Program,
a new innovation at our university that provides members with extensive
development and teaching opportunities. This program invites them to
become part of a community of dedicated teachers within the Faculty.
Drs. Louise Laramée, Heather McLean and Michael Froeschl from the
Department of Medicine are amongst the first 12 to participate in this program.

Dr. Chris Johnson joined the Department of Medicine Internal Medicine Residency
Training Program as Associate Director. Dr. Susan Humphrey-Murto was named
Senior Research Associate for the Academy for Innovation in Medical Education
(AIME) at uOttawa. This new position at AIME will provide much needed mentoring
for young medical educators wishing to get involved in scholarship.

Curricular Innovations

The Department of Medicine continues to provide a substantial amount of
teaching at the preclinical level for the undergraduate medicine curriculum.
Departmental members did 28% of all prescheduled teaching in the form
of case-based learning (CBL), problem-assisted learning and lectures.

Clinician-educators within the department have developed innovative
undergraduate medical education initiatives. Dr. Anne McCarthy has
developed a curriculum on global health and is facilitating students wishing
to do electives abroad. Dr. Anna Byszewski has led the implementation of
professionalism education in the undergraduate curriculum. Professionalism
education is now “infused” throughout the curriculum and environment where
students learn, with as much exposure to exemplary conduct as possible.

In postgraduate medical education, 2010 saw the accreditation of the
Nuclear Medicine Residency Training program under the leadership of
Dr. Laurent Dinh. In addition to our “core” Internal Medicine training program,
the Department now counts 17 different specialty and subspecialty training
programs. Dr. Stephanie Hoar, along with her team of program directors, is busy
incorporating tools for the assessment of the non-expert CanMEDs roles.

Under the leadership of Dr. Anna Byszewski as Continuing Professional
Education (CPE) director, 2011 saw the inaugural Dr. John Seely Memorial
Lectureship on Professionalism. The CPE committee is planning to develop
further lectureships commemorating individuals who have provided significant
contributions to education within the department. As a testament to the
Department’s commitment to provide continuing education to its members,
Medical Grand Rounds can now be accessed at community sites including
Montfort and Queensway Carleton Hospital.
Recognition of Achievement

Recognition of achievement is evidence of the dedication of departmental members to reach greatness in medical education. This year the Department of Medicine awarded the first Meridith Marks Educator Award for Innovation and Scholarship in Medical Education. The inaugural recipient was Dr. Timothy J. Wood from the Medical Council of Canada. Dr. Wood is a PhD medical educator who has collaborated with numerous departmental members and has made many research projects possible for them.

In May, 2011 Dr. Chris Glover, on the behalf of the Cardiology residency training program, received the 2011 PAIRO Residency Program Excellence Award. The Residency Program Excellence Award is given to one program in the province that consistently provides an exceptionally positive and rewarding experience to its residents. The Cardiology Residency Program excelled in all of the criteria set out in this award as highlighted by, educational activities that are numerous and of extremely high quality, a supportive program director that is attentive to the resident’s needs, an overwhelmingly positive and supportive work environment, and a willingness to commit financial support for resources identified as important.

Other members also achieved recognition for their involvement in medical education this year. Drs. Anna Byszewski and Louise Laramée were awarded the Canadian Association for Medical Education Certificate of Merit. Dr. Stephanie Hoar received the Teaching Skills Attainment Award for her commitment to professional development in the Faculty of Medicine of the University of Ottawa.

New Places

The fall of 2010 saw the opening of the University of Ottawa Simulation and Skills Centre (uOSSC). The Department of Medicine is supporting this endeavour by investing in equipment and PhD educators. The uOSSC will provide the space, personnel and equipment to further advance curricula, skills development and research endeavors for our medical students, residents and staff.

In summary, we have assembled the team and planted the seeds of necessary resources and rewards to continue investing in education, preparing the physicians of today for tomorrow.

Claire Touchie
MD, FRCP
Associate Professor of Medicine
Vice-Chair, Education
While her large clinical responsibilities and teaching load take up a great majority of her time, Anna Byszewski realizes the importance of keeping her body and spirit healthy. Yoga classes enable her to return to work with renewed energy and focus. (Photo taken at Centre Fitness Plus, The Ottawa Hospital, Civic Campus)
AN INTERVIEW WITH
DR. ANNA BYSZEWSKI
MD, MEd, FRCPC

Anna Byaszewski is an Associate Professor of Medicine with the Faculty of Medicine, University of Ottawa, and a practicing physician in the Department of Medicine, Division of Geriatrics, The Ottawa Hospital. She is also an investigator with the Ottawa Hospital Research Institute and Director of Professionalism for the Undergraduate Curriculum.

Throughout medical school, residency and even in junior faculty positions most physicians are focused solely on their role as clinicians, not on the many other roles one can pursue as a medical doctor. For Dr. Anna Byaszewski her role as a medical educator grew out of a passion for sharing knowledge about her subspecialty, geriatrics. Being a fairly new subspecialty at the time it was important for her to teach others about the special care older people require. For Anna, medical education wasn’t the result of any one defining moment, it was simply a case of evolution based on a need.

“Geriatrics is the fastest growing population in hospital care, most of our patients are older. Even if you don’t do geriatrics but you’re an orthopedic surgeon or cardiologist it’s incredibly important to look at the whole person, whether it’s assessing multiple medications, cognitive change or grief.”

This passion for sharing knowledge naturally led her to pursue the field of medical education and in 2005 Anna received a Masters in Education, “I wanted to have the skills to further medical education, to develop programs or tools — simply to teach better,” she says. “As focused as it seems now, I never understood in medical school that this would be one of my roles. I thought I just wanted to practice good medicine — whatever that means.”

Although it was not a straight path, opportunities in medical education followed one after the other. As a dedicated faculty member, Anna has spent more than two decades helping educate doctors in Ottawa. Throughout her career she has provided educational initiatives, innovations and leadership at multiple levels. She has served as Director of Continuing Professional Education within the Department with an emphasis on bringing Medical Grand Rounds into the 21st Century. She has led the Professionalism Program for the undergraduate medical curriculum bringing with her a vision of ethics, patient-centered and relationship-centered care and overall student well being. In this capacity she hopes to ensure medical students are given the best education around
role-modeling and professionalism so that they understand the importance of the CanMEDS roles. Delivery of this key message will ultimately translate to improved patient care. “Students are impressionable and very vulnerable — they need good role models. It’s not enough to be a skilled clinician, you need to be a good collaborator, communicator, professional, health advocate, manager, scholar, and promote the determinants of health for self and for your colleagues.”

Teaching extends to more than just medical students. As a key contributor to the e-portfolio program, a ground breaking program led by Dr. Pippa Hall that encourages reflective learning through the use of a web-based journaling/feedback tool, Anna organizes the faculty development of close to 70 coaches. Her goal is to develop a culture of supportive collegiality, where ethical clinical care and constructive feedback encourage this new type of learning. “It’s kind of touchy feely, but I think that’s the way of the future, that’s what society expects of physicians.” Her drive and dedication comes from a combination of many things including personal experiences. “Being a caregiver to family members and myself being a recipient of health care, I am now sensitized to how patients are approached and handled. I had high expectations. I was looking for empathy; understanding and two-way dialogue and I didn’t always see that. These experiences have helped me to understand that I have to provide better care to my patients and to teach others to do so, as well. These types of programs will hopefully help future generations of health care providers develop those competencies.”

Anna attributes much of her success to the support of the Department. “We have an amazing group of individuals, having been part of the education committee, I look back 25 years ago and there was no support for education. It was all research-based. We have a better balance now with an administrative structure and a really great group of leaders, all committed to medical education. The Department should be commended.”

While she has achieved a great deal of local, national and international recognition in the area of medical education, Anna’s greatest achievement goes back to the patients. “I don’t want to be an educator if it really doesn’t change what I’m here for, I’m here to look after the patients.” Her biggest passion has been in developing the Geriatric Day Hospital at The Ottawa Hospital’s Civic Campus, where she was director for 15 years. During that time, together with an amazing team, she was able to shape the way health care providers help older people with issues, including dementia, driving safety, multiple medical problems and stressed caregivers. “My biggest medical achievement has been in that area. It shaped all my interests. I teach students and residents there everyday. We all have our CV’s and our careers, our aspirations, they’re all important but ultimately it’s about patient care. That is the driver.”
In recognition of her exceptional role modeling and living the hospital’s core values, Dr. Byszewski was recently presented with an Ottawa Hospital Compass Award. “It’s very humbling and I’m very honoured. There are amazing changes happening here at The Ottawa Hospital and this award recognizes the people who are helping make those changes happen. I love coming to work; it’s a gift. I remember my mom saying ‘strive to have a job where you want to go to everyday, where you feel passionate, something that will feel more like a hobby than a job. I always remember that value as being important and I thank my mom for that.”

Q&A with Dr. Anna Byszewski

What is your idea of a perfect day?
A day at the ocean.

What keeps you awake at night?
My children … Still.

If you could have dinner tonight with a famous person of your choice (dead or alive), who would it be?
Malcolm Gladwell.

If you could be a super hero, what power would you like to have?
The ability to heal with touch.

What was the last book you read?
Blink—there are a few things there to take away.

What actor would play you in a movie about your life?
Sophia Lauren

If you were given $1 million that you had to donate anonymously, who would be your recipient?
Split between the Alzheimer’s Society and Doctors Without Borders.

If you could take a trip anywhere for 30 days, with money not being a consideration, where would you go and what would you do?
Ghana, Africa. Revisit memories as a child.

What’s the one thing about you few people know?
That I am a very good carpenter. I love working with wood, creating.
“Medical science has proven time and again that when the resources are provided, great progress in the treatment, cure, and prevention of disease can occur.”

— Michael J. Fox
RESEARCH

Medical research, at its core, is about planting seeds, taking simple ideas and developing them into life changing discoveries. Medical advances often start their life cycle as small ideas, supported, developed and grown in the perfect environment. The mission of this Department of Medicine is to continue to provide optimal conditions for its investigators to conduct health research.

The Department of Medicine directly supports research via an innovative infrastructure funding program that is unique amongst University Departments across Canada. In 2010–2011, the Department directly allocated more than $4.5 million, derived from its Alternate Funding Plan (AFP), to support members who conduct research. Approximately 75% of these funds were distributed through the Department of Medicine practice plan as Research Salary Awards. Selection and distribution of these awards were based on a competitive process overseen by the Research Advisory Committee. This process guarantees that clinician scientists have adequate time protection for research, thereby also ensuring that the research priorities of the Department, such as in Thrombosis, Respirology, and Vascular Health remain world-class. In addition to this unique Salary Award Program, research operating grants were awarded to Department members to support pilot projects, translational research studies, the development of interdisciplinary teams to conduct research, and priority research grants in vascular health or clinical research.

Through its practice plan, the Department also supported four Dean’s University of Ottawa Faculty of Medicine Clinical Research Chairs. These are highly distinguished honours and the Department is proud to note that our researchers received four of the nine chairs awarded in 2010–2011.
Dean’s uOttawa Faculty of Medicine Clinical Research Chairs

Dr. Shawn Aaron  
Respirology  
Tier 1 Research Chair in Obstructive Lung Disease

Dr. Marc Rodger  
Hematology  
Tier 1 Research Chair in Venous Thromboembolism and Thrombophilia

Dr. Greg Knoll  
Nephrology  
Tier 1 Research Chair in Clinical Transplantation Research

Dr. Marc Carrier  
Hematology  
Tier 2 Research Chair in Venous Thromboembolism and Cancer

In 2010–2011 the Department of Medicine ran 2 competitions for internal research funding and proudly granted awards to its members in the following categories:

Developmental Research Awards

Dr. Grant Stotts  
Neurology  
Establishment of the Ottawa Stroke Research Group (OSRG)

Dr. Smita Pakhale  
Respirology  
Examining treatment adherence in adults living with CF: A pilot study

Dr. Alan Tinmouth  
Hematology  
Safety and efficacy of a therapeutic platelet transfusion strategy in patients receiving outpatient-based care for myelodysplastic syndrome/acute myeloid leukemia

Dr. Dar Dowlatshahi  
Neurology  
Predicting early intracerebral hemorrhage expansion using the dynamic CT-angiography spot sign
Research Priority Awards

Dr. Jonathan Angel  
*Infectious Diseases*  
Circulating endothelial progenitor cells in HIV-infected men as a marker of cardiovascular risk

Dr. David Allan  
*Hematology*  
Induction of angiogenic repair capacity in vascular progenitor cells

Dr. Vincent Corrales-Medina  
*Infectious Diseases*  
The impact and risk of cardiac complications in patients with community acquired pneumonia

Dr. Greg Knoll and  
*Nephrology*  
The implementation of a computerized decision support system for oral anticoagulant dosing in hemodialysis patients: a study of effectiveness and safety in a high-risk population

Mid-Career Salary Awards

Dr. Carl van Walraven — Internal Medicine

Dr. Alan Forster — Internal Medicine

Dr. Paul MacPherson — Infectious Diseases

Junior Research Awards

Dr. Karim Abou-Nassar — Hematology

Dr. Dar Dowlatshahi — Neurology

Research Fellowship Awards

Dr. Kirsten Hogg — Hematology

Dr. Nataliya Milman — Rheumatology

Dr. Esteban Gandara — Hematology

Dr. Yoko Schreiber — Infectious Diseases

Dr. Marion Doyle — Endocrinology & Metabolism
For Divisions that are not Members of this Departmental Practice Plan (University of Ottawa Medical Associates), research productivity in 2010–2011 has been substantial. The Division of Cardiology at the University of Ottawa Heart Institute has a well-established program to support lab-based clinician scientists as well as clinical investigators for start-up and salary support, with some of these funds derived from the Associates in Cardiology. The Division has traditionally placed considerable emphasis on the value of research and has allowed for clinician scientists to have up to 80% protected time. In the Division of Physical Medicine and Rehabilitation, there has also been a tradition of excellence in research. For example, Dr. Guy Trudel has been very successful in obtaining CIHR operating grants related to bone and joint function, and his endeavours have led to important partnerships with the Canadian and European Space Agencies. In the Division of Medical Oncology there is a strong history of excellence in research. Most recently, Dr. Garth Nicholas has received grant funding for an early detection study in lung cancer, Dr. Roanne Segal is conducting a study looking at the impact of exercise on the outcome of women with breast cancer and 3 members of the Division (Drs. Clemons, Goss and Jonker) are part of a multidisciplinary group conducting High Impact Clinical Trials in Oncology.

Canada Research Chairs

In 2010–11 the following members of the Department held Canada Research Chairs:

**Marjorie Brand** — Regulation of Gene Expression

**Jeffrey Dilworth** — Epigenetic Regulation of Transcription

**Jeremy Grimshaw** — Health Knowledge Transfer and Uptake

**Michael Rudnicki** — Molecular Genetics

**Michael Schlossmacher** — Parkinson’s Disease

**Rhian Touyz** — Hypertension

**Peter Tugwell** — Health Equity

**Philip Wells** — Thromboembolic Disease

**Kumanan Wilson** — Public Health Policy
In 2010–2011, total external research funding received by the Department of Medicine was approximately $50 million derived from peer review sources. Lists of key grants can be found in the Divisional Reports section of this report. A significant number of these grants were from the premiere national agency that supports health research, the CIHR.

While the Department was particularly proud of its accomplishments in basic/translational research within its research intensive Divisions such as Hematology, Neurology, General Internal Medicine, Infectious Diseases, and Nephrology, we recognize that research is a critical scholarly activity within all divisions in the Department, even those that would traditionally not be thought of as research-intensive. Most notably, in 2010–2011, Dr. José Pereira from the Division of Palliative Care was awarded a CIHR Knowledge Translation Grant to evaluate palliative-care related competencies.

FINDINGS, DISCOVERIES & BREAKTHROUGHS

As one of the most research-intensive Departments of Medicine in the country, it comes as no surprise that a significant number of medical advances were made this past year. The following are highlights of the findings, discoveries and breakthroughs made by our researchers with the support of the University of Ottawa and The Ottawa Hospital Research Institute.

Dr. Michael Schlossmacher and his colleagues identified signature proteins in the spinal fluid that may help diagnose the process of Parkinson’s Disease in the brain. Findings of this biomarker work were presented at World Parkinson’s Congress in Scotland in 2010 and during a webinar hosted by the journal Science Translational Medicine and the Michael J Fox Foundation in April 2011. His team is now developing a blood test for Parkinson’s. The Michael J. Fox Foundation has recently announced a $40M international research project that will examine potential biomarkers in 700 Parkinson’s patients and controls. Dr. Schlossmacher’s biomarker will be part of this project.

New research by Dr. Jonathan Angel’s group has shed light on the important question of how exactly HIV weakens the immune system. While it has been known for many years that HIV directly infects and kills T cells, Dr. Angel’s research shows for the first time that HIV also disrupts the IL-7 signaling pathway that is crucial for T cell development, function and survival. This research is important because it suggests that IL-7-based therapies for HIV (which are currently in clinical trials) may need to be augmented with therapies that restore the IL-7 signaling pathway. Please see the Journal of Leukocyte Biology for details.
To facilitate decision-making about treatment options for patients with end-stage renal disease considering kidney transplantation, Drs. Carl van Walraven and Greg Knoll developed an index for clinical prediction of risk of death. This index uses commonly available information to predict mortality accurately in patients with end-stage renal disease and could provide valuable quantitative data on survival for clinicians and patients to use when deciding whether to pursue transplantation or remain on dialysis.

New research led by Dr. Duncan Stewart suggests that a commonly used type of bone marrow stem cell may be able to help treat sepsis, a deadly condition that can occur when an infection spreads throughout the body. The study shows that mesenchymal stem cells can reduce organ damage, help clear infection and triple the overall survival rate in experimental models of sepsis. Please see the American Journal of Respiratory and Critical Care Medicine for details.

High-impact Publications


Courtman, D, Stewart D et al. The role of transglutaminase 2 and osteopontin in matrix protein supplemented microencapsulation of marrow stromal cells. *Biomaterials* 2010; 31(35):9256-65


Renaud, LP et al. Post- and presynaptic group II metabotropic glutamate receptors reduce neuronal excitability in rat midline paraventricular thalamic nucleus. *J Pharmacol Exp Ther* 2011; 336(3):840-9

Sabloff, M et al. HLA-matched sibling bone marrow transplantation for beta-thalassemia major. *Blood* 2011; 117(5):1745-1750


Touyz, RM et al. Sphingosine-1-phosphate-induced inflammation involves receptor tyrosine kinase transactivation in vascular cells. *Hypertension* 2011; 57:809-818


Wells, PS et al. A regression model to predict warfarin dose from clinical variables and polymorphisms in CYP2C9, CYP4F2, and VKORC1: Derivation in a sample with predominantly a history of venous thromboembolism. *Thromb Res* 2010; 125(6): e259-64

**HONOURS AND AWARDS**

**Dr. Kevin Burns**
Recipient of the Kidney Foundation of Canada 2010 Medal of Excellence in Research.

**Dr. Tony Hakim**
Recipient of the Biomedical Science Ambassador Award from Partners in Research at the annual Ottawa Evening Gala.

**Dr. Jeremy Grimshaw**
Elected co-Chair of the Cochrane Collaboration, a highly prestigious international research network that helps people make informed health care decisions.

**Dr. Rhian Touyz**
Recipient of the Distinguished Service Award at Hypertension Canada's Annual Meeting.

**Dr. Duncan Stewart**
Awarded the 2010 Royal College Visiting Professorship in Medical Research from the Royal College of Physicians & Surgeons of Canada.

**Dr. Ed O'Brien**
Named the UOHI Investigator of the Year Award for Basic Science.

**Dr. Bob Reid**
Named the UOHI Investigator of the Year Award for Clinical Science.

**Dr. Michael Sharma**
Received 1st Prize — The Ottawa Hospital Quality Award for the project “Reducing door-to-needle time in acute stroke (with the Champlain Regional Stroke Centre).

**Dr. Duncan Stewart**
Recipient of the inaugural Friends of CIHR Founder’s Award to mark the 10th anniversary of the organization and honours the leaders who helped create the organization.

**Dr. Paul MacPherson**
Recipient of the 2010 Young Professor Award from the University of Ottawa, Faculty of Medicine.
RESIDENT RESEARCH DAY

Resident Research Day continued to be an important part of the Department’s ongoing dedication to provide a strong academic research environment for our trainees. Dedicated to enhancing a resident’s educational experience and providing a mentoring relationship with faculty members, this annual event, chaired by Dr. Alan Forster, provided an opportunity to better understand the connection between research and clinical care.

This past year we were very fortunate to have Dr. Louise Pilote from McGill University, Division of General Internal Medicine as our keynote speaker.

Judged to be the Best in 2011:

- Oral Presentation Award Winner (PGY2): **Dr. Tahir Shaikh**, “Lamivudine is Highly Effective in a Non-Investigational Chronic Hepatitis B-Infected Population”
- Oral Presentation Award Winner (PGY3): **Dr. Kaïssa de Boer**, “Exacerbation Frequency and Clinical Outcomes in Adult Patients with Cystic Fibrosis”
- Oral Presentation Award Winner (PGY5): **Dr. Sunita Mulpuru**, “Performance Test Characteristics of the Febrile Respiratory Illness and Influenza-like Illness Infection Screening Tools during Pandemic H1N1 Influenza Season”
- Overall Poster Presentation Award Winner (PGY2): **Dr. Allison Hall**, “Cardiac FDG PET Imaging Positively Impacts Management Direction and Identifies High Risk Patients in Multi-Center Provincial Registry (CADRE)”
Finally, the Department of Medicine is very proud to acknowledge the research contributions and achievements of its members who do not have their primary appointments in the Department.

**Dr. Lynn Megeney**  
Awarded the Dr. Michel Chrétien Researcher of the Year Award from the Ottawa Hospital Research Institute (OHRI) for his ground-breaking work on stem-cell development.

**Dr. John Bell**  
Awarded the Dr. J. David Grimes Research Career Achievement Award for his pioneering work on oncolytic viruses for cancer therapy from the OHRI.

**Dr. Melissa Bowerman**  
Awarded the Dr. Ronald G. Worton Researcher in Training Award for her research in developing new treatments for spinal muscular atrophy.

---

**Kevin Burns**  
MD FRCP  
Professor of Medicine  
Vice-Chair, Research
The stillness of the lake at 5:30AM provides Shawn Aaron perfect moments of clarity with which to think. Many of his research ideas were formed while in his kayak, exploring the waters around his cottage on Lac Heney, Quebec.
AN INTERVIEW WITH

DR. SHAWN AARON
MD, FRCPC

In addition to his role as Head of the Division of Respirology, Dr. Aaron is a full professor with the Faculty of Medicine, University of Ottawa and a senior scientist at the Ottawa Hospital Research Institute.

Most people would say the key ingredients to becoming a successful researcher are time and determination, but in Shawn Aaron’s case you’d also need to throw in a pinch of luck and a dash of love. Trained as a clinician, who only wanted to do clinical medicine, Dr. Shawn Aaron has since transformed into one of the Department of Medicine’s research super stars.

Influenced by his parents towards going into medicine and intent on making his mother happy, Dr. Aaron entered McGill University medical school with no plans of being a researcher. “I just wanted to become a doctor. I actually fell into research, not even by choice to be honest”, that choice as it turns out belonged to his heart. His wife Karen, also a physician, had an opportunity to practice in Ottawa, and Shawn’s only option at securing employment in the same city was conditional upon him completing a Masters in Epidemiology and becoming a researcher.

“Going back to school after doing 4 years of med school and 6 years of residency did not appeal to me. The first 6 months I was miserable, I was a bear, and then gradually I realized that this was sort of interesting and finally I liked it. Before I knew it, I fell in love with doing research and that was that.”

Being forced outside of his comfort zone has paid off. Over his ten-year career Dr. Aaron has received close to $6.8 million in peer-reviewed funding as a principal investigator. He’s been the recipient of numerous awards including most recently, a University of Ottawa Tier 1 Research Chair in obstructive lung disease. He is a highly sought after speaker in the international arena and has published 70 plus articles, many with significant journal impact factors. Dr. Aaron attributes many of his successes to the support of the Department.

“The Department of Medicine here in Ottawa has been a major factor for my success. The Department has always fostered my research interests throughout my career. They’ve been very, very supportive in guaranteeing me protected time to do the research because without time you cannot be successful.”
In addition to the support and his genuine love of research Dr. Aaron’s success has been driven by a keen sense of competition. “I can’t say I was ever a great athlete but I always loved to compete. In research you compete against the top people in Canada for grants and to get your papers published in the best journals, I sort of thrive on that.”

And compete he has. Most recently Dr. Aaron was awarded 2 CIHR grants, totaling close to 3.5 million in funding. The first, for an international clinical trial to evaluate whether daily therapy with a statin (Simvastatin) decreases pulmonary morbidity in patients with advanced COPD. It is hoped that regular use of these inexpensive medications will improve patient health and quality of life, reduce respiratory exacerbations, and ultimately save money for the health care system.

The second grant will be used as a follow-up to Dr. Aaron’s highly publicized 2008 CMAJ publication. This controversial publication showed that approximately 30% of individuals with physician-diagnosed asthma did not have asthma when objectively assessed. “There were controversies related to the fact that asthma is a disease that goes up and down and that maybe we tested patients at a point when we couldn’t find any asthma. We’re going to try to bury the controversy once and for all by doing it perfectly.”

This new study will determine if Canadian physicians are employing objective measures of lung function, such as spirometry and bronchial challenge tests, to establish new diagnosis of asthma in Canadians. It will also evaluate the prevalence of misdiagnosis of asthma in Canadians who have been recently identified with this condition.

Even with the components of determination, time and love in place, being open to the unexpected is also a vital element in research.

For example, in 2003 while looking at the results of a study to determine whether or not patients with respiratory infections had the same type of Pseudomonas when ill as they did when they were well, Dr. Aaron discovered a previously unheard of phenomenon. He found 11 patients that shared the same strain. The only previous study in Canada said that there weren’t any transmissible strains and that this was a European phenomenon, not a Canadian problem.

“We weren’t looking for that, in fact it wasn’t even part of the objective of that first study, but we found something objective and we built on it, which I think is a good way to do research. If you look at your findings and you discover something you didn’t expect then you’d better figure it out.”
This unexpected discovery eventually led to a CIHR grant and in 2010 he published his conclusions in JAMA. The findings had quite an impact in Canada and have dramatically changed the infection control policies in this country. Based on his finding, The Canadian CF Foundation has just put forward a call for a team grant to study the Pseudomonas strains.

“The impetus for that publication was simply luck. I think a lot of stuff in research is about keeping your eyes open for things you don’t expect.”

Dr. Aaron continues to share his love of research by actively recruiting new young academic researchers, “I’m hoping in 10 years they can take my place and continue the rich academic tradition of this division. If I’m going to be successful in another area other than the research and clinical care it’s to make sure I build a solid base of people that this division will grow with.”

Q&A with Dr. Shawn Aaron

- **What one invention would most improve your life?**
  Caffeine without the side effects.

- **If you wrote an autobiography, what would be the title?**
  I would never write one, no one would read it… maybe my mother would.
  So maybe “Autobiography for my mom”.

- **What is your idea of a perfect day?**
  At the cottage, wake up at 5:30, kayak for 1.5 hours and spend the rest of the day on the lake.

- **If you could have dinner tonight with a famous person of your choice (dead or alive), who would it be?**
  Sir Frederick Banting — He discovered insulin. A very famous Canadian researcher.

- **If you could be a super hero, what power would you like to have?**
  Someone with extraordinary intelligence; a real genius.

- **What was the last book you read?**
  I just finished Water for Elephants—it was very good.

- **What actor would play you in a movie about your life?**
  It would be the kiss of death for his career. Dustin Hoffman.
If you were given $1 million that you had to donate anonymously, who would be your recipient?
I would give it to the Lung Association of Canada because unfortunately lung disease does not get a lot of attention for money. COPD, smokers who got sick, no one is going to give money to that and yet these people are suffering and we need good research.

What’s the one thing about you few people know?
That I get up a 5:30 in the morning and kayak on a lake and no one knows I’m around. No one knows I do it because I’m the only one out there.
PATIENT QUALITY & SAFETY

“Safety shows itself only by the events that do not happen.”

— Erik Hollnagel
Patient quality and safety is one of the 4 priorities of the Department of Medicine. In 2010, the Department created a patient quality and safety committee to support this. We identified a champion of quality and safety from each division and generated a list of potential initiatives and projects.

Several key projects have been selected:

1. The development of an electronic handover tool using the OACIS platform for transferable record that identifies patients, their problem list and key results that require follow-up. This tool will be designed specifically to ensure safe patient coverage during the evening and weekend call periods.

2. Evaluate hospital re-admission rates. There is very little data within the department as to whether the push to rapid discharge has an impact on patient care and on the reasons patients are readmitted.

3. Track the time from referral to completion of consultation.

At the present time, the Department is focusing on the electronic hand-over tool sheet. The committee is working with IT under the leadership of Dr. Glen Geiger. It is forming subcommittees to identify IT and division specific requirements and anticipates the tool will be developed in 2011.

Several other projects are currently being discussed including the development of a model to improve early discharge using a day hospital or discharge clinic model. This would enable patients who are discharged to be followed quickly as an outpatient and therefore facilitate a reduction in the length of stay and decreasing bed pressure without having any impact on the quality of care and readmission.
The committee has also suggested implementing bi-annual departmental patient safety rounds. The divisions would present a selection of complicated case(s) to illustrate the importance of monitoring and the influence of systemic breakdowns to clearly demonstrate how these things can impact patient care.

Although not a member of the committee formally, Dr. Alan Forster is the Ottawa Hospital lead on patient quality and safety and an advisor to the committee. He has launched the patient safety learning system, an online tool to track patient care errors throughout the hospital He is a well recognized champion of patient measurements and monitoring within the department, the Ottawa Hospital and nationally. (See below for an interview with Dr. Forster).

In order to make patient quality and safety an academic area of scholarship and pursuit, the department is developing a funding model of research and salary support for those individuals who are committed to dedicating a portion of their academic endeavours in this area. Funding will be similar and modelled after that used by in the Education Awards in the Department of Medicine. This is currently being developed in a collaboration between UMA Finance Committee and the Department of Medicine executive.

---

**Gary E. Garber** MD FRCPC FACP CCPE  
Professor of Medicine,  
Vice-Chair, Patient Quality and Safety
Alan Forster’s chosen field is a very serious one — Alan Forster, not so much. He is seldom without his trademark grin and has an inane jovial quality that instantly endears you to him. As a marathon runner and avid cyclist, he is dedicated to constant self-improvement and exploration. His bucket list is ever growing and he is currently teaching himself to play the piano.
AN INTERVIEW WITH
DR. ALAN FORSTER
MD, FRCPC, MSc

Alan Forster is an Associate Professor of Medicine with the Faculty of Medicine, University of Ottawa, a practicing physician in the Department of Medicine, Division of Internal Medicine, and the Scientific Director, Performance Measurement, The Ottawa Hospital. He is also a Senior Scientist with the Ottawa Hospital Research Institute, Clinical Epidemiology and Executive in Residence, Telfer School of Management.

There is great power in the act of writing things down, particularly when struggling with a decision or dilemma, and in 1999, a disenchanted Alan Forster put this principle to practice. Wanting to focus his work in the area of patient quality and safety but not having a clear picture of how to do so, Dr. Forster followed the advice of a mentor, committed pen to paper, and created a road map outlining the steps necessary to make his mark in this domain. The act of writing on that piece of paper was key, he says. “As soon as I did that it became clear to me what I had to do and I just got on with it — it changed my life.”

Now, over a decade later, Dr. Forster has indeed made that mark as he is considered one of Canada’s leading experts in patient quality and safety. He is sought after to speak nationally and internationally to present his expertise on the subject of patient quality and safety. He has received many accolades, most notably, a Career Scientist Award with the Ontario Ministry of Health and Long Term Care. His work evaluating the incidence of adverse events following discharge from hospital received world-wide attention and triggered the development of numerous strategies to improve care in this area. He spearheaded the development of a hospital data warehouse to serve, in part, as a supporting infrastructure for research projects in patient quality and safety. To date he has received more than $10 million in peer reviewed grants, one most recently to develop a world-leading “eTrigger” technology, a system that will utilize software to monitor patient data to alert clinicians of potential adverse events before they occur. The culmination of these accomplishments is The Ottawa Hospital granting him the role of Scientific Director of Performance Measurement. In this position he is now responsible for measuring the performance of the health care system and analyzing the determinants of it.

Patient quality and safety was a seed that was planted early on in Alan’s life. As the third generation in his family to practice medicine, there were many discussions at the dinner table about the challenges of the health care system
and of looking after patients. *First, do no harm*—a key philosophy of medical ethics and a promise originating with the Hippocratic Oath. For Dr. Forster it was more than just words, it would become his entire approach towards the treatment of each and every one of his patients. As such, Patient Quality and Safety wasn’t so much a career choice but more of a gravitational pull.

As a resident working on the wards he focused not only on identifying ways to treat patients but was also fastidious about all of the things that could go wrong. “It could have just been my underlying neurotic personality but to me I thought that was what a good physician should be doing.” The possibility of adverse events would be top of mind for him when treating patients, in particular, when they were being sent home from hospital. “As a resident you treat people and you have this very short view into their lives… they come and go after three to seven days, we send them out and we don’t know what happens to them. The time spent here in hospital can have a profound impact on people’s lives. As a resident, you’re on this treadmill, you see this over and over again.”

That got Alan thinking about coupling his concerns of, ‘what are the things that could go wrong’ with ‘how is this experience affecting people’s lives’ and then studying the concept and attempting to make it better. Mentors such as Jeff Turnbull, Peter Tugwell and Andreas Laupacis, all accomplished individuals themselves, offered advice and suggested exploring additional academic opportunities and knowledge. “I was fortunate to have good people who guided me in terms of how I could take my concerns for patients and safety and turn them into something that would be more than just a concerned person. These mentors pushed me to find something inspirational, something that would make me hungry to succeed and it was obvious that they themselves were all very driven by that passion.”

The result: In 2001, Dr. Forster completed a fellowship at Harvard and returned to Ottawa armed with the skills necessary to perform legitimate academic work in the field. Shortly after his return he published a landmark paper that evaluated the incidence of post discharge adverse events. This seminal work received worldwide attention and is still shaping what we do in health care today. Over the last several years he has been the recipient of numerous prestigious awards recognizing his work within the field of health services research, most recently receiving a $1.7 million grant from the Ontario Ministry of Research and Innovation to develop “eTrigger” technology to improve hospital patient safety. The system will involve sophisticated software that monitors patient data in real-time and alerts clinicians to high risk situations via mobile information technologies, so that medical errors can be prevented before they occur. The system will build on leading-edge information technology already in use at The Ottawa Hospital.
In his current role as Scientific Director of Performance Measurement, Dr. Forster leads a team of 25 people with a big mandate—to assist the hospital in becoming one of the top ten in North America in quality and safety. Dr. Forster has been working closely with the Canadian Collaborative for Excellence in Health care Quality, an organization founded by Dr. Jack Kitts, CEO of The Ottawa Hospital to develop performance metrics across Canadian Academic Health Science Centres. It’s a difficult task and has very distinct challenges. “One of the things I’ve noticed is that whenever you measure people’s performance there is a tendency for them to question that measurement. Inherently people feel very passionate about what they do and how well they do it. When you point out areas where perhaps they’re not as good as they could be, people get very emotional.”

Alan credits great leadership at The Ottawa Hospital for the ability to keep things moving forward despite the many challenges. Senior management has acknowledged that issues do exist and they have focused on the desire for improvement. “The philosophy of the work is that there are issues that are systemic—that cause mistakes, and our role is to get rid of those underlying system issues, so that it doesn’t put doctors in a situation where a mistake is going to cause serious harm. To me, measurements and assessments aren’t about discovering that something went wrong but about making the changes necessary to make the problems go away.”

In addition to significant contributions to a quality and safety program at The Ottawa Hospital, Dr. Forster provides ongoing scientific advice regarding quality of care to provincial and national organizations, such as the Ontario Health Quality Council and the Canadian Institute for Health Information.

And remarkably, he still has that ‘life changing’ piece of paper from 1999. “It’s funny reading it now. I didn’t accomplish everything that I thought I needed to…I guess I have more time.”

Q&A with Alan Forster

What one invention would most improve your life?
Teleportation.

If you wrote an autobiography, what would be the title?
Try Less Hard.
What is your idea of a perfect day?
Waking up in the South of France in that perfect climate, my kids would be off somewhere else, the maid would bring my wife and I coffee and croissants in bed and then we would have a little dip in the pool and head off on our bikes for the day, stop somewhere for lunch and then come back and have a BBQ. That would be my favorite day, going around up in the Alps on my bike.

If you could have dinner tonight with a famous person of your choice (dead or alive), who would it be?
Roger Bannister. He broke the 4 minute mile as a neurology resident.

If you could be a super hero, what power would you like to have?
I’d like to be the Green Hornet, he was pretty laid back. He had a side kick that could do all his dirty work, so I like that.

What was the last book you read?
I just finished reading Moby Dick, it was horrendous—it was a hard go. After reading it I was glad I did but I’m not sure that I would pick it up again.

What actor would play you in a movie about your life?
Although I like Harrison Ford’s Jack Ryan character, I think Seth Rogan should play me in a movie about my life.

If you were given $1 million that you had to donate anonymously, who would be your recipient?
I would give it to Unicef—to international development, somewhere that would benefit impoverished young people with no opportunities. They don’t really have that much of a chance.
GLOBAL HEALTH

“Of all the forms of inequality, injustice in health care is the most shocking and inhumane.”

— Martin Luther King, Jr.
GLOBAL HEALTH

Global Health focuses on issues that directly or indirectly affect health and that can transcend national boundaries. It addresses the social determinants of health, defined by the World Health Organization as “the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, …most responsible for health inequities—the unfair and avoidable differences in health status seen within and between countries.” The Department of Medicine is very much involved in Global Health related activities, at home and abroad.

Many members of the Department do work in Canada to address the health needs of those experiencing challenges related to the social determinants of health. These include people like Drs. Jeff Turnbull (Internal Medicine) and Mark Tyndall (Infectious Diseases) working with the homeless in Ottawa, as well as many members, including Drs. Gonzalo Alvarez (Respirology), Doug Smith (Rheumatology), and Alan Karovitch (Internal Medicine), who travel to Nunavut to provide medical care.

In addition, many in our department work beyond our borders to deliver health care, do research or carry out other health-related activities. Some contribute through volunteer and non-governmental organizations, while others form partnerships and develop formal programs. Dr. Allison Dugan (Internal Medicine) volunteers with the University of Ottawa's Canada Africa Community Health Alliance (CACHA, www.cacha.ca), providing medical care in Tanzania.
Dr. Pierre Allard (Palliative Care), with extensive previous global health experience, has been involved with a project sponsored by the Canadian Medical Foundation, working toward the delivery of palliative care in Burkina Faso. Dr. Smita Pakhale (Respirology) recently established a link with India, opening a rural information centre for marginalized, rural students in central India and providing a talk to the Department of Respirology, Government Medical College, in Nagpur.

Dr. Bill Cameron (Infectious Diseases), highlighted in this report, stands out as a Global Health Champion. He has been instrumental in the successful collaboration between the Department of Medicine/Ottawa Hospital Research Institute/University of Ottawa and the University of KwaZulu-Natal at the Pietermaritzburg Hospital Complex in South Africa. The PMB-TOH collaboration, just celebrating its 10th year, has objectives of patient care, medical education, professional development, and health research. As Dr. Cameron points out: “the conduct of meaningful health research requires and promotes good patient care, and the sharing of these objectives and principles is required for a useful collaboration which contributes to the development of the host organization, as well as the education, professional development and research projects”. The PMB-TOH project has produced reciprocal exchange of physicians between Ottawa (Drs. Cameron, Alvarez, McCarthy, Garber) and Pietermaritzburg (Drs. Jim Mueller and Doug Wilson). In addition, several post graduate medical trainees and medical students have spent months in exchange. The collaboration has resulted in several publications and grants and more than one academic centre enhanced in the process of developing lasting friendships and a secure stable international health collaboration. More recently Dr. Cameron, along with other members of the Division of Infectious Diseases (Drs. Paul MacPherson and Mark Tyndall)
and Dr. Karam Ramotar, a TOH medical microbiologist, have been working on a deeper collaboration between The University of Ottawa/The Ottawa Hospital/Ottawa Hospital Research Institute and the University of Guyana/Guyana Public Hospital Corporation in Georgetown, Guyana. Dr. Cameron has established an MOU (as with Pietermaritzburg) outlining permissions and expectations. This includes an outpatient clinic for maternal-child and HIV health care in the context of general primary care. The goals will be to have a U of O/TOH physician presence on the ground continuously, while seeking out the same shared goals in development of high quality patient care, medical education and professional development for ourselves and for our Guyanese colleagues and students. In that context, we will plan health research according to local needs and priorities.

Each year the Department of Medicine bestows upon one of its members the “Jeff Turnbull Contributions to International Medicine Award” in recognition of their exceptional medical and humanitarian contributions made towards international health. This year’s award went to Dr. Gonzalo Alvarez for his unwavering dedication to improving the quality of tuberculosis care in South Africa and Nunavut. The Department made a donation on his behalf to the International Union Against Tuberculosis and Lung Disease.

So why does Global Health matter in Ottawa? The truth is that these activities not only benefit the individual and the host community, but have a tangible benefit for the patients that we serve. Canada is a cultural mosaic: twenty percent of the Canadian population is foreign born, Ottawa is the 5th most common immigrant destination, and, importantly, we have the highest numbers of refugees per capita in Canada. Therefore, the skills that one acquires working internationally translate into better patient care and address the department priorities of quality and safety of patient care. One way we could better address the quality and safety of patient care is to do a better job of providing culturally appropriate interpretation services for the people we serve in our clinics and within the hospital. Within many of our Infectious Diseases clinics, there are large numbers of foreign born individuals with limited language skills in either French or English. These language skills deteriorate further when one is ill, when you are likely to revert back to your primary language and culture. So there is a challenge to the Department and the hospital, we should be able to do a better job of providing culturally competent medical care and expanded interpretive services, to better address the needs of the multi-cultural, multi-lingual patient population that we serve.
Throughout my time in the Department of Medicine there has been a remarkable amount of support for expanding global health medical education. Funding from the Departmental/University of Ottawa Medical Associates through grants and salary support have helped me and my collaborators to establish an evidence-based global health curriculum for undergraduate and postgraduate trainees. This research has resulted in the development of the ACTION Global Health Network (AGHN; www.actionglobalhealth.ca) an interactive online resource that serves as a networking tool to connect professionals, residents and students interested in global health. This system provides information on organizations and their projects, individuals and their experiences, opportunities for collaboration, training and mentorship, as well as a wealth of news, events and other media; all in the context of global health efforts. The network will shortly launch a series of evidence-based online teaching modules that will help to prepare trainees and faculty for ethical and safe international experiences. A milestone was achieved this past year with the development and publication of a resource for health care providers, the Pocketguide for Global Health, which has been incorporated in university global health training programs in Canada and the US. It is available by contacting globalhealth@uottawa.ca. The success of that collaboration, has lead to another publication that will be launched in the coming months, the Pocketguide for Global Volunteerism, designed to help non-medical volunteers prepare for global experiences.

Since the summer of 2009, I have been the Director of the Office of Global Health at the Faculty of Medicine, a position supported by the Department. The office provides a foundation for global health activities within the Faculty, including activities at the undergraduate, postgraduate and faculty level. We provide counsel and training for those going abroad to undertake global health experiences. We also provide post experience debriefing as required, and we facilitate the establishment of formal links between institutions.

Anne McCarthy MD MSc FRCPC DTM&H
Associate Professor of Medicine
Director, Office of Global Health, Faculty of Medicine, University of Ottawa
It goes without saying, a get-together in Bill Cameron’s office will most likely be accompanied by a fresh cup of fine tea. According to Bill, there is something calming in the ritual of making and sharing a pot of tea.
AN INTERVIEW WITH
DR. BILL CAMERON
MD, FRCPC, FACP

Bill Cameron is a full Professor of Medicine with the Faculty of Medicine, University of Ottawa, and a practicing physician in the Department of Medicine, Division of Infectious Diseases, The Ottawa Hospital. He is also a Senior Scientist, Clinical Epidemiology, Ottawa Hospital Research Institute.

They say you can tell much about a man by the shoes he wears. In Bill Cameron’s case however (Birkenstocks not withstanding), one might discover more about the man by looking closely at his surroundings. Bill’s office, a naturally lit room of organized chaos is scattered with treasures connected to his life — photos of friends in distant places, bits of yellowed papers with faded ink, Rubik’s cubes, no doubt solved many times over, and books—hundreds of them, spanning all sorts of topics: Origin and Evolution of Viruses, Hidden Histories of Science, Biology of the House Mouse, The Private Science of Louis Pasteur, and A Barefoot Doctors’ Manual. Yet despite all the clutter, there is comfort.

As a mentor to medical students, residents and even colleagues, Bill has spent countless hours in that office chatting about his areas of expertise: Infectious Diseases, medical research and most notably how they relate to International Health. His message is simple, “The needs of international health research are outrageously basic, it’s about fundamentals: nutrition, water, shelter, security, social organization, good governance, good public health policies and health care facilities that work. I learned that it was very important in doing health research anywhere that it be done in the context of good health care. If we don’t have the basics in place then health research becomes meaningless or even harmful, because it’s hard to apply some new knowledge that you may gain through research in a system that’s not working or providing the fundamentals in the first place, and the research may displace something better to do. International health research is not exotic travel nor is it a form of medical tourism. The projects, he says need to be established with a local organization, with consideration for the host organization’s priorities and development. It should be assessed in terms of the host’s perspectives: is the project wanted, will it address a real need and significant local priority, will it lead to something effective or carry forward? On the developmental side, is the research capacity transferable and is it sustainable?
For twenty-plus years Bill has been using this model to develop successful collaborative international health projects and in doing so has created trusting professional relationships and personal friendships with people in the world’s poorest communities in developing countries. These types of relationships he says are essential to the success of an international health program. “In any successful collaboration what you bring has to be transferable and what you build has to be sustainable. But it’s still based on trust, respect and friendships between participants.” Through Bill’s work, several health care practitioners from Ottawa have had opportunity to learn and apply their own research skills in developing countries to assist local colleagues within their own health care facilities.

Notwithstanding a very obvious enthusiasm for his work as a physician, Bill’s real passion is as an amateur enthusiast in the humanities; medicine as it turns out was simply an accident. “I was studying classics, mathematics and biology as an undergraduate at Queen’s and in 2nd year, I watched my friends make their plans, and I realized I probably couldn’t cut a living out of what I was doing — that someday I would have to feed myself. So in a mistaken fit of panic, I applied to medical school and accidentally got in.”

From early on in his postgraduate medical career he was exposed to great role models, people like Tom Marrie at Dalhousie University in Halifax, considered by many to be a favourite uncle in Infectious Diseases in the country. Bill’s lessons in international health and research began in a fellowship in infectious diseases from the University of Manitoba. He learned a great deal from his supervisors, Allan Ronald (a grandfather in Infectious Diseases in Canada) and Frank Plummer, both exceptionally good leaders by their example. “They were good men who showed their goodness by living it in their daily lives — they just did really good work. This was very inspiring”. Their work was complementary in nature and additive in value, and their example helped students not just to learn their lessons well, but to study their teachers.

Given an opportunity to participate in one of Dr. Ronald’s international health projects in Kenya in 1986, Dr. Cameron lived for two years executing clinical and linked laboratory research in communities of the urban poor. His collaborative work with colleagues at the University of Manitoba, the University of Nairobi and the Kenya Medical Research Institute resulted in research on sexually transmitted infections published in the Lancet and New England Journal of Medicine, and let to public health and health care strategies for HIV prevention locally in Kenya, and worldwide. Based on his learning in Nairobi he has tried to emulate his teachers’ work in other settings. The urban and peri-urban poor in different settings have different needs and priorities, but the problems are similar for the large burden of infectious diseases of migration, crowding and poverty.
He has worked on many provincial, national, and international collaborations since the 1980’s in Ottawa, specifically in HIV treatments and care, in clinical and linked laboratory research. In the last 10 years he has developed a partnership of reciprocal exchange and collaboration from the University of Ottawa’s Department of Medicine at The Ottawa Hospital, with the Edendale Hospital at the University of KwaZulu-Natal and the Nelson Mandela School of Medicine in Pietermaritzburg, South Africa.

He is currently working on a similar type of partnership in Georgetown, Guyana (South America). “With prior successes I looked around at different places where we could take that model of engaging in local health care, for development of medical education and health research. Part of these opportunities is to use your practice in one or two specialized things really well, then to be a good citizen and be generous with your experience and your knowledge. Share what you know and learned from other people in other places. I know that we can succeed in Guyana because we succeeded in South Africa.” When it comes to learning and teaching, what you keep you lose, and what you give away you keep.

Dr. Cameron looks forward to eventually seeing the exchange of knowledge and expertise between centers of collaboration in Ottawa, communities in northern Canada (which has the needs and priorities of underdeveloped countries in the setting of crowding and poverty), KwaZulu-Natal, and Guyana. “This kind of collaboration is not about a single person or player, although local champions are required. If successful, they will be departmental and institutional programs.” Success he says is after the second generation. “Your success as a parent is actually how many happy, healthy grandchildren you get. And your success as a clinical researcher is that your research is meaningful and has lasting impact, and the teaching that you offer in the course of doing it is taken up successfully by another professional generation of researchers and teachers. Their success is the metric of your success.”

It’s clear that Bill’s early career-defining ‘accident’ has benefited the health and health care of many people in many places, and opened some doors for future international health researchers. His mentorship has already impacted the careers of others. As one colleague puts it, “Bill Cameron has mentored me since I was in medical school and continues to this day to provide invaluable mentorship in my scientific endeavors. He is a great human being with a great scientific mind.”

Bill Cameron has been the recipient of the Researcher of the Year Award of the Ottawa Hospital Research Institute, the Heroes in Medicine Award of the International Association of Physicians in AIDS Care, and the Jeff Turnbull Contributions to International Medicine Award, from the Department of Medicine, University of Ottawa.
Q&A with Dr. Bill Cameron

What one invention would most improve your life?
Teleportation, and time travel.

If you wrote an autobiography, what would be the title?
I wouldn’t write one.

What is your idea of a perfect day?
Today is a good day.

What keeps you awake at night?
Not much.

If you could have dinner tonight with a famous person of your choice (dead or alive), who would it be?
Why famous, why not just somebody?

If you could be a super hero, what power would you like to have?
To fly (without the airplane, and with a nice landing too).

What was the last really good book you read?
“The Best Laid Plans” by Terry Fallis.

What actor would play you in a movie about your life?
It should not happen.

If you were given $1 million that you had to donate anonymously, who would be your recipient?
Whizz Kids United. This is a South African community based co-educational program in Edendale that teaches children life skills, using team soccer and coaching as an educational medium. HIV education, prevention and treatment (at 7% of teens) is integrated into the program at the team clubhouse.

If you could take a trip anywhere for 30 days, with money not being a consideration, where would you go and what would you do?
Georgetown Guyana, to set up a University / The Ottawa Hospital collaboration and exchange with the Georgetown Public Hospital Corporation for a outpatient primary care clinic, for excellent health care, medical education, professional development and health research.

What’s the one thing about you few people know?
That I wear black all the time because I had my colours done.
DIVISIONAL REPORTS

“It is a fact that in the right formation, the lifting power of many wings can achieve twice the distance of any bird flying alone.”

— Author Unknown
DIVISION HEADS

Dr. Terrence Ruddy  Cardiology
Dr. John Kim  Critical Care
Dr. James Walker  Dermatology
Dr. Erin Keely  Endocrinology & Metabolism
Dr. Alexander Sorisky  Endocrinology & Metabolism
Dr. Linda Scully *  Gastroenterology
Dr. Barbara Power  Geriatrics
Dr. Marc Rodger  Hematology
Dr. Mark Tyndall  Infectious Diseases
Dr. Anthony Weinberg  Internal Medicine
Dr. Jean Maroun *  Medical Oncology
Dr. Peter Magner  Nephrology
Dr. Pierre Bourque  Neurology
Dr. Terrence Ruddy  Nuclear Medicine
Dr. José Pereira  Palliative Care
Dr. Sue Dojeiji *  Physical Medicine & Rehabilitation
Dr. Shawn Aaron  Respirology
Dr. Doug Smith  Rheumatology

* Acting Chair
CARDIOLOGY

68 Faculty Members • 13 Residents • 20 Fellows

Clinical Activities

Cardiology continued to provide world class care in arrhythmia and electrophysiology, cardiac imaging, interventional cardiology, heart failure and transplantation.

Dr. Labinaz, Director of the Coronary Interventional program, expanded the percutaneous aortic valve implantation program in collaboration with cardiac surgery.

Dr. Le May, Director of the Coronary Care Unit and UOHI STEMI program, expanded the STEMI program with the development of a therapeutic hypothermia program for STEMI patients presenting with a cardiac arrest.

At the General Campus, Drs. Johnson and Turek have developed a cardiology-oncology referral clinic which will optimize care of oncologic patients developing cardiac complications of their oncologic disease or treatment.

Educational Activities

Dr. Michael Froeschl and Dr. Louise Laramée have been accepted to the inaugural U of O Faculty of Medicine Distinguished Teacher Program. Dr. Louise Laramée has been appointed interim Assistant Dean, Student Affairs.

The Division of Cardiology and the Postgraduate Program Director, Dr. Chris Glover, were awarded the 2011 PAIRO Residency Program Excellency Award.

Dr. Lyall Higginson, former Division Chief has returned to the Division of Cardiology. He will have a major role as a Clinician-Teacher.

Research Activities

Drs. A. Tang and D. Birnie published a landmark trial, Resynchronization-defibrillation for Ambulatory Heart Failure Trial (RAFT) in the New England Journal, demonstrating the beneficial effect of adding cardiac resynchronization therapy to an internal defibrillator with reduced rates of death and hospitalization for heart failure.

In genetics, Drs. R. Roberts, R. McPherson and G.A. Wells expanded their work on the common variant, 9P21 as a predictor of the severity of coronary artery disease.
Dr. M. Gollob and team characterized a connexin 43-deletion mutant from atrial tissue in patients with lone atrial fibrillation.

In Cardiac Imaging, Dr. B. Chow, Co-Director of the CT Coronary Angiography program, demonstrated the feasibility of using coronary opacification for measurement of resting coronary artery flow.

Key Grants

Beanlands, RSB. HSFO. Elucidation of metabolic and cellular function alterations in dysfunctional myocardium and their response to therapy

Beanlands, RSB, Wells, G. CIHR. Imaging Modalities to Assist with Guiding Therapies and the Evaluation of Patients with Heart Failure — IMAGE-HF

deKemp, R. CIHR. Rubidium-82 — An alternative radiopharmaceutical or myocardial Imaging (RB-ARMI)

Leenen, F. CIHR. Brain Mechanisms and Sympathetic Hyperactivity in Genetic Models of Salt-Sensitive Hypertension

Ruddy, T. CIHR & NSERC. Iodine-123 labeled Rotenone for Myocardial SPECT Perfusion Imaging

Noteworthy Publications

Members of the Division of Cardiology published 113 peer-review articles in 2010. Key publications include:


**Awards**

**Dr. Marino Labinaz**  Recipient of the University of Ottawa Faculty of Medicine Award for Excellence in Continuing Medical Education

**Dr. Michael Froeschl**  Recipient of the University of Ottawa Faculty of Medicine Award for Excellence in Undergraduate Education in the Professional Pillar

**Dr. Ed O’Brien**  Named the UOHI Investigator of the Year Award for Basic Science (2011)

**Dr. Bob Reid**  Named the UOHI Investigator of the Year Award for Clinical Science (2011)

**Dr. Marty Green**  Awarded the Distinguished Teacher Award from the Canadian Cardiovascular Society

**Dr. Andrew Pipe**  Awarded the Harold N. Segal Award of Merit from the Canadian Cardiovascular Society

**Dr. Ben Chow**  Named to the Editorial Board of the Journal of the American College of Cardiology

**Dr. Chris Johnson**  Became Department of Medicine Associate Program Director for Internal Medicine

**Dr. John Veinot**  Named Head of the Department of Pathology and Laboratory Medicine
Critical Care

11 Faculty Members belonging to Medicine • 4 Residents • 12 Fellows

Clinical Activities

Critical Care continues to provide excellence in bedside care of the critically ill patients. In its efforts to expand on this excellence, Dr. Hilary Meggison is participating in a multi-center clinical research collaborative — Towards RECOVER. This initiative, which provides follow-up of ICU survivors and the impact of survival both on the patient and caregivers, will examine ICU survivor issues beyond hospital discharge, and will further expand our understanding of outcomes beyond mortality and discharge.

Educational Activities

In addition to providing the highest standard of training for its Fellows in training and for residents in postgraduate training, Critical Care has been involved in several key educational activities that are improving patient care both locally and in multiple centers across Canada. Highlights include the following:

1. Delivery of Critical Care Training courses for physicians and allied health professionals in Iqaluit through a jointly sponsored initiative in collaboration with the Nunavut government, Royal College of Physicians and Surgeons of Canada (RCPSC), Canadian Resuscitation Institute Critical Care Education Network (CRI-EDUNET), RBC Foundation.

2. Delivery of H1N1 educational modules through CRI-EDUNET.

3. Delivery of the annual National Acute Critical Events Simulation (ACES) Training course for all Critical Care residents in Winnipeg, and delivery of ACES courses and instructor training to North Bay, Ontario.

4. Delivery of ACES course instructor training to the Department of Family Medicine, Hôpital Montfort and CSS Hôpital Gatineau de Hull.

5. Development of a Interactive Virtual Patient educational module in the care of critically ill patients beyond the initial resuscitation phase — SimuCase.
Research Activities

Critical Care remains successful in the field of clinical epidemiology, with Dr. Paul Hébert’s focus on transfusion medicine and Dr. Lauralyn McIntyre’s focus on resuscitation in sepsis. Critical Care’s scope of interest has widened with the inclusion of Dr. Meggison’s participation in the Towards RECOVER initiative and Dr. Shane English’s focus on issues in neurocritical care.

Key Grants

Hébert, P. CIHR. Plasma Utilization in Cardiac Surgery

McIntyre, L. CIHR. Realities, Expectations and Attitudes to Life Support Technologies in Intensive Care for Octogenarieans: The REALISTIC 80 Study

Meggison, H. CIHR. Towards RECOVER

Noteworthy Publications

Members of the Division of Critical Care published 62 peer-review articles this past year. Key publications include:


Cuthbertson, BH, Francis, J, Campbell, MK, McIntyre, L, Seppelt, I, Grimshaw, J; SuDDICU study groups. A study of the perceived risks, benefits and barriers to the use of SDD in adult critical care units (the SuDDICU study). Trials 2010;11:117
DERMATOLOGY

18 Faculty Members • 11 Residents

Clinical Activities

The Pigmented Lesion Clinic, was started in November 2010 by Dr. Jennifer Beecker to screen for early melanoma in high risk patients, using FotoFinder technology including digital dermoscopy. Malignant melanoma is eminently curable in the early phases but extremely resistant to treatment when metastatic. This clinic will assist in the recognition and management of curable thin melanomas in vulnerable patients.

A Bone Marrow Transplant/Dermatology clinic was started in December 2010. Dr. Beecker is operating this clinic in collaboration with Drs. Huebsch and Anstee in the Haematology-Oncology clinic at the General Campus, to assess and treat patients with GVHD and other cutaneous problems.

Mohs Surgery operational funding has been increased from 1 to 3 days weekly at The Ottawa Hospital. This will allow our Mohs surgeons Dr. Adam Mamelak with the addition of Dr. Jillian Macdonald to augment the optimal treatment of complex skin cancers, producing the highest possible cure-rates with minimal loss of normal tissue.

We plan to expand this program by working with other surgical services, to provide tumor-free margins for their patients.

Out-Patient Services

The total number of out-patients assessed in Dermatology Clinics at The Ottawa Hospital and CHEO for 2010 were as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Campus</td>
<td>2218</td>
</tr>
<tr>
<td>Civic Campus</td>
<td></td>
</tr>
<tr>
<td>— Ground East</td>
<td>6006</td>
</tr>
<tr>
<td>— Psoriasis</td>
<td>9228</td>
</tr>
<tr>
<td>— Mohs Surgery</td>
<td>104</td>
</tr>
<tr>
<td>CHEO</td>
<td>2498</td>
</tr>
</tbody>
</table>

In addition, numerous patients are seen at clinics at Elizabeth Bruyère and St. Vincent’s.
Over the next 18 months, the Division of Dermatology will be building a world-class Dermatology Centre within the Ottawa Hospital. This will allow us to further develop tertiary care and promote medical student and resident education and cutaneous research. This centre will also allow us to attract top recruits from around the globe to further our academic mission.

Educational Activities

Our Residency Training Program is the gem of our Division. We have produced nearly 100 dermatologists since the inception of this program in 1967. This program has never received anything less than full accreditation on every Royal College survey. Our Program Director is Dr. Nordau Kanigsberg. We provide a full spectrum of clinical and academic opportunities for our trainees. Our clinics include adult general and pediatric dermatology, cancer, contact dermatitis, psoriasis, Mohs surgery, pigmented lesion, and leg ulcer. In addition our residents attend clinics in Iqaluit with Dr. Robert Jackson, and are supported for numerous electives around the world. We provide strong one-on-one mentorship for all our residents. In addition we provide classroom and clinical teaching for medical students and residents from other services.

Two of our physicians were published in the May/June 2011 issue of the Journal of Cutaneous Medicine and Surgery, Volume 15, No.3, pp 150-156; “Teaching Dermatology to Canadian Undergraduate Medical Students”, Kirshen, C, Shoimer, I, Wismer, J, DesGroseilliers, JP, Lui, H. This survey, with 100% response rate from all 17 Canadian medical schools, delineates the time allotted to dermatology teaching, the timing within the different schools' curricula and the nature of teaching. There was consensus to develop a national strategy for dermatology curriculum change in our medical schools.

An education milestone was the opening of our Dysplastic Nevus Clinic by Dr. J. Beecker where residents will be taught the latest dermatoscopic techniques in diagnosing melanoma and following patients with dysplastic nevi.

Drs. Jennifer Beeker and Dahlia Mikhail have joined the division and will have major roles as a Clinician-Teachers.

Research Activities

Dr. Melanie Pratt performs collaborative research as a member of the North American Contact Dermatitis Group (NACDG) compiling data and co-publishing several papers annually. Of the 5000 cases that come from the group of 14 experts
in the field of contact dermatitis over a two-year cycle one-fifth or 1000-plus patient cases come from the Ottawa Hospital Contact Dermatitis Clinic.

Key Grants

Pratt, M, Kuritzky, L.A. CDF and Astellas. Filaggrin Mutations and Cell Mediated, Allergic Contact Polysensitization Study

Pratt, M. CREOD. Key Exposures Causing Work Related Contact Dermatitis and Evidence of Dual Causation of Occupational Asthma

Noteworthy Publications

Members of the Division of Dermatology published 8 peer-review articles this past year. Key publications include:


Warshaw, EM, Nelsen, DD, Sasseville, D, Belsito, DV, Mailbach, HI, Zug, KA, Fowler, JF, Taylor, JS, DeLeo, VA, Marks, JG, Stores, FJ, Mathias, CGT, Pratt, MD, Rietsche, RL. The positivity ratio and reaction index: patch test quality control metrics applied to the North American contact dermatitis group database. Dermatitis 2010; 21:91-97


Awards

Dr. Renée Beach
Awarded the Best Resident/Fellow Research project: for her presentation “Relaxer-induced changes in IL1a and IL1RA”, at the 2011 Skin of Color Scientific Symposium, New Orleans, LA

Dr. Michele Ramien
Won a Fisher award for their presentation “Fixed Drug Eruption from Propolis: How Patch Testing Saved a Marriage” at the AAD meeting in New Orleans 2011. This paper is in progress for publication
Dr. Jennifer Lipson

Won a Fisher Award for their presentation “Contact Dermatitis to Corticosteroids, What are the Ideal Standard Screening Allergens — Using 6 years of NACDG data”. This was presented at the ACDS and at the CDA meetings in 2010. This paper is also in progress for publication.

ENDOCRINOLOGY & METABOLISM

20 Faculty Members • 6 Residents

Clinical Activities

The Division of Endocrinology has focused on two quality improvement initiatives:

Tools for Transition™

The Tools For Transition™ (TFT™) Program was initiated to develop and evaluate tools to facilitate the transfer of patients with type 2 diabetes from FEDC specialist care back to the care of their primary care physicians (PCP) once diabetes management was optimized. An extensive needs assessment/environmental scan was completed to gain a thorough understanding of the needs of all stakeholders—PCP, specialist team members and patients. Based on our work and an extensive review of the literature, 5 tools for transition were developed and implemented, and are in the process of being evaluated.

The Tools For Transition™ tool set includes:

1. A Structured, Customized Discharge Consult Letter
2. A Rapid Re-entry Process and Rapid Re-entry Form
4. A Diabetes Clinic Discharge Note (to the patient)
5. 3-month Reminder Post-card
Implementation of Pre-printed insulin orders 
as part of Best Practice for Inpatient Diabetes Care

The management of diabetes in hospital may often be considered a secondary issue compared to the admission diagnosis. However, both hyperglycemia and hypoglycemia put patients at risk for adverse outcomes and may extend their hospital stay.

We developed and implemented pre-printed insulin orders across TOH and the UOHI in order to:

• make insulin prescribing safer and easier
• encourage a standard approach towards diabetes management across The Ottawa Hospital
• reduce transcription errors
• encourage best practice

Currently, ~ 65% of all insulin orders are now written on the pre-printed forms.

Educational Activities

The Training Program in Endocrinology and Metabolism has developed a novel community rotation for our residents. This rotation has been designed to allow them to develop their managerial skills. It is portfolio-based, allowing them to track and evaluate their experiences. Residents are assigned to Community Endocrinology Clinics and also attend the Community Diabetes Education Programs.

The Division organized its 6th Annual CME day in 2010 — 88 family physicians, 11 residents, 2 students, 19 nurses, and 8 dieticians attended what they described as an important and useful update for their continuing education.

A Lipid Symposium in partnership with the Department of BMI, University of Ottawa, was held in May 2011 at our centre with speakers from Japan, Edmonton, and Ottawa.

Our Annual Visiting Professor day was held 15th of June 2011, Dr. Gordon Francis from UBC, an expert in lipid metabolism, met with our Division and also presented Medical Grand Rounds.

Undergrad News — The second iteration of Obesity week was held in December 2010 for the 2nd year medical students. The week combines panel, session, team-based learning, lectures and group work to address all aspects of
obesity. In addition to health issues, this week also addresses the topic of stigmatization and, through innovative advocacy projects, helps students learn how they can influence social change and advocate for their patients. This work was presented at AIME research day 1st of April 2011 and the CCME annual meeting on 5th of May 2011 in Toronto.

Research

Our research enterprise encompasses cellular and molecular studies through to clinical research and models of health care delivery. We are linked to the Chronic Disease Program of the OHRI, and fall within the vascular health priority of the OHRI and the Department. Dr. A. Sorisky, as Director of the OHRI Chronic Disease Program and as University Chair of the Division of Endocrinology and Metabolism, aims to develop and coordinate our research excellence and capacity. Over the past year, research collaborations have continued with Nephrology, including development of a Vascular Phenotyping Core (in conjunction with the CFI TIMEX infrastructure grant awarded to OHRI), endocrine hypertension, and kidney disease-related dyslipidemia. An Ottawa Metabolism Research Initiative is being developed with Dept of BMI, and may involve ICU metabolic dysfunction related to lipid metabolism, nutrition, and hepatic steatosis/hepatitis B.

We were successful in our application to become a specialty site within the Canadian Clinical Trial Network for type 1 diabetes research developed by the JDRF in conjunction with the federal government. This network will enhance the number of clinical trials we can offer to our patients with type 1 diabetes.

Through collaboration with Elizabeth Bruyere researchers and the Champlain LHIN, we have established an e-consultation service involving ~ 50 primary care doctors and 10 specialty services. Over 100 consultations have been completed through this web-based system. Our preliminary results, obtained through interviews, focus groups and surveys, have demonstrated tremendous satisfaction and support for this project.

We organized a joint research retreat including our Division and the CHEO Division of Endocrinology and Metabolism in March 2011.

Key Grants

Sorisky, A. CIHR. Atherogenic adipocyte dysfunction induced by TSH

Scott, F. CIHR. Mechanisms of gut involvement in dietary protection from autoimmune diabetes
Zha, X. HSFO. Characterization of microparticles released by ABCA1-expressing macrophages

Keely E. Public Health Agency of Canada/Canadian Diabetes Strategy. Enhancing best practices to improve screening and risk reduction in the antenatal and postpartum care of women with gestational diabetes

Lochnan, H. University of Ottawa—AIME. Power asymmetries between residents and faculty limit the reporting of professional lapses: A participatory strategy to promote awareness and evaluation of professionalism in the Faculty of Medicine. Principal Investigator

Noteworthy Publications

Members of the Division of Endocrinology & Metabolism published 31 peer-review articles this past year. Key publications include:


GASTROENTEROLOGY

14 Faculty Members • 7 Fellows

Clinical Activities

Through the recruitment of another Advanced Therapeutic Endoscopist, we have been able to enhance our care of patients with malignant esophageal and colonic obstruction, by providing timely therapeutic and/or palliative stenting. This has dramatically improved patient care and reduced the need for emergency surgery. New double layer stents with reduced chance of long term obstruction and tumour overgrowth are now being studied.

As the leaders in colorectal cancer screening, we have expanded the programme at The Colon Cancer Screening Clinic at the Riverside Hospital. In the past year, over 2100 high-risk patients underwent colonoscopy at this clinic with the resulting detection of many more large precancerous adenomas and early cancers. 815 patients were found to have one or more polyps and 56 had early cancer detected. Quality Assurance Initiatives and markers are being applied to this programme through a project directed by Dr. Ralph Lee and Dr. Ramy Abaskharoun.

As a result of the addition of another Gastroenterologist with training and expertise in Inflammatory Bowel Disease, we have improved the timeliness and quality of care of these often young patients with extremely complicated and debilitating chronic disease. Dr. Liliana Oliveira spent a year at one of the most highly respected centres for research in Inflammatory Bowel Disease at the University of Chicago and has returned to our Division with experience in cutting edge therapy of Crohn's Disease. We are in the process of finalizing a plan for an expanded programme with an IBD Centre of Excellence, to provide state-of-the-art multidisciplinary care of this increasingly complex patient population.

Dr. Chatterjee has expanded his programme in Endoscopic Ultrasound. This addition to our armamentarium of imaging enables one to better define the extent or local spread of subtle tumours. It helps our surgical, medical and oncologic colleagues to provide the most appropriate care to patients with localized pancreatic, biliary and esophageal cancers.

Dr. Thomas Shaw-Stiffel continues to collaborate with the members of the Division of Infectious Disease in the Hepatitis Clinic at the General campus. Dr. Shaw-Stiffel helps with the management of patients with advanced cirrhosis and assesses them for potential liver transplantation.
DIVISIONAL REPORTS

Educational Activities

Dr. R Lee and Dr. A Abaskharoun organized and lead the teaching of the Year 2 Medical students in The GI Block. All members of the Division of Gastroenterology participate in the lectures and problem based learning sessions. This block has been highly rated by the students.

The GI Residency training programme received full accreditation when reviewed by the Royal College in 2010. It was highly praised for its level of clinical and Endoscopic training. In the last 2 years we have added a programme in Advanced Therapeutic Endoscopy, under the leadership of Dr. A Chatterjee. The 2 fellows who have completed this programme have received training in state-of-the-art therapeutic procedures. One of these trainees has been added to our Division and Dr. Allalam has accepted a position in Thunder Bay.

The GI group is also active in Continuing Medical Education for community Gastroenterologists, General Surgeons and Internists. Monthly Journal Clubs and Gut Clubs are well attended by this group. Presentations on the latest research and improvements in patient care are presented by local and invited speakers, the latter from North America and Europe. Annually, the GI group led by Dr. Sy and Dr. Shaw-Stiffel host a well-attended day-long Update in Liver and IBD, with local and international presenters.

Drs. Harinder Dhaliwal and Liliana Oliveira have joined the division and will have major roles as Clinician-Teachers.

Research

The GI Division, represented by Dr. Chatterjee is collaborating with Dr. Brent Zanke of Haematology/OHRI in a project designed to study the genetics influencing the development of colonic adenomas and neoplasia. This is a long-term project with the study group consisting of patients with a family history of colon cancer, undergoing surveillance colonoscopy at The Colon Cancer Screening Centre.

Dr. MC Champion has been collaborating with Dr. E Keely of Endocrinology in a clinical project utilizing Botox injection of the pylorus in patients with disabling diabetic gastroparesis.

Dr. R Lee and Dr. A Abaskharoun have established a project to assess Quality Assurance in Endoscopy Procedures at the Ottawa Hospital. Soon this will use state-of-the-art Electronic Endoscopy Medical Record Technology for collecting, documenting and analyzing the data on thousands of procedures performed annually.
Data on adenoma detection rates, cecal intubation rate, complications etc will be captured and any deficits in performance can be easily identified. Standardized performance markers will be recorded to improve patient care.

Dr. A Chatterjee is collaborating with Dr. Jason Pantarotto, a Radiation Oncologist, in the Cyberknife Project for the treatment of locally advanced pancreatic cancer.

Dr. R Sy is participating in the Enable 2011 study with physicians from University of Toronto, McMaster University and University of Western Ontario. This study is looking at the influence on wait times of private vs public coverage for biologic therapy and the subsequent development of adverse events in patients with IBD.

**Key Grants**

**Chatterjee, A.** Ontario Regional Cancer Foundation. The Ottawa Hospital Endoscopic Ultrasound Program

**Noteworthy Publications**

Members of the Division of Gastroenterology published 12 peer-review articles this past year. Key publications include:


Milner, D, **Chatterjee, A.** A case of portal vein thrombosis caused by ingestion of a foreign body. *Gastrointest Endosc* 2011 Feb 1[Epub ahead of print]
GERIATRICS

10 Faculty Members

Clinical Activities

The Division of Geriatric Medicine is known for its excellence in clinical care. The External Accreditors in the past two hospital accreditations rated Geriatrics as a Model Program. The scope of care that Geriatrics provides is broad, linking the Hospital to the community and rural areas. The Division has a 24 bed inpatient unit, provides active consultation services to both campuses and a Day Hospital that operates 5 days per week. Geriatrics also provides regular rural clinics to surrounding communities including Winchester, Cornwall, Renfrew, Pembroke and Ami prior and was one of the first groups in Ottawa to have Telemedicine clinics for follow ups to improve efficiency and shorten wait times. The Division also has weekly outpatient clinics at the Montfort Hospital and a VPT member of the Division works full time at the Queensway Carleton Hospital.

Educational Activities

There is extensive involvement by the Members of the Division of Geriatric Medicine in the Undergraduate Curriculum at the University of Ottawa from an administrative level to formal teaching and bedside supervision.

Clinical Skills Program — Dr. Power is the Chair of Clinical Skills Program at the University of Ottawa. This program is for 1st and 2nd year Medical Students and includes Interviewing Skills; Physical Skills Development; the Community Preceptor Program and Link Block which is the first month of Clerkship.

Professionalism — Dr. Byszewski is the Anglophone Co-Chair of the Professionalism Curriculum for Years 1 & 2 at the University of Ottawa.

E-Portfolio Program — Dr. Byszewski is the Assistant Anglophone Co-Chair of this Program. Several members of the Division also participate as “coaches”.

Integration Block — In 2010 Geriatric Medicine developed a core 2 week teaching block in the 2nd year curriculum. Dr. Dalziel chaired the organization of this Program. All of the Geriatricians are actively involved in teaching which includes lectures and case-based learning workshops.
Postgraduate — Geriatric Medicine is a mandatory rotation for Family Medicine, Rehabilitation Medicine, Psychiatry and Dermatology. Care of the Elderly/Third Year Family Medicine is considered one of the strongest training programs in the country and it usually has 2-3 trainees per year. These core trainees are in addition to elective residents. Therefore there are always a significant number of Resident trainees in Geriatrics.

Several members of the division were participants in the following peer-reviewed medical education article: Moineau, G, Power, B, Pion, AM, Wood, TJ, Humphrey-Murto, S. Comparison of Student Examiner to Faculty Examiner Scoring and Feedback in an OSCE. Medical education, 2011 45(2), 183-191.

Research

The main focus of Research in our Division is on Dementia. Drs. Malcolm Hing and Frank Molnar have focused their work on Dementia and its impact on Driving. They have received three CIHR grants over the past 10 years to explore this field of emerging Public health importance. Dr. Anna Byszewski’s focus has been in the area of Disclosure of the Diagnosis of Dementia and on Quality of Life in Dementia as part of the Canadian Alzheimer’s Disease Quality of Life Study. Dr. Dalziel is a Co-Investigator on 2 NET grants on Dementia and Transitions of Care from the home to Alternative Living Accommodations. Dr. Power is a co-investigator with the Department of Anaesthesia in a grant focused on the Prevention of Delirium in post operative patients. As the previous Head of Gender and Equity at the Medical School, Dr. Azad’s main research focus is in Cardiovascular Disease in Elderly Women as part of the Project for an Ontario Women’s Health Evidence-Based Report Card.

Key Grants

Molnar, F. The Alzheimer’s Society of Canada. Driving and Dementia in Ontario

Power, B. PSI. Ambulatory functional outcomes in the elderly

Noteworthy Publications

Members of the Division of Geriatrics published 15 peer-review articles this past year. Key publications include:


Awards

Dr. Nahid Azad
Recognized by Dr. Alan Rock as one of sixteen Extraordinary Women at the University of Ottawa. Dr. Azad was one of only two recognized from the Faculty of Medicine

Dr. Nahid Azad
Nominated to the Canadian Medical Association Mentorship Award

Dr. Anna Byszewski
Received a The Ottawa Hospital Compass Award

Dr. Anna Byszewski
Received a CAME Merit Award for her contribution to Medical Education
HEMATOLOGY

18 Faculty Members • 9 Residents • 4 Fellows

Clinical Activities

Thrombosis Program becomes a Regional Program

The Thrombosis Program delivers outpatient management of DVT/PE and anticoagulant therapy through over 15,000 clinic visits per year. This program has led innovations which have permitted the transition of care of these patients from an inpatient to an outpatient setting through more safe and cost-effective diagnostic and treatment strategies.

In early 2010, The Champlain LHIN announced it will be providing $250,000 in annual funding to support the expansion of the Thrombosis Program to a new regional thrombosis program. Patients all over the Champlain LHIN region will now have better access to medical expertise and the latest technology for thrombosis related conditions. Through the creation of satellite thrombosis clinics in the Montfort, Hawkesbury, Cornwall and Pembroke hospitals, cases of deep vein thrombosis and pulmonary embolism can be managed more effectively. This new model of care is expected to save the health care system an estimated $2 million per year. (for more details see Impact on Community section).

Innovative Hemoglobinopathy Day Hospital Pilot Launched

Dr. Alan Tinmouth successfully obtained TOHAMO AFP funding to pilot a hemoglobinopathy day hospital program that we hope will reduce patient stays, improve patient care and patient satisfaction for patients with Sickle Cell disease and other hemoglobinopathies.

Blood and Marrow Transplant Program (BMT) achieves a record high FAHCT accreditation Score

The Ottawa Hospital BMT program, the first program accredited in Canada, celebrated its 10th year of Foundation for the Accreditation of Hematopoietic Cell Therapy (FAHCT) accreditation. Furthermore, after the most recent accreditation visit/report, we learned that the accreditation score was the highest ever recorded for any program in North America FACHT accreditation, highlighting the clinical excellence of our BMT group.
Blood and Marrow Transplant Program
applies treatment strategy to rare autoimmune disorders

The Ottawa Hospital BMT program, in addition to being one of only a handful of centers to treat multiple sclerosis with autologous stem cell transplants has expanded this innovative approach to other life threatening autoimmune diseases for patients from across Canada.

Hematology Ward consistently scores highest in patient satisfaction at The Ottawa Hospital

The Ottawa Hospital routinely conducts patient satisfaction surveys on inpatient wards. For the last 12 out of 12 months our Hematology ward (5West) has ranked the highest in patient satisfaction of all The Ottawa Hospital wards. The nearest competitors are over 10% behind in proportion rating care as excellent.

Educational Activities

The Hematology Residency Training Program is the pride of our Division and known to be one of the strongest in the country. The program has never received anything less than full accreditation on every Royal College survey since its inception in 1990 and we boast a 100% success rate at the Royal College Examinations. We provide a full spectrum of clinical and academic opportunities for our trainees, including unique longitudinal clinics in both general and malignant hematology. In addition we provide classroom and clinical teaching for medical students and residents from many other services.

All of our faculty are passionate about the education and career paths of our residents, and participate actively in mentoring and teaching activities. Our mission is to produce well-rounded, highly competent hematologists who excel in all facets of medicine including patient care, research and education. Our residents complete online programs in health advocacy through the World Health Organization and we are the first hematology program to fully implement a 360 degree evaluation system for our trainees. In this model, residents are not only evaluated by faculty members but also by patients and other allied health care personnel.

This year, we welcomed back Dr. Karim Abou-Nassar to the division as faculty. Dr. Abou-Nassar completed his hematology fellowship training here in Ottawa in 2009 and then went on to complete a Lymphoma fellowship at the prestigious Dana Farber Institute at Harvard University. He has accepted a position as a research-clinician, but also plays a strong role in teaching and mentoring our current residents.
At the completion of the 2010–11 Academic Year we saw a change in Program Directors, as Dr. Marc Carrier, also a former graduate of our Program, took over the reins from Dr. Melissa Forgie. We wish Dr. Forgie the best as she assumes her new role as Associate Dean, Undergraduate Medical Education at the University of Ottawa.

**Research**

Dr. Chris Bredeson has returned to the Division of Hematology as Head of the Malignant Hematology and Stem Cell Transplantation program.

The Division has active clinical and basic research programs in:

- Thrombosis, led by 3 clinician scientist each with external salary awards,
- Malignant Hematology with 2 basic scientists (1 with external salary award), 3 clinician scientists (1 with external salary award) and 2 clinician investigators and;
- Transfusion Medicine with 1 clinician Scientist

In total for 2010–2011, Division members are principle or co-investigators in numerous active peer reviewed research grants with the majority being prestigious CIHR awards. Notable grants below.

**Key Grants**

- **Atkins, H.** Multiple Sclerosis Society of Canada. Autologous Mesenchymal Stem Cell Transplantation: A potential cell-based treatment for inflammatory forms of Multiple Sclerosis

- **Carrier, M.** Heart and Stroke Foundation of Canada. Screening for previously undiagnosed malignancy in patients with unprovoked Venous thromboembolism: a randomized controlled trial using a comprehensive computed tomography of the abdomen/pelvis

- **Carrier, M.** CIHR. The Use of Extended Peri-operative Low Molecular Weight Heparin to Improve Cancer Specific Survival Following Surgical Resection of Colon Cancer: A Randomized Controlled Trial

- **Rodger, M.** CIHR and NIH. A Pilot Study Assessing Feasibility of a Randomized, Placebo-controlled Trial of Low Molecular Weight Heparin for Postpartum Prophylaxis in Women at Risk of Developing Venous Thromboembolism

- **Tay, J.** Canadian Blood Services. Transfusion of Red Cells in Hematopoietic Stem Cell Transplantation
Tinmouth, A. Canadian Blood Services. University of Ottawa Centre for Transfusion Research: Infrastructure Support for Transfusion Research

Noteworthy Publications

Division member published over 80 peer reviewed publications in 2010–2011 with notable publications in high impact journals including:


**Kekre, N, Chou, A, Toksyey, M, Doucette, S, Tinmouth, A, Tay J, Allan, DS. Storage time of transfused red blood cells and impact on clinical outcomes in hematopoietic stem cell transplantation.** Transfusion 2011 May 13. (ePub ahead of print)

**McDiarmid, S, Hutton, B, Atkins, H, Bence-Bruckler, I, Bredeson, C, Sabri, E, Huebsch, L. Performing allogeneic and autologous hematopoietic SCT in the outpatient setting: effects on infectious complications and early transplant outcomes.** Bone Marrow Transplant 2010;45(7):1220-6
Awards

Dr. Marc Carrier  Received a University of Ottawa, Faculty of Medicine Tier 2 Research Chair in “Cancer and Venous Thrombosis”

Dr. Marc Rodger  Received a University of Ottawa, Faculty of Medicine Tier 1 Research Chair in “Venous Thrombosis and Thrombophilia”

Dr. Mitchell Sabloff  Recipient of a 2010 COMPASS award for compassionate care and exemplary multi-disciplinary teamwork

Dr. Melissa Forgie  Received 2 Faculty of Medicine Excellence Awards for 1) Compétence être humain and 2) Compétence avocat-défenseur de la santé

Dr. Melissa Forgie  Named Associate Dean of Undergraduate Medicine

Dr. David Allan  CIHR New Investigator Award for his bench research work on vascular stem cells.
INFECTIOUS DISEASES

Faculty Members 19 • Residents 4 • Fellows 2

Clinical Activities

Dr. Alvarez established a new clinic at the Ottawa Hospital for Non Tuberculous Mycobacteria (NTM) patients. Only one other centre in Canada has a similar clinic. To date over 50 patients are attending this clinic for specialized treatment of NTM. Dr. Alvarez will pursue important research questions through this clinic in the near future. Dr. Alvarez also led a team of respiratory therapists, occupational health specialists, nurses and doctors to establish a new sputum induction program at the Ottawa Hospital.

A new negative pressure facility was constructed at the General Campus where the sputum induction program is taking place. The program offers a point of care test in that patients come to the clinic and can get the procedure done within the clinic space and time. The program is presently available to all outpatient TB suspects in the Ottawa region resulting in significant reductions in the requirement for bronchoscopy to rule out TB which results in lower risk to the patient and significant cost savings.

Current ID initiatives include: a hypogammaglobulinemia clinic for primary and secondary immunodeficiencies with home self-administered subcutaneous immune globulin replacement treatment (Cameron, W.); a TOH Infectious Disease GPHC Collaboration in outpatient care, medical education and clinical research (Garber, G.); the launch of a TOH antimicrobial stewardship program (Garber, G.); and the establishment of an HIV clinic at the Mission shelter (Tyndall, M.).

Educational Activities

From the educational perspective our training program continues its mission to produce highly competent well rounded consultants as reflected by our most recent graduate Dr. Cecilia Costiniuk who captured the 2011 AMMI/Astellas Post-Residency Fellowship, a national competition that awards excellence in Infectious Diseases research conducted by trainees (Lee, C.). Other educational activities included the Antimicrobial Stewardship Teaching Program Queensway Carleton Hospital initiated at The Ottawa Hospital (Rose, G.).
Research

The division has active and productive research programs in Hepatitis Care and treatment (Garber, G., Cooper, C.), HIV Basic Sciences (Angel, J., Cooper, C., MacPherson, P.), sexually transmitted infections (Lee, C., Garber, G.), Infection Control (Suh, K., Roth, V., Garber, G.), cardiac complications of pneumonia (Corrales-Medina, V.), International Health (McCarthy A., Cameron, W.) and Inner City Health (Tyndall, M.).

Dr. Suh and Dr. Roth are members of the Canadian Nosocomial Infection Surveillance Program, a collaboration between the Canadian Health care Epidemiology Committee (of our national organization) and PHAC — ongoing research related to antimicrobial resistant organisms, and selected health care acquired infections with numerous publications. Dr. Roth is co-chair of CNISP this year.

Dr. Suh and Dr. Roth both have externally funded research related to IPAC, including collaborator/co-investigator status in two CIHR funded research grants:

Dr. Gary Garber has a basic science laboratory studying the pathogenesis of Trichomonas vaginalis, a protozoal parasite that cause vaginitis in women, increase the risk of foetal prematurity and increase the risk of HIV acquisition and transmission. The work has recently identified a lactoferrin binding protein that also has malate dehydrogenase activity. Their mouse model of vaginal infection is used for vaccine development research.

Dr. Tyndall joined the Division of Infectious Diseases in November 2010 as the Division Head. His research interests include HIV prevention, care and treatment with a focus on harm reduction among illicit drug users. He is also involved in several HIV related international research initiatives.

Key Grants


Angel, J. CIHR. Regulation and function of soluble IL-7 receptor alpha (CD127) in HIV infection.

McCarthy, A. Department of Medicine Education Grants Committee. Investigating the unique needs of global health curriculum: ethical and Safety dilemmas faced by medical trainees in global health settings.

Balfour L, MacPherson P. CIHR. The HIV quit smoking program: tackling the co-morbidities of cardiovascular disease and depression. Catalyst Grant.
Cooper, CL. CIHR. Practical Advice on Planning a Pathway to Career Success: Canadian Association of HIV Research New Investigator Workshop Meetings, planning and Dissemination Grant.

Noteworthy Publications

In the Division of Infectious Diseases there were a total of 70 peer-reviewed publications (2010–2011), with notable publications in high impact journals including:


Shannon, K, Strathdee, S, Shoveller, J, Zhang, R, Montaner, J, **Tyndall, M.** Crystal methamphetamine use among female street-based sex workers: Moving beyond individual-focused interventions. *Drug Alcohol Depend* 2011;113(1):76-81


Yeung, A, **Cameron, DW**, Desjardins, M, **Lee, BC.** Use of signature-tagged mutagenesis to identify virulence determinants in Haemophilus ducreyi responsible for ulcer formation. *J Microbiol Methods* 2011;84(2):290-8

Awards

**Dr. Gary Garber**  
Inaugural recipient of Canadian Society for Physician Executive May 2011

**Dr. Paul MacPherson**  
Received the 2010 Young Professor Award from the University of Ottawa Faculty of Medicine
INTERNAL MEDICINE

25 Faculty Members • 67 Residents • 5 Fellows

Clinical Activities

In-Patient — The Division of General Internal Medicine cares for a large volume and proportion of TOH in-patients, mostly in the setting of the Clinical Teaching Units. There are six units, three at each of the Civic and General campus. One hundred and twenty beds are allocated to these units including fourteen monitored (Civic eight and General six beds) and four telemetered beds (Civic). 5335 patients were admitted through the CTU over the past twelve months. Almost all are referred from The Ottawa Hospital Emergency Department. There is also 30-bed non-teaching unit, supervised by attending physicians from the Division and staffed by 4 Physician Assistants.

In addition to the in-patient units each CTU group provides an inpatient consultation service to other departments and divisions, staffed by a designated attending physician and by senior medical residents. These units act as first responders to Emergency Room requests and triage for admission.

Out-Patients — General Medicine out-patient clinics are conducted at two sites, General and Riverside. In the near future clinics at the Riverside will be relocated to the Civic campus. The clinics include a specialized preoperative evaluation assessment unit for patients with known medical illness and two longitudinal clinics for GIM fellows. As well as General Medical clinics CTU staff participate in special interest clinics namely Medical Complications of Pregnancy, HIV, Diabetes and Thrombosis.

Educational Activities

These represent a mixture of administrative and teaching roles. Administratively the Division oversees the Core Program, directed by Dr. Code and co-directed by Dr. Nishikawa. Most Internal Medicine members are involved in CBL, supervise/organize Link Block (Dr. Wooller) and chair undergraduate clinical teaching committees (Drs. Clark and Contreras-Dominguez). All members participate in bedside teaching and attend morning report, as well as offer time to OSCE-station supervision.

Drs. Loree Boyle, Catherine Gray and Delvina Hasimja-Saraqini have joined the division and will have major roles as Clinician-Teachers.
Research

The division has an active research program principally at the Civic Campus and related to operational topics. These include patient safety, resource utilization, public policy and determinants of clinical activity. This work is facilitated by both the unique Ottawa Hospital comprehensive Data Warehouse, largely developed by the Internal Medicine research team, and ICES satellite centre. The physicians primarily involved are well funded by peer reviewed agencies and have a very impressive publication record. (Drs. H. Clark, A. Forster, C. van Walraven, and K. Wilson).

There is a nascent research program in medical education based at the General site. It is combined with external activities with the RCPS and the MCC and fits well with the Department of Medicine priority of education and is led by Drs. C. Touchie (Department Vice Chair of Education) and D. Pugh, and J. Chan.

Key Grants

Forster, A. CIHR. Improving outpatient prescribing using an interactive voice response system

Forster, A. CIHR. Using novel Canadian resources to improve medication reconciliation at discharge

van Walraven, C. CIHR. Improving patient safety and chronic disease management with a new generation of health information technologies

van Walraven, C. CIHR. Virtual ward to reduce readmissions after hospital discharge

Clark, H. CIHR. Control of hypertension in pregnancy study

Noteworthy Publications

Members of the Division of Internal Medicine published 16 peer-review articles this past year. Key publications include:


**Awards**

**Dr. Kumanan Wilson** Received The Media Relations Award 2011 from the University of Ottawa.
MEDICAL ONCOLOGY

21 Faculty Members • 3 Residents • 5 Fellows

Clinical Activities

The Division of Medical Oncology sees 4500 new patients per annum, which translates into approximately 60,000 patient visits per year and runs a 33 bed inpatient unit.

The clinical activities of the Division of Medical Oncology continue to grow with a 7% annual increase in new patient consultations and a 10% increase in re-consultation visits. A major impact on the Division's clinical activity has been the opening of a satellite site at the Queensway Carleton Hospital, the Irving Greenberg Family Cancer Centre. This centre is projected to service medical oncology patients who live west of Bronson Ave. The intention is to treat all patients excluding those that require highly specialized interventions which are available only at the General campus of the Ottawa Hospital. The increasing patient numbers, complexity of care and the new campus at the Irving Greenberg Family Cancer Centre means that the clinical service is extremely busy.

Educational Activities

The Division of Medical Oncology has a Royal College accredited training program and provides medical education at the undergraduate, postgraduate and subspecialty level.

At the undergrad level the division modified and improved the neoplasia week in the current undergraduate curriculum. It continued the undergraduate medical student elective program for both the University of Ottawa and other universities and improved the undergraduate student awareness in oncology.

At the postgraduate level the Division formed a Fellowship committee, identified a Director and introduced case-based learning. It also formalized a Fellowship research program and mentorship program. There has been an introduction of ward passports as a form of a standardized self-learning tool and improvements in the clinical teaching sessions for trainees.
The Division supported continuing medical education by promoting web-based learning to better utilize available resources (for CAMO and Champlain LHIN), ran its annual region wide oncology full-day symposium and continued to provide monthly CME events for the Champlain LHIN.

Research

The Division has a large clinical research group with significant interaction with translational scientists in the Centre for Cancer Therapeutics. Clinical Research activities within the Division of Medical Oncology spans a number of areas including a large Clinical Trials office conducting phase II/III studies, new drug development projects conducting phase I/Ib studies, a clinical outcomes group looking retrospectively at a large database and a large translational research group. In addition, the Division has received peer reviewed grant funding for an early detection study in lung cancer, a study looking at the impact of exercise on the outcome of women with breast cancer and a large grant to establish a multidisciplinary group conducting High Impact Clinical Trials in Oncology.

New Drug Development Program

The investigational new drug program at TOHCC was formalized 5 years ago which led to the recruitment of a medical oncologist, clinical pharmacology nurses, a clinical research associate and a research coordinator dedicated to Phase I and Phase Ib clinical trials. Currently, this unit involves 5 medical oncologists, 2.7 CRA’s, 3 clinical pharmacology nurses with a dedicated space for pharmacokinetic and pharmacodynamic studies and toxicity assessment. This program has shown itself to be financially stable and sustainable. The group is well known in oncology circles across Canada and is one of 2-3 groups who are regarded as national leaders in drug development. Recent collaborations with international centres in the United States and Europe and partnerships with Bristol- Meyers Squibb and Roche Oncology are increasing our exposure internationally.

Translational Research

The Division of Medical Oncology has strong research links with the basic and translational scientists in the Centre for Cancer Therapeutics. Drs. Goss, Jonker, Laurie, Asmis and Maroun in conjunction with Drs. Lorimer, Addison and Dimitroulakos have already published a number of successful collaborations in high impact journals.
High Impact Clinical Trials

In June 2010, the OHRI received a Translational Research Team (TRT) award from the Ontario Institute for Cancer Research (OICR) High Impact Clinical Trial (HICT) Program, a joint venture of OICR and Cancer Care Ontario (CCO). As one of OICR’s translational programs, the HICT Program supports hypothesis-driven translational research in clinical trials that facilitate the evaluation of personalized medicine strategies and interventions consistent with OICR strategic priorities. The HICT Program aims to execute its mission by enhancing science, collaborations, capacity, education and operational efficiencies by working with industry and academic clinical trial sponsors and researchers at Ontario institutions. Through participation in the HICT program, the OHRI aims to increase its ability to conduct HICTs and strengthen its relationship with the OICR, the CCO research program, and ON-TRECT (Ontario Network for Translational Research and Experimental Cancer Therapeutics in Clinical Trials). Within the context of OICR’s mission, the OHRI TRT is committed to establishing Ottawa as a center of excellence for research in personalized medicine for metastatic cancer patients. The OHRI’s TRT is lead by Glen Goss, and its members include: Mark Clemons, Derek Jonker, Christina Addison, Jim Dimitroulakos, Ian Lorimer, Charles la Porte, Carolina Souza, Leonard Avruch, Harman Sehkon, and Koralee Berghout.

Key Grants

**Segal, R.** Ontario Clinical Oncology Group. A Lifestyle Intervention Study in Adjuvant Treatment of Early Breast Cancer: The LISA trial

**Clemons, M.** Canadian Breast Cancer Foundation. A Randomized, Phase III Trial of Individualized Care versus Standard Care, in the Prevention of Chemotherapy Induced Nausea and Vomiting in Breast Cancer Patients

**Clemons, M.** Canadian Breast Cancer Foundation. A multicentre phase II study assessing 12-weekly intravenous bisphosphonate therapy in women with low risk bone metastases from breast cancer using bone resorption markers

Noteworthy Publications

Division members published 64 peer reviewed publications in 2010–2011 with notable publications in high impact journals including:


**Awards**

Glen Goss, Derek Jonker  
Received Translational Research Team Award  
(through OICR’s High Impact Clinical Trial Program)
Clinical Activities

The Division of Nephrology provides integrated care for patients across the region who suffer from chronic kidney disease from an initial referral and triage system (that has formed the model of the Canadian Society of Nephrology Guidelines for referral) to hypertension and advanced CKD clinics to multidisciplinary progressive renal insufficiency clinics to renal replacement decision support to dialysis and transplant. Home dialysis has been enhanced by the New Start Hemodialysis Unit. This is a separate 4 station dialysis unit that provides care for about 60 new dialysis patients annually for their first 8 weeks of treatment. Staff with a dedication to education focus on easing the transition to dialysis and promotion of home dialysis and transplantation.

We have enhanced patient education and decision support in our Pre-dialysis clinic and for patients who start on dialysis urgently for acute renal failure. The new Incentre nocturnal Hemodialysis programme offers an option for some of our sicker dialysis patients.

Our hemodialysis vascular access management provides rapid assessment, and surgery or radiological intervention with virtually no wait time and is held up as a model for Ontario and Canada. This is achieved by tight integration between nephrology, vascular surgery and interventional radiology, coordinated by our vascular access APN.

The Renal Transplant programme has been actively involved in increasing the numbers of Living Donor Transplants and actively participating in the National Exchange programme.

Very busy Nephrology consult teams provide rapid assessment and management of patients in Emergency, and those admitted at both campuses and the Heart Institute. In the critical care areas we are pursuing a pilot of a form of prolonged dialysis for unstable patients, called SLED (sustained low-efficiency dialysis).

Educational Activities

The division provides major contributions to UGME teaching through formal teaching, UGME student clinical supervision in addition to clinical supervision
to residents on our in-patient service and in the General Nephrology clinics. Formal teaching to residents is also a major focus of our group.

Dr. Edwards succeeded Dr. Hoar as program director of our RCPSC accredited Nephrology training program. The division also supports a Clinical Fellowship program and a Renal Transplant Fellowship; the latter was re-accredited by the AST/ASN in 2010. Division members are also involved in providing teaching formal sessions to post-graduate trainees at national and international Nephrology and Transplantation courses.

Developed with funding through the Department of Medicine Medical Education Research and Innovation grant, an innovative program in hypertension education provided 24 half-day clinics in 2010. Current outcomes of the program were presented in abstract form at the AIME research day (winning best poster), the CSN annual scientific meeting and the Family Medicine Forum.

Division members provided over 100 hours of Continuing Professional Development teaching locally to our allied health staff, Department and Faculty of Medicine, regionally to physician groups within the Champlain LHIN/Eastern Ontario as well as nationally and internationally (Halifax, Toronto, Boston, Rochester, Denver, Paris, Doha and Qatar).

Educational Administration:

Dr. Robert Bell: Faculty of Medicine — Director of Unit 1 Undergraduate curriculum

Dr. Jolanta Karpinski: Faculty of Medicine — Director of Postgraduate Evaluation and Accreditation

Dr. Stephanie Hoar: Dept of Medicine — Chair of Postgraduate Education Committee

Research

The Kidney Research Centre (KRC), in the OHRI has a 15,000 sq. ft. facility for basic research situated at Roger Guindon Hall. Basic research is focused on the pathogenesis of diabetic and hypertension-induced kidney disease (Drs. Burns, Kennedy, Touyz), as well as immune mechanisms of renal disease (Dr. Fairhead). The KRC also promotes Clinical/Translational Research at TOH, covering several areas in nephrology, including transplantation (Dr. Knoll), hypertension (Dr. Ruzicka), hemodialysis outcomes (Dr. Zimmerman), detection of CKD (Dr. Akbari), and prevention of contrast-induced renal injury (Dr. Hiremath).
Key Grants

**Burns, K.** CIHR. Translational research on the role of tubular ACE2 in kidney disease progression.

**Ruzicka, M.** Heart and Stroke Foundation of Canada. Sympathetic activity in patients with end-stage renal disease on peritoneal dialysis

**Fairhead, T.** KFOC. The role of RIP2 in experimental crescentic glomerulonephritis

**Kennedy, C.** CIHR. Prostanoid signaling in diabetic nephropathy CIHR

**Zimmerman, D.** CIHR. Canadian Kidney Disease Cohort Study

**Knoll, G.** CIHR. The effect of immunosuppressive medication use on patient outcomes following kidney transplant failure

**Touyz, R.** CIHR. Novel Nox homologues and redox signaling in hypertension

Noteworthy Publications

Division members published 44 peer reviewed publications in 2010–2011 with notable publications in high impact journals including:


**Montezano, AC, Zimmerman, D, Yusuf, H, Burger, D, Chignalia, AZ, Wadhera, V, van Leeuwen, FN, Touyz, RM.** Vascular smooth muscle cell differentiation to an osteogenic phenotype involves TRPM7 modulation by magnesium. *Hypertension* 2010; 56(3):453-62

Awards

Dr. Kevin Burns  
Awarded the Medal for Research Excellence from the Kidney Foundation of Canada (KFOC).

Dr. Rhian Touyz  
Recipient of the Distinguished Service Award of the Canadian Hypertension Society.

Dr. Greg Knoll  
Awarded a Clinical Research Chair (Tier 1) from the Faculty of Medicine at the University of Ottawa.

Dr. Kevin Burns  
Awarded The Harold W. Ashenmil Award for 2011 from the KFOC, which is granted to a volunteer who over a number of years has rendered distinguished service and made noteworthy contributions to the Mission and objectives of the KFOC.
NEUROLOGY

28 Faculty Members • 15 Residents • 4 Fellows

Clinical Activities

There has been an expansion of the Neuro Observation Area with the opening of 4 additional beds and new functionalities (tPA administration for inpatient stroke codes). This unit underwent a full operational review by an Interprofessional Model of Care committee.

The main Neurosciences clinic (2nd Floor, Civic Campus) has reached full utilization through the expansion of stroke/general neuro clinics as well as a Lumbar Puncture Clinic. Its nursing support has increased.

The Stroke clinic works in close collaboration with the Champlain Regional Stroke Network. It has spearheaded several initiatives to improve clinical stroke care, notably:

• a successful reduction of door-to-needle time for tPA administration (ranking 2nd/11 stroke centers)
• demonstration of reduced stroke rate after TIA through a systematic expedited clinical/laboratory care map.

The Multiple Sclerosis clinic is in the final stages of consolidation planning for its 4th Floor location at the General Campus. The Parkinson’s clinic has benefited from the addition of clinical fellows.

Educational Activities

The Division continues to demonstrate leadership in undergraduate education at the level of the Medical School: neuroscience content experts (Francophone and Anglophone), Unit III (eye-neuro-psychiatry) Leader, intensive involvement in lectures, case-based learning tutoring. Dr. Heather MacLean has been accepted in the Distinguished Teacher Program.

The Neurology residency program received high praise in the report of the Royal College at the time when it was awarded full accreditation in June 2010. To further attest to its success, this program received two nominations (PAIRO Residency program excellence and PGME innovation and excellence awards) and has been attributed an increase in its enrolment quota (CaRMS match, Canadian entry positions).
Research

With leadership exercised by Dr. D. Grimes, the Parkinson’s Research Consortium (PRC) has established an active link between clinical activities in Parkinson’s disease and basic scientists within the OHRI and University of Ottawa. The PRC, with the help of the Ottawa Hospital Foundation, was able to raise over $150,000 last year to support local Parkinson’s research efforts. Three student fellowship awards have been created and funded through the PRC’s efforts.

Dr. M. Schlossmacher has positioned himself as a leader in the field of Parkinson’s disease research on two fronts: (i) Biomarker research; and (ii) Target identification. His recent Annals of Neurology paper was a ‘first’ in the field; it functionally explored and suggested a solution to an important puzzle in the field of PD research. He was also a key figure in the creation of the Inaugural MD/PhD Program at uOttawa.

Dr. M. Freedman has spearheaded several collaborations to unravel the neuroimmunology and treatment of Multiple Sclerosis:

• investigating the role of γδ T cells derived from treated patients and controls for evidence of antibody-dependant cell cytotoxicity via their Fc receptors
• investigator driven grant together with Genzyme to examine the potential mechanism of action of Alemtuzumab;
• understand the basis of MS disability by concentrating on immunoreactivity directed against neurofascin, a component of myelinated nerve fibre nodes of Ranvier
• major grant proposal to assess the potential for Autologous Mesenchymal Stem Cell Transplantation as a cell-based treatment for inflammatory forms of Multiple Sclerosis.

Dr. M. Sharma is a co-PI in a Heart and Stroke Foundation Grant funding a randomized trial of cost free pharmacotherapy for smoking cessation. In addition, he is the chief neurologic investigator in an ongoing CIHR funded study of a decision rule for risk in TIA/minor stroke. The Ottawa stroke research group, led by Dr. Grant Stotts, participates in 12 investigator-initiated multicenter trials. Other stroke research domains are the study of intracerebral hemorrhage (Dr. Dowlatshahi), neuroimaging of ischemia / functional MRI (Dr. Hogan) and cerebral venous imaging in Idiopathic Intracranial Hypertension and MS (Dr. Bussière).

The Canadian Stroke Network, led by Dr. A. Hakim received $6.4 million from the Network of Centres of Excellence.
DIVISIONAL REPORTS

Key Grants

Freedman, MS, Bussiere, M. MS Society of Canada. Chronic Cerebrospinal Venous Insufficiency in Relation to Multiple Sclerosis.

Schlossmacher, MG. CHIR. To demonstrate that transgenic expression of human Cathepsin D reduces the concentration of and pathology induced by SNCA in vivo.

Schlossmacher, MG. Parkinson Society Canada. To validate 40 lead compounds (i.e., FDA-approved drugs) from a preliminary screen to lower mRNA levels and protein concentration of SNCA by 25%. Pilot Grant.

Sharma, M. Grant in Aid. Heart and Stroke Foundation of Ontario Efficacy and Cost-Effectiveness of Cost-Free Pharmacotherapy for Smoking Cessation for High-Risk Smokers with Cerebrovascular Disease “The Quit-Med Study”.

Noteworthy Publications

Division members published 45 peer reviewed publications in 2010–2011 with notable publications in high impact journals including:


Awards

Dr. Michael Sharma  And the Champlain Regional Stroke Centre received the 1st Prize in The Ottawa Hospital Quality Awards for the project “Reducing door-to-needle time in acute stroke”

Dr. Pierre Bourque  Received the Prix d’Excellence compétence “érudit” from the Faculty of Medicine

Dr. Christine De Meulemeester  Nominated for the PAIRO Residency Program Excellence award and the PGME Excellence and Innovation award

Dr. Mark Freedman  Received a Department of Medicine Mid-Career Research Award. He was the keynote speaker for several international symposia (St Louis MI, Barcelona, Rome, Tel Aviv, Washington DC, Montreal)

Dr. Antoine Hakim  Renewed in his position as Chair of the External Scientific Review Committee by the European Stroke Network.
NUCLEAR MEDICINE

6 Faculty Members • 2 Residents

Educational Activities

The Residency Training program was approved by the Royal College of Physicians and Surgeons of Canada as of July 1, 2010, with Dr. Laurent Dinh as the Program Director and champion of this effort. The program had 2 residents as of January, 2011 with two more starting in the next academic year.

Research

Software for planar and tomographic analysis of gated blood pool images has been developed for quantification of dyschrony in patients with heart failure as part of the selection process for cardiac resynchronization therapy. Validation results have been published in the Journal of Nuclear Cardiology (J Nucl Cardiol 2010;5:803-810). The clinical utility of this approach is being further validated as a substudy of the RAFT study funded by the Heart and Stroke Foundation of Ontario (Drs. Birnie, Wassenaar, Ruddy and Tang).

Dr. Leung is the local PI for an International Multicentre Phase III trial evaluating survival benefit of Ra-223 for treatment of bone metastases for hormone refractory prostate cancer.

Noteworthy Publications

Division members published 4 peer reviewed publications in 2010–2011 with notable publications in high impact journals including:


Lalonde, M, Birnie, D, Ruddy, TD, deKemp, RA, Wassenaar RW. SPECT blood pool phase analysis can accurately and reproducibly quantify mechanical dyssynchrony. J Nucl Cardiol 2010; 17(5):803-10
PALLIATIVE CARE

15 Faculty Members • 3 Residents • 5 Fellows

Clinical Activities

The Division provides clinical consultation coverage at The Ottawa Hospital (General and Civic Campus), TOH Cancer Centre (General Campus) and the Bruyère Palliative Care Consultation Team (PPSMCS). Division members are also the attending physicians on the Acute Palliative Care Unit at the Élisabeth Bruyère Hospital. The Division provides 24/7 coverage at the above sites. The Queensway Carleton Hospital (QCH), The Irving Greenberg Family Cancer Centre (QCH site), and the Montfort Hospital were added as new sites this past year. Division members provide part-time coverage but no after-hours coverage at these sites. The TOH teams (General and Civic combined) received almost 2900 new referrals during the period and conducted almost 22,000 visits (including visits from the nurse consultants in the team). This remains one of the busiest in-hospital palliative care consult teams in Canada. There were 394 admissions to the Élisabeth Bruyère Palliative Care Unit and 570 new referrals to the Bruyère PPSMCS.

The number of weekly outpatient palliative care clinics at the Cancer Centre increased from 3 to 5. This included 2 new clinics at the Irving Greenberg Family Cancer Centre.

The Palliative Care Unit at the Élisabeth Bruyère Hospital underwent restructuring; the 36-bed unit has been divided into an Acute Palliative Care Unit (20 beds) and a subacute unit (16 beds). The Acute unit is for patients with very complex needs (but who are not necessarily at the end of life) while the subacute unit is for patients who have less intense needs but are at the end of life or require long term in-patient palliative care.

The number of referrals to the Palliative Rehabilitation Program increased and by June 2011 almost 100 patients had been referred to this new and unique (first in the world) service.

Several quality improvement projects were launched in the past year, including the development of regional clinical guidelines on the use of palliative sedation, ketamine for pain control and bowel care.
Educational Activities

Residency Program — The number of non-palliative care residents rotating through the Division increased in this past year, now numbering 60.

The following academic sessions continued to be held throughout the year:

- Clinical supervision
- Weekly Journal Rounds
- Weekly Case Discussion Rounds
- Weekly Residency Academic Half-day
- Pallium LEAP courses for off-service residents (Wednesday afternoons)
- Twice monthly Palliative Care City-Wide Academic Rounds
- Twice-monthly Research Work in Progress (WIPs) rounds

The Division welcomed International fellows; 3 physicians from Portugal completed observerships (each 3 months long) in the past year (a family physician and 2 medical oncology residents). Professor Carlos Centeno, a well known European Palliative Care academic from the University of Navarra in Spain, completed a 3-month sabbatical in our Division.

Undergraduate Program — This was the second year that the new palliative care curriculum was delivered in the integration block of the 2nd Year. It consists of a full week of learning activities (case-based learning, lectures, workshops, debates and self-learning). The evaluations of the program have been excellent. This 2nd-year block is enhanced by workshops in years 1 and 4 and optional clinical rotations. This new curriculum is led by Drs. Shirley Bush and Pippa Hall and all Division members have participated.

There was a significant increase in the number of medical students doing electives and optional clinical rotations in the Division; 52 from a previous year’s 36 (1 to 4 weeks long).

Division members continue to serve as E-portfolio mentors (6 Division members are now involved, mentoring 8 groups in total).

Continuing Professional Development — The Division, mainly through the Bruyère Team, offered three interprofessional 3-day-long palliative care courses (using the Pallium LEAP courseware) for family physicians, community nurses and pharmacist this past year (total of 60 learners). The Division also presented 8 evening workshop sessions for family physicians (total of 68 physicians participated).
Research

The Division Research Group increased its activities over the past year with over 20 active studies (clinical research and education research). Two new research assistants were added to the group (total of 8 research assistants and coordinator). The Group works with both the OHRI and the EBRI. See below for key grants and the total amount of grants received.

Key Grants

Pereira, J. CIHR. Systematic Review of Instruments to Evaluate Palliative Care Related Competencies

Chasen, M. Ottawa Regional Cancer Foundation. The Palliative Rehabilitation Program: Enhancing Appetite, Weight Gain and Quality of Life in Cancer Patients

Pereira, J. University of Ottawa Faculty of Medicine. Learning Objective Structured Clinical Encounters (LOSCEs): A Controlled Trial to Examine their Education Role Across Multiple Specialty Programs

Lawlor, P. Bruyère Foundation. Gillin Family Research Scientist Position

Pereira, J. TOHAMO. Difficult Discussions, Better Decisions: Improving End of Life Care in The Ottawa Hospital and Community

Noteworthy Publications

Division members published 22 peer reviewed journal publications in 2010–2011 with notable publications in high impact journals including:


DIVISIONAL REPORTS


Awards

**Dr. Tara Tucker**

Received the Award for Excellence — Collaborator Competency Faculty of Medicine Awards in Education, University of Ottawa

**Dr. Raphael Chan**

Received the Award for Excellence — Collaborator Competency Faculty of Medicine Awards in Education, University of Ottawa
PHYSICAL MEDICINE & REHABILITATION

13 Faculty Members • 9 Residents

Clinical Activities

The Division of Physical Medicine and Rehabilitation continues to be the primary rehabilitation services provider in the Champlain LHIN, providing specialized world class inpatient, outpatient and outreach care for patients with amputations, brain injuries, spinal cord injuries, strokes, chronic lung disease, respiratory disorders, complex neurologic disorders, multiple sclerosis, complex orthopaedics, chronic pain, and communications disorders. We strive to improve our patients’ quality of life and to foster safe and independent living.

The Division of PM&R has over 100 inpatient beds located at Élisabeth Bruyère, The Ottawa Hospital General Campus and The Ottawa Hospital Rehabilitation Centre. The Short Term Rehabilitation unit effectively and efficiently transitioned, treated and discharged over 780 patients this past year.

For 2010–2011, Bruyère Continuing Care reduced the average length of stay of its inpatients to 44.3 days (in line with Ontario averages). The RITTS (Rehabilitation Integrated Transition Tracking System, electronic referral system) was successfully implemented resulting in an average time from referral to decision of 1.7 days.

Dr. Lynne MacGregor has worked with the inter disciplinary out-patient department staff in establishing streamlined service and protocols for clients with neuromuscular disorders, MS, and CP being referred for percutaneous gastrostomy tubes. This was officially put in place this 2010–2011 year.

On June 8th, 2011, The Ottawa Hospital Rehabilitation Centre was proud to unveil the Rehabilitation Virtual Reality Lab (RVR Lab) featuring the CAREN (Computer Assisted Rehabilitation Environment) Extended System. One of only 3 in the world, this system was donated by the Canadian Forces in recognition of our efforts in managing wounded Canadian Forces personnel. Its installation and infrastructure were made possible by donations from The Ottawa Hospital, The Ottawa Hospital Foundation, and the people in the Champlain region. This system combines room-sized surround 3D graphics with a moving platform immersing the user in a fully interactive virtual world where evidence based
rehabilitation therapies can be conducted in a safe, monitored environment. This innovative system provides TOHRC & IRRD burgeoning research opportunities.

Educational Activities

Following a very successful accreditation where PM&R received a “No Weaknesses” declaration from all reviewers, the division enjoyed a successful CaRMS match and welcomes 2 new PGY1’s. PM&R is actively involved in the undergraduate curriculum. PM&R residents and faculty have acted as primary MSK and Neuro block lecturers and as Clinical skills tutors for undergraduate students for University of Ottawa throughout the year. PM&R is actively involved in the link block placements at TOHRC and Élisabeth Bruyère. PM&R accommodates numerous trainees from across Canada, as well as international medical observers.

Dr. Sue Dojeiji is a diligent supporter of the educational curriculum. She is the Chief Examiner for the RCPSC, PM&R Fellowship Examinations (Term 2010–2014).

Dr. Anna McCormick and Dr. Lynne MacGregor were Examiners for the 2011 RCPSC, PM&R Fellowship Examinations.

Dr. Lynne MacGregor is active with the Ontario Neurotrauma Foundation through Élisabeth Bruyère (EBHC) in putting together a resource for family doctors and residents to facilitate primary care for patients with spinal cord injuries.

Dr. Dojeiji works part-time as an education consultant (“Clinical — Educator”) at the RCPSC supporting the mandate of The Office of Education and the CanMEDs initiative.

Research

Dr. Marshall was a founding and principal co-investigator for the Canadian Driving Research Initiative for Vehicular Safety in the Elderly (CanDrive). This groundbreaking project will generate knowledge for use by transportation policy makers, clinicians and the general public to improve the safety and quality-of-life of older drivers in Canada and abroad. For 2010–2011, the scope of this research has expanded globally to include Australia and New Zealand through an international collaborative multi-year study.

Dr. Marshall has led the development of Guidelines for Mild Traumatic Brain Injury and Persistent Symptoms. Dr. Shawn Marshall is the Co-Chair of the Mild Traumatic Brain Injury and Persistent Symptoms Task Force for the Ontario Neurotrauma Foundation Concussion/Mild Traumatic Brain Injury Management Strategy
Dr. Guy Trudel is Director of the Bone and Joint Laboratory and a member of the Institute for Rehabilitation Research Development (IRRD) task force. His research endeavours related to the effects of immobility have led to numerous partnerships with the Canadian and European Space agencies and the establishment of various CIHR Grants.

Dr. Hillel Finestone is Chair of a physician working group between Geriatrics and Stroke Rehabilitation to develop common practices for reporting driving concerns in patients who have had a stroke. He is also actively conducting research on virtual reality interventions for stroke rehabilitation.

Dr. Nancy Dudek completed a multi-centre trial examining the impact of a faculty development intervention on successfully completing an in-training evaluation record. Manuscript submission is underway.

Dr. Sue Dojeiji co-chairs a national working group which is establishing guidelines for communication skills training across the continuum of education (pre-clerkship to practice). The outcomes of the working group will be available in December 2011 on the RCPSC website.

**Noteworthy Publications**

Division members published 10 peer reviewed journal publications in 2010–2011 with notable publications in high impact journals including:


**Blackmer, J**. The ethical obligations of researchers in protecting the rights of human research subjects. *World Medical and Health Policy* 2010; 2(3): Article 6

RESPIROLOGY

13 Faculty Members • 5 Residents • 2 Fellows

Clinical Activities

The division has an active inpatient general respirology service of 16-20 beds at the General Campus. We provide outpatient consultation clinics in cystic fibrosis, pulmonary rehabilitation, malignant lung disease, pleural effusion, sleep medicine, and obstructive lung diseases.

The division of Respirology has greatly expanded its scope of clinical activities by establishing several new subspecialty clinics in the last 1-2 years. The Pulmonary Hypertension clinic is run as a joint Respirology-Cardiology clinic at The Ottawa Heart Institute. Dr. Chandy currently follows over 300 patients with pulmonary hypertension in this specialized clinic which has facilitated access to right heart catheterization and other specialized tests needed to diagnose and treat pulmonary hypertension.

Dr. Amjadi has expanded his scope of practice in malignant diseases to include an interventional malignant ascites/malignant pleural effusion clinic which runs twice a week at the Cancer Assessment Centre. Dr. Amjadi has also begun a clinic dedicated to treating dyspnea in patients with malignant disease.

Dr. Alvarez travels to Nunavut regularly with a respirology resident and runs a TB clinic to provide medical care and specialized respiratory care to patients in Canada’s Far North.

Dr. McKim is doing groundbreaking clinical work in his neuromuscular disease respiratory clinic. Dr. McKim follows hundreds of patients with respiratory failure from neuromuscular disease and he has been able to keep the vast majority from requiring invasive ventilation.
Finally the Ottawa adult Cystic Fibrosis clinic continues to grow, we now follow more than 110 adults with CF from the Ottawa-Gatineau area and provide tertiary and post-transplant care to these patients.

**Educational Activities**

The Division of Respirology is highly active in medical education at all levels.

Our Respirology Subspecialty Training Program is fully accredited by the Royal College and is one of the most competitive in the country. Fellowship training in Interventional Pulmonology, Sleep and Pulmonary Rehabilitation is also offered. Our trainees attend a full range of subspecialty clinics and have the opportunity to perform a high volume of procedures. They also benefit from community-based respirology clinics which provide invaluable experience in practice management. Over the last few years, we developed several cross-departmental rounds in conjunction with the departments of radiology and pathology to further enhance the collaboration and educational experience of all divisions involved. This year, the use of a bronchoscopy simulator was incorporated into the training curriculum.

In addition to the subspecialty program, all division members actively participate in undergraduate and postgraduate education. The respirology postgraduate rotation is highly rated and provides teaching to residents from a wide range of specialties.

Several division members (Drs. Alvarez, Amjadi, Bencze, McKim, Sharma and Voduc) are regularly involved in subspecialty resident teaching at provincial and national meetings. Our division is also involved in the provision of continuing medical education to community physicians in the form of monthly "pneumoclubs" as well as presentations and workshops at various conferences. Dr. Chandy will be chairing the upcoming Ontario Thoracic Society conference in January of 2012.

**Research**

Divisional research interests are in clinical epidemiology and clinical research with an emphasis on research in obstructive lung diseases, TB, and cystic fibrosis.

The division's research has focused on COPD, asthma, and cystic fibrosis including a focus on investigating acute exacerbations of these diseases. We are specifically interested in the critical assessment of interventions designed to prevent exacerbations and improve the diagnosis and treatment of exacerbations of COPD. Other major research interest involves the microbiology, pathophysiology, and
treatment of CF exacerbations. Finally, appropriate diagnosis and management of asthma is also being researched by members of our group (Drs. Aaron and Pakhale).

Members of our group are also active in TB and public health research (Dr. Alvarez), sleep medicine (Dr. Leech) and in clinical research related to care and treatment of neuromuscular disease (Dr. McKim). Optimal management of malignant pleural and peritoneal disease is researched by Dr. Amjadi and Dr. Srour. Finally Dr. Dales is very active in epidemiologic research related to the health effects of air pollution.

Key Grants

Alvarez, G. Health Canada-Public Health Agency of Canada. TAIMA TB

Aaron, S. CIHR. Simvastatin therapy for moderate and severe COPD (STATCOPE).

Aaron, S. CIHR. Strategies to improve diagnosis and treatment of asthma in Canadians

Aaron, S. CIHR. Dissemination and implementation of a lung transplant decision aid

Noteworthy Publications

Division members published 28 peer reviewed journal in 2010–2011 with notable publications in high impact journals including:


**Awards**

**Dr. Shawn Aaron**
Awarded a University of Ottawa Faculty of Medicine Tier 1 Research Chair in Obstructive Lung Diseases.

**Dr. Kayvan Amjadi**
Received Physician Clinician Recognition Award 2010, The Ottawa Hospital

**Nha Voduc**
Received Award of Excellence in Continuing Medical Education, University of Ottawa

**Gonzalo Alvarez**
Received the Jeff Turnbull Contributions to International Medicine Award, Department of Medicine

---

**RHEUMATOLOGY**

10 Faculty Members • 1 Resident • 1 Fellow

**Clinical Activities**

The Division of Rheumatology is based in the Arthritis Centre on the 6th floor of the Riverside Campus. Our multidisciplinary team provides ambulatory care to approximately 1100 patients per month. Our clinical priorities include inflammatory arthritis, early arthritis, advanced therapeutics, osteoporosis and systemic autoimmune rheumatic diseases (SLE, scleroderma, Sjogren’s, inflammatory myositis and vasculitis.) We provide outreach services in the Ottawa Valley as well at Baffin Island. We currently monitor close to 1000 patients on biologic agents. As a quality and safety initiative, and to facilitate care a database is being developed to monitor these patients. Dr. Milman has joined the Canadian Vasculitis Network and is developing a specialty clinic and database for patients with vasculitis.
Educational Activities

Dr. Susan Humphrey-Murto is Interim Associate Director for AIME/uOSSC Fellowship in Medical Education (new July 1, 2010.) For 2011 she has been designated as AIME Senior Research Associate (SRA) through a peer reviewed process. She is also a Co-PI on projects related to AIME, OSCEs, evaluations and feedback for trainees.

Research

Dr. Peter Tugwell leads our group with 18 peer reviewed publications for 2010–11. He is PI on 4 CIHR grants, Co-PI on 1 and co-investigator on one. These are in the areas of Decision Aids, evidence based medicine, knowledge synthesis and translation (Cochrane.) Total funding is over $1 million per year.

Dr. Susan Humphrey-Murto has been active in educational research. The mission of the Department of Medicine is to provide the best educational experience for trainees through the continuum of their education including undergraduate, postgraduate and continuing professional development. Her ongoing medical education projects listed below clearly support our mission and vision. Most are related to improving the objective structured clinical examination (OSCE) for undergraduate and postgraduate students. One project involves the development of a technical skills curriculum for our internal medicine residents. An innovative OSCE is being developed to assess multiple CanMEDs roles in this context. Many of these projects involve our internal medicine residents thus providing them with important medical education research experience.

Key Grants

Tugwell, P. CIHR. Can patient decision aids improve shared decision making and reduce gender disparity in the utilization of total knee arthroplasty. A pilot study. 2010/11 CIHR: Podcasting evidence based preventive care guidelines to immigrants and refugees to Canada. PI Dr. Peter Tugwell. $64,600

Tugwell, P. CIHR. Knowledge synthesis and translation by Cochrane Canada.

Tugwell, P. CIHR. The safety of biologics for musculoskeletal conditions: a systematic review and network metaanalysis.

Noteworthy Publications

Division members published 25 peer reviewed journal in 2010–2011 with notable publications in high impact journals including:


**Awards**

**Dr. Gunnar Kraag**  
Presented with the Canadian Rheumatology Association Distinguished Rheumatologist Award. He was also presented with an Award of Excellence from the Mexican College of Rheumatology

**Dr. Susan Humphrey-Murto**  
Recipient of a Department of Medicine Tier 1 Career Medical Education Award.

**Dr. Nataliya Milman**  
Awarded a UCB/Arthritis Society Research Fellowship for 2 years.