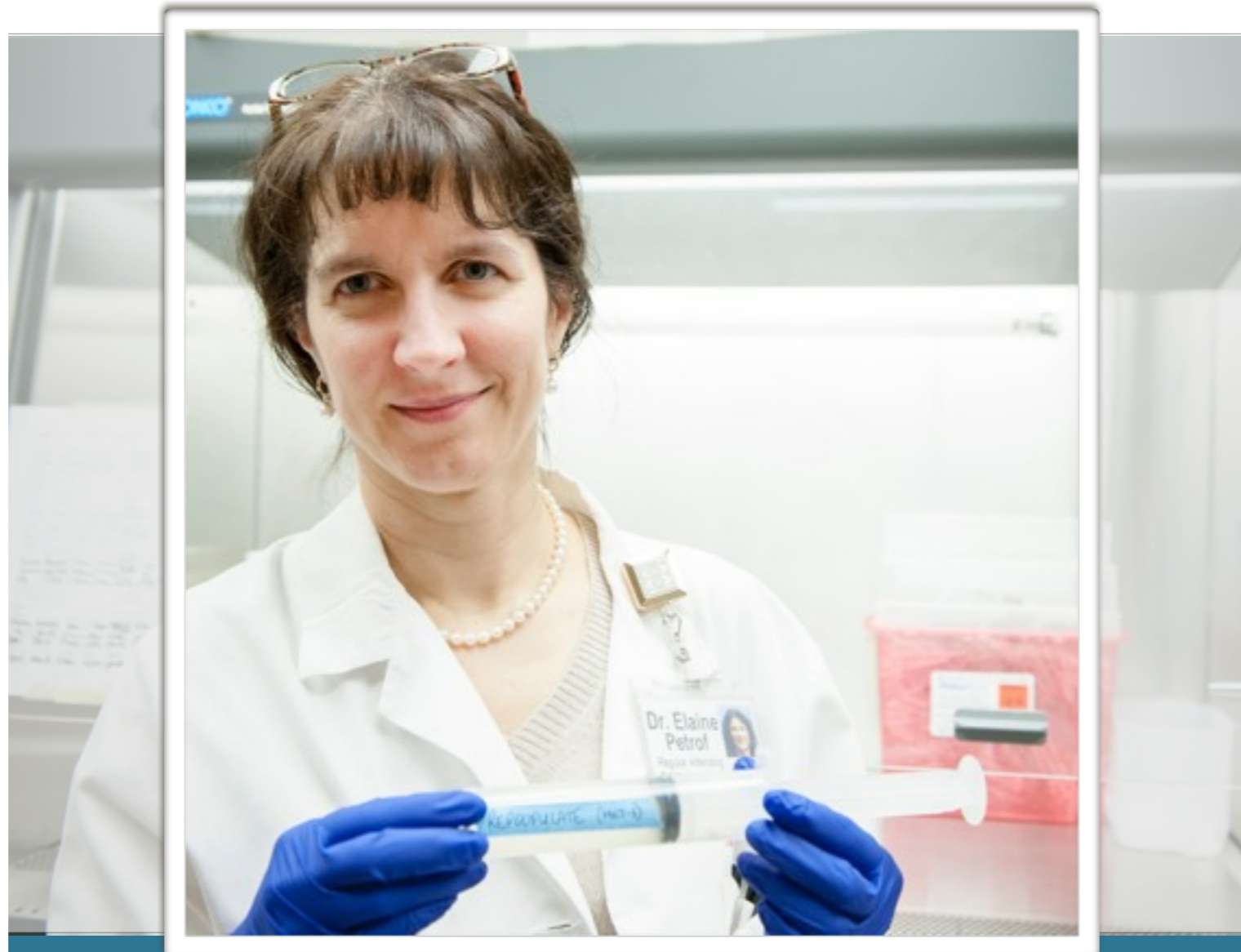


Department of Medicine Annual Report



2013

Introduction



Dr. Stephen Archer
Head, Department of
Medicine

Welcome to the Queen's Department of Medicine Annual Report for 2013. This report tells the stories of our faculty members, patients and Department as a whole through three categories:

Divisional Reports

Patient Stories

Program Reports

Reading this iBook

As you browse through, you'll see that this iBook is a Multi-Touch medium, embedded with a variety of widgets. To maximize your experience, ***tap on everything you see***. Some text boxes are scrollable, some photos have pop-up dialogue boxes, some photos are interactive and some words are hyperlinked to glossary terms or websites. **Click here** to learn more tips and tricks for using an iBook.

Acknowledgements

I would like to acknowledge the creative expertise of Jen Valberg in the production of this iBook, and the careful editing done by Jennifer Andersen and Nancy Koen.

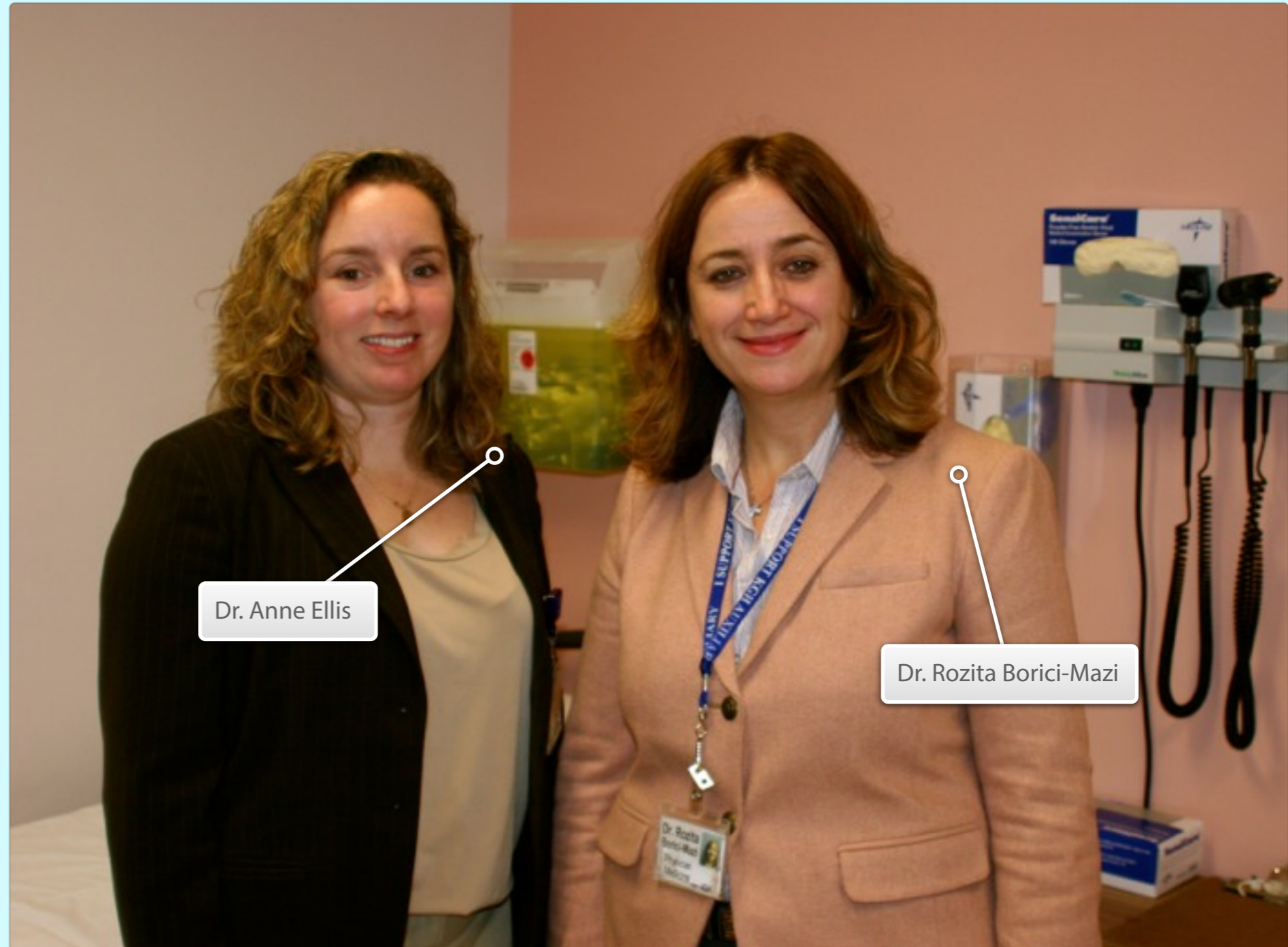
I hope you enjoy our Annual Report and I look forward to your feedback!

A handwritten signature in black ink that reads "Stephen Archer". The signature is written in a cursive, flowing style. It is contained within a thin black rectangular border.

Division of Allergy & Immunology

Mission

To expand access to patients suffering from allergic conditions and immunodeficiency in the Southeastern Ontario region while enhancing our global reputation for excellence in research into the allergic condition



Division of Allergy & Immunology

The Division of Allergy & Immunology is comprised of Dr. Anne Ellis, a Clinician Scientist with a 70% research portfolio and Dr. Rozita Borici-Mazi, a Clinician Scholar with 85% clinical activity. We run nine half-day clinics per week at Hotel Dieu Hospital (HDH) and provide year-round inpatient consult coverage at Kingston General Hospital (KGH). In our outpatient Allergy/Immunology clinics, a full spectrum of allergic and immunologic disorders are evaluated and treated, including allergic rhinitis, asthma, atopic dermatitis (eczema), urticaria, angioedema, food allergy, anaphylaxis, drug allergy, stinging insect allergy and immunodeficiency.

The research activities within our Division are tremendous, and are highlighted by the clinical trials conducted in the Environmental Exposure Unit, an internationally recognized and validated controlled allergen challenge model of allergic rhinitis. We participate in studies of direct nasal allergen challenge, and this year had several abstracts presented in the realm of angioedema as a presenting problem to the Emergency Department. Dr. Ellis has an interest in epigenetic modifications that predispose to atopy and develop in response to allergic challenge.

Our Division contributes to the education of Undergraduate medical students through lectures and Small Group Learning Sessions in their first year of training, Clinical Skills teaching, and offers a rotation in Allergy/Immunology combined with Endocrinology in the Clerkship year. We contribute to Postgraduate Education through participation in Academic Half Day and Allergy/Immunology rotation, and both members contribute to teaching on the Internal Medicine Clinical Teaching Units (CTUs).



Key accomplishments in 2013

- ▶ Assistance with the development of a new Facilitated Small Group Learning Case of peanut allergy for the Undergraduate Medical Education (UGME) Program.
- ▶ Participation in several course retreats pertaining to the Mechanisms of Disease UGME course.
- ▶ Continued participation in Clinical Skills teaching and the new Clerkship rotation, shared with Endocrinology, which has become a highly rated block amongst Subspecialty Medicine Clerkship students.
- ▶ Members of the Division were active within the Canadian Society of Allergy & Clinical Immunology, the American College of Allergy, and the American Academy of Allergy.

Associate Professors

Dr. Anne Ellis

Assistant Professors

Dr. Rozita Borici-Mazi



Division of Allergy & Immunology



Programs of Distinction

- ▶ Significant contribution to the Antimicrobial Stewardship Program by ensuring the results of our penicillin skin testing clinic evaluations are updated in the KGH/HDH Patient Care System and accurately reflect the true drug allergy status of patients seen at both hospitals.
- ▶ Continued expansion of the Subcutaneous Immunoglobulin Replacement Therapy Program to improve the quality of life of patients with immunodeficiency who prefer to receive their IVIG infusions at home.
- ▶ Ongoing ability to test for and successfully desensitize patients with stinging insect allergy, dramatically improving quality of life and reducing the risk of anaphylaxis in the affected patients.

Research Highlights

- ▶ Several publications released pertaining to clinical trials conducted in the Environmental Exposure Unit in 2013. [Click here](#) to read *Cats, Ragweed and Grass, Oh My!*, on page 14 of Queen's (e)Affect Fall 2013.
- ▶ Successful completion of two studies of a novel peptide-based immunotherapy for patients suffering from grass allergy, and a biomarker-driven study of a similar peptide-based immunotherapy for patients with cat allergy. The feedback from participants in these trials was dramatic in terms of 'life changing observations' from those who received active product, indicating a true value-add for Kingston residents who now have access to these exciting new treatments.

Patient Story: Murray Smith



He took a break from chopping wood to tell us he feels like he is 60 again.

This is an abridged version of an original story from the University Hospitals Kingston Foundation, printed in the June 2012 [Community Report](#).

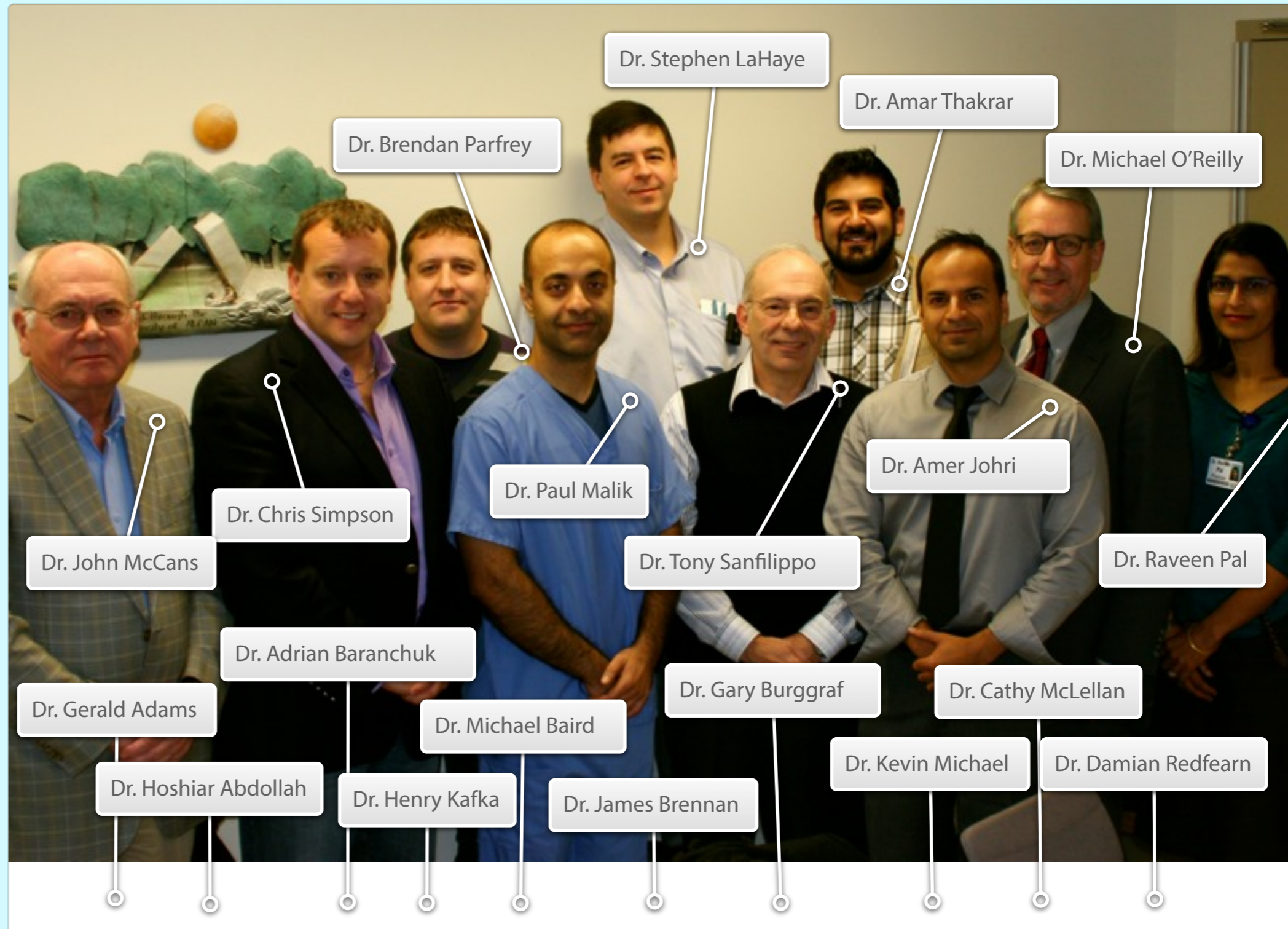
He had been taking medication for his heart for some time, but in 2011, Murray Smith felt himself growing weaker – he was taking more and more nitroglycerin and found himself short of breath more often. He paid a visit to his cardiologist in Belleville for his annual stress test and the next week, he was being scheduled for triple bypass surgery at KGH. Curious about the procedure, Murray and his wife Marnie, a retired nurse who worked in the hospital in Picton, began reading up about the procedure in her 1963 medical books. Much to their dismay, they discovered that heart patients are cooled for the procedure. “A little red light went on,” Murray says. He has a severe allergy to being cold – not a healthy dislike for feeling chilly, but a full-blown anaphylaxis reaction.

That added a significant dimension of difficulty to this already complicated procedure for cardiac surgeon Dr. Darrin Payne and his surgical team. They brought in allergy specialist Dr. Anne Ellis and the debate began. “They wanted to take me to 24 degrees (Celsius) for the operation, and Dr. Ellis said if you do that, you’d probably kill him,” but without the operation, Murray knew he would not survive. Marnie, Dr. Ellis and Murray met again one year after Murray’s ordeal. They made a difficult compromise and Murray was cooled to 28 degrees for the operation that began on June 21st. Dr. Ellis remarks, “at the end of the day, we came up with a plan that we felt would be safe and would be effective. And he’s been able to have the surgery that he so desperately needed. As you can see, it’s made a huge difference to his quality of life. So that makes all the time that you spend, researching how exactly we keep this patient safe through such a challenging procedure. That’s what makes it all worthwhile.” Murray agrees. “It was so successful, I was out of the hospital in six days.” One year after his miraculous operation – this 71-year-old took a break from chopping wood to tell us he feels like he is 60 again.

Division of Cardiology

Mission

To improve the heart health of residents in Southeastern Ontario and beyond, through a focus on timely quality care, innovation, discovery, teaching, and learning



Division of Cardiology



The Division of Cardiology provides comprehensive tertiary care services to the people of Southeastern and Central East Ontario. Our services include full echocardiography (including TEE, stress echo and 3D TTE/TEE and carotid U/S), cardiac CT, stress testing, ambulatory rhythm monitoring, interventional cardiology (including a 24/7 primary PCI program for STEMI) **interventional electrophysiology**, cardiac rehab, and both general and **specialized outpatient clinics**. An outreach heart rhythm clinic is located in Peterborough, ON. We have a 14-bed Cardiac Sciences Unit – a highly innovative and unique combined unit shared with cardiac surgery – as well as 22 inpatient ward beds and four short-stay beds. In 2012-13, we performed approximately 3000 angiograms, 1000 stent procedures, 600 pacemaker and ICD implants, 400 electrophysiology procedures and 12,000 echocardiograms.

Programs of Distinction

- ▶ State of the art advanced arrhythmia care for both VT and AF ablation, with a 100% increase in completed cases in 2013.
- ▶ Transcatheter Aortic Heart Valve Implantation (TAVI) Program at KGH which represents the successful collaboration of the Division of Cardiology and the Division of Cardiac Surgery.
- ▶ 3D carotid ultrasound and 3D echocardiography services.
- ▶ Regional STEMI Program.
- ▶ Leadership of regional Cardiac Clinical Services Roadmap Initiative with regional program of primary care-integrated heart function clinics now being implemented.

Professors

Dr. Chris Simpson
Dr. Hoshier Abdollah
Dr. Stephen Archer
Dr. John McCans
Dr. Tony Sanfilippo
Dr. Michael Baird

Associate Professors

Dr. Adrian Baranchuk
Dr. Damian Redfearn
Dr. James Brennan

Assistant Professors

Dr. Gerald Adams
Dr. Henry Kafka
Dr. Amer Johri
Dr. Stephen LaHaye
Dr. Paul Malik
Dr. Cathy McLellan
Dr. Kevin Michael
Dr. Michael O'Reilly
Dr. Raveen Pal
Dr. Brendan Parfrey
Dr. Amar Thakrar

Professors Emeriti

Dr. Gary Burggraf



Division of Cardiology



The Cardiac Surgery team performs a TAVI procedure

Subspecialty Training Program

- ▶ The Cardiology Training Program has seven residents, having received full accreditation at the last Royal College Review. There is a high level of satisfaction amongst residents who report an engaged and supportive faculty. In 2013, five postgraduate students were supervised by members of the Division.
- ▶ The Division has an Electrophysiology (EP) Training Program with three fellows. EP training was recently recognized by the Royal College as a distinct subspecialty within cardiology and our program aims to become the first fully-accredited EP Training Program in Canada before the end of the year.

Research Highlights

- ▶ Dr. Kevin Michael has established a full animal lab (cardiac electrophysiology) to compliment our clinical research program in electrophysiology.
- ▶ Dr. Amer Johri has secured a CFI grant and works on carotid U/S techniques to better predict coronary disease. A first-author abstract was named best abstract at the American Society of Echo meeting.
- ▶ Division members have been authors or co-authors on 76 papers and abstracts in 2013, including NEJM, Circulation, JASE and Circulation Arrhythmia.

Patient Story: Anne Schutta



“After I had the procedure, it was a complete turn-around”

*This is an abridged version of an original story from the University Hospitals Kingston Foundation, printed in the Summer 2013 **Foundation Report**.*

Anne Schutta has a new lease on life after undergoing a Transcatheter Aortic Heart Valve Implantation (TAVI).

“I was short of breath. I couldn’t go shopping – which is very bad for a woman. And I was generally tired, tired all of the time,” says 87-year-old Anne Schutta.

After years of suffering from a heart valve defect that kept her from being active, Anne qualified for this innovative new procedure. Instead of open heart surgery, her heart valve was replaced through a catheter inserted through her groin. She was able to go home four days after the ground-breaking procedure.

“After I had the procedure, it was a complete turn-around,” she adds, noting that she feels as good as she did 15 years ago. Anne’s story is one of many from Kingston’s hospitals that highlight the importance of patient-oriented research, and the impact it has on our community’s health. It is an example of the kind of technology that can be developed through patient-oriented research.

Advancements in disease prevention, diagnosis and treatment are leading to better patient experiences and outcomes, just like Anne’s.

Medicine Program Report



It has been another bumper year for the Medicine Program at Kingston General Hospital (KGH). We continue to see unprecedented numbers of patients and families needing our support; a picture many of my colleagues across the Province also see. In amongst this 'busy-ness', we maintain a healthy approach to improving all that we do. We have 10 improvement teams that are changing how we collectively provide clinical care and support staff in their working and educational environment.

Stroke Distinction Award – This year KGH became the second acute-care hospital in Canada to achieve Accreditation for 'Stroke Distinction' designation. Our stroke team has given numerous presentations on a provincial and national stage and we have many requests from other centres for guidance on the Accreditation Canada assessment process.

Advance Care Planning – Small but significant changes that have been implemented across the hospital were led by Critical Care and Medicine teams, in an effort to make end-of-life just a little easier and more reflective of patients' and families' wishes.

Mobilization – The MOVE ON team is continuing to see their improvements impact our elder patient population. We are continuing to spread this knowledge and experience across the entire hospital.

Discharge Planning and Care Navigation – In 2012, we saw funding allocated to support four Care Navigator positions in the Program, which have quickly become 'must haves' for many services. Since implementation we have seen a 10% drop in length of stay, no rise in readmission rates and an 8% increase in overall patient satisfaction.

Renal CQI – A broad group from the Renal Service has been working on identifying areas to improve hemodialysis and peritoneal dialysis patient services. Regular review of quality indicators has resulted in a sustained reduction in infection rates and increases in independently dialyzing patients.

You will read more about the above and other successes throughout this report. What this very small list of examples demonstrates is that the Medicine Program has come a long way. It is leading the measurable improvement of clinical services locally, provincially and nationally, and doing so in multiple areas across the Program. There is no one person or profession that achieves any of this. All that we do for our patients, families, staff and learners is done collectively. We are not perfect, but we are making significant progress, progress that others turn to as a reference point.

Richard Jewitt

Operational Director, Medicine Program, KGH

"A member of staff came up to me as I was writing this piece. She has a new job title and with that a new ID badge was issued. She was disappointed with this new badge, and I asked why. She said that the new ID badge did not say 'Medicine Program', an affiliation she is proud of. We will get that fixed as well."

Division of Endocrinology

Mission

- To provide the best possible care for patients with endocrine disease.
- To teach undergraduate students, postgraduate trainees, and healthcare providers about optimal management of endocrine disease.
- To educate patients and the public about endocrine disease and advocate for the best endocrine care.
- To conduct research in endocrine disease.



Division of Endocrinology



The Division of Endocrinology consists of three members, all of whom are clinician scholars.

Division Chair Dr. Robyn Houlden serves as the lead in Undergraduate education and clinical programs.

She has a special interest in diabetes, diabetes and pregnancy, insulin pumps and endocrine tumours.

Dr. Pendar Farahani joined the division in 2013. His research interests include evaluation of therapeutics from effectiveness and economic perspectives using real world data, models for diabetes care, and clinical pharmacology studies on insulin analogs in sub-groups of diabetes patients with co-morbidities. He is interested in academia-industry partnership to enhance and to develop pharmacotherapeutics and medical technologies/devices for diabetes care. Dr. Farahani's clinical interests include diabetes care and thyroid disease management. He is currently developing a multidisciplinary thyroid clinic with Otolaryngology (ENT) in which patients with thyroid nodules will be assessed and followed by both disciplines with performance of fine needle aspiration biopsy in the clinic setting.

Dr. Kathy Kovacs has a clinical interest in all aspects of endocrine disease. She has taken the lead for supervising the education of Postgraduate trainees on the Endocrine Service.

Programs of Distinction

► **Insulin Pumps:** We care for one of the largest insulin pump patient populations worldwide with over 500 adults and 100 children on insulin pumps.

Dr. Houlden is recognized as a world expert on insulin pumps and is an international speaker on the topic, having participated in multi-centre and single site studies examining the effectiveness of insulin pumps and continuous glucose monitoring systems.

► **Glycemic Optimization Clinic:** In 2013, the Glycemic Optimization Clinic was established for patients attending the Hotel Dieu Hospital (HDH) Bariatric Assessment Centre. The goal of the clinic is to improve glycemic control in patients awaiting bariatric surgery and to achieve a target A1C of < 7.5 (a defined eligibility criteria for the procedure). An interdisciplinary team consisting of a diabetes nurse educator, endocrinologist and dietitian see the patients monthly and maintain telephone contact weekly.

► **Inpatient Management of Diabetes:** In 2013, a Diabetes Consult Service was established at Kingston General Hospital (KGH). A nurse practitioner assesses, manages and educates inpatients and dialysis patients with diabetes under the guidance of Dr. Houlden. The Diabetes Consult Service also promotes best diabetes-related practice to nursing and medical staff.

► **Diabetes and Pregnancy:** We provide care to women with pregnancies complicated by diabetes and other endocrine problems in a multidisciplinary clinic in collaboration with the Department of Obstetrics and Gynecology.

► **Endocrine Cancer:** Dr. Houlden chairs the Endocrine Multidisciplinary Cancer Committee at KGH. The committee consists of endocrinologists, general surgeons, ENT surgeons, pathologists and radiologists, and meets monthly to discuss complex patients with thyroid and adrenal endocrine tumours and to develop standardized management protocols.

Professors

Dr. Robyn Houlden

Assistant Professors

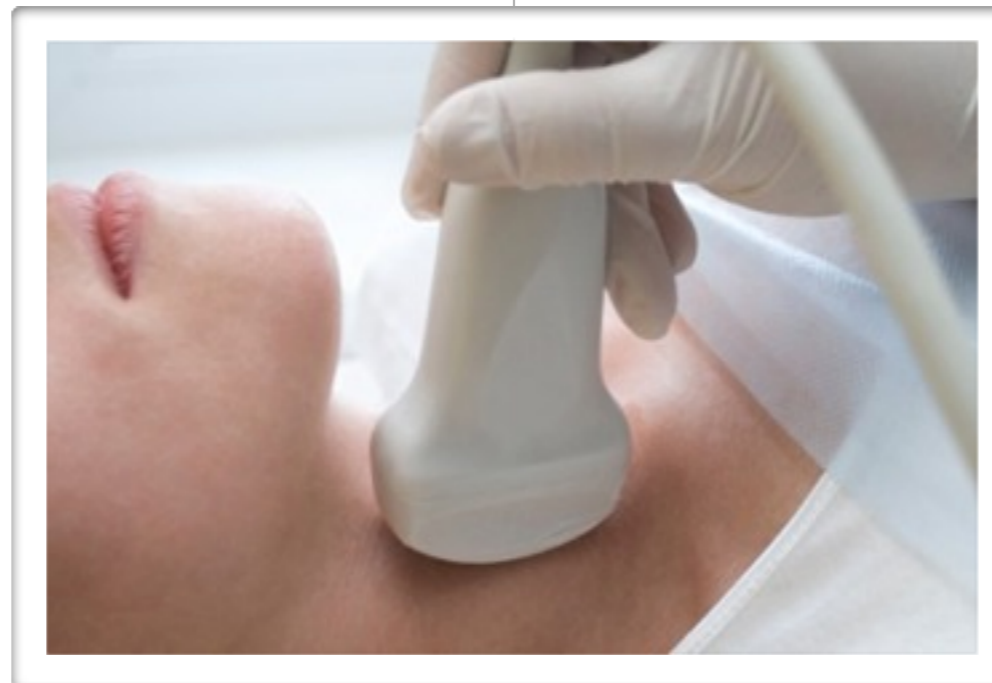
Dr. Pendar Farahani

Dr. Kathy Kovacs

Division of Endocrinology

Research Highlights

- ▶ Dr. Houlden completed a study examining the long term efficacy of insulin pumps using data from her outpatient insulin pump clinic.
- ▶ Dr. Houlden completed a study examining the effectiveness of the glycemic optimization clinic on helping patients undergoing bariatric surgery in reaching A1C targets.
- ▶ Using the Ottawa Model of Undiagnosed Diabetes/Dysglycemia in hospitalized patients, Dr. Houlden completed a study in which she screened all patients admitted to the Clinical Teaching Unit (CTU) services for four weeks for undiagnosed diabetes.
- ▶ Dr. Houlden participated in two CIHR studies: the MiTY study of the effectiveness of metformin in women with type 2 diabetes in pregnancy and the CONCEPT study examining the effectiveness of continuous glucose monitoring in women with type 1 diabetes in pregnancy.



Key Accomplishments in 2013

- ▶ Expansion of the Division of Endocrinology with the re-assignment of Dr. Katherine Kovacs from General Internal Medicine, and the new hiring of Dr. Pendar Farahani. The addition of two endocrinologists will allow more patients with endocrine disease to be seen, and will reduce waiting list times significantly.
- ▶ Creation of standardized templates for insulin order sets with ISMP Canada. As part of the process, ISMP Canada has recognized KGH as being one of the few institutions in Canada with insulin order sets that met all of their recommended criteria.
- ▶ Creation of the Glycemic Optimization Clinic for patients undergoing bariatric surgery with diabetes
- ▶ Creation of an Inpatient Diabetes Consult Service
- ▶ Creation of the Endocrine Multidisciplinary Cancer Committee



Patient Story: Nicole



At age 28, things changed when she switched from multiple daily injections of insulin to a pump.

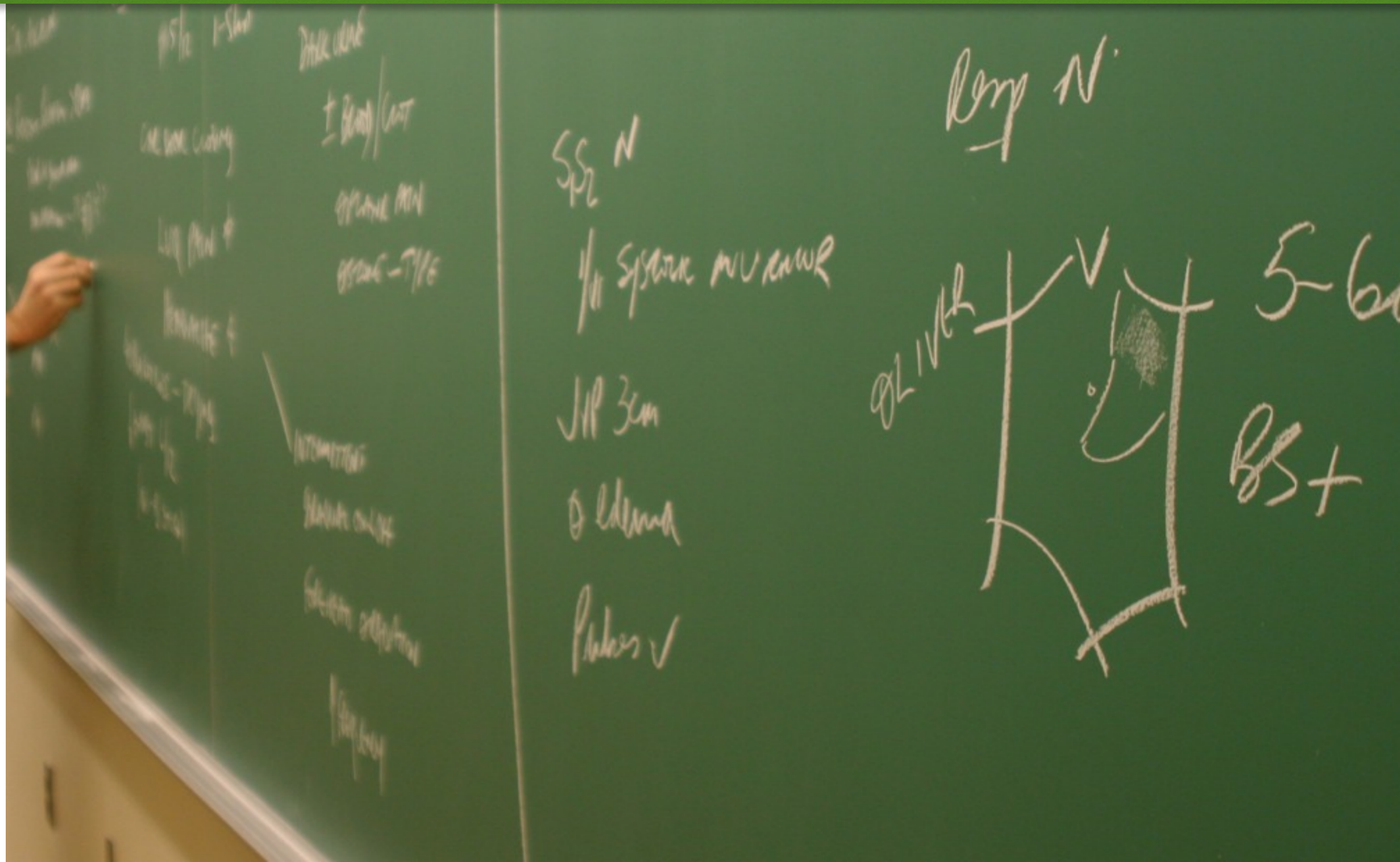
Nicole is a young mother of two active boys. She has had type 1 diabetes since age 13.

For many years, Nicole thought she would never be able to have children, as she experienced great difficulty with keeping her blood glucoses under good enough control to ensure a safe pregnancy.

But at age 28, things changed when she switched from multiple daily injections of insulin to a pump. For the first time, she was able to achieve the glucose levels she needed, and had two safe pregnancies. Unfortunately, a few years later she developed severe hypoglycemia unawareness. Nicole was no longer able to sense when her blood glucoses levels were dangerously low. Her husband was terrified to leave her alone as he would often find her unconscious at home.

The introduction of an insulin pump and continuous glucose monitoring changed this situation. A sensor worn in the skin of her abdomen measures her interstitial fluid glucose levels every five minutes and transmits the value to a display on her insulin pump. Nicole can set up alarms that let her know when her blood glucose levels are too high or low. As Nicole explains, "an insulin pump with continuous glucose monitoring makes it easier to maintain my average blood sugar levels because I can detect trends more quickly, allowing me to take action earlier. It gives my family and I peace of mind."

Education Report



Education Report

The Department of Medicine has major roles in undergraduate and postgraduate education, and a growing role in educational research and scholarship.

The **Advisory Panel on Education** held a retreat in 2013 and set several specific priorities:

1. Sustain and grow a leadership role in education within the Department
2. Maintain a leadership role in clinical skills in the Department
3. Grow scholarship in education
4. Enhance local and national recognition of top educators in the Department

Leadership

In Postgraduate education, seven subspecialty program directors oversee seven fully accredited Royal College training programs. The launch of the recently approved Royal College subspecialty program in Palliative Medicine will occur in 2015, with interviews being conducted in the fall of 2014. On an annual basis there are on average, 57 residents affiliated with the fully accredited Core Internal Medicine Training Program.

The Department runs the advanced Clinical Skills Term 4 Program in the Undergraduate Medicine Program, School of Medicine, under the leadership of Drs. **Laura Milne** and **Hoshiar Abdollah**. Over 40 members of the Department of Medicine serve as teachers.

Scholarship and Innovation

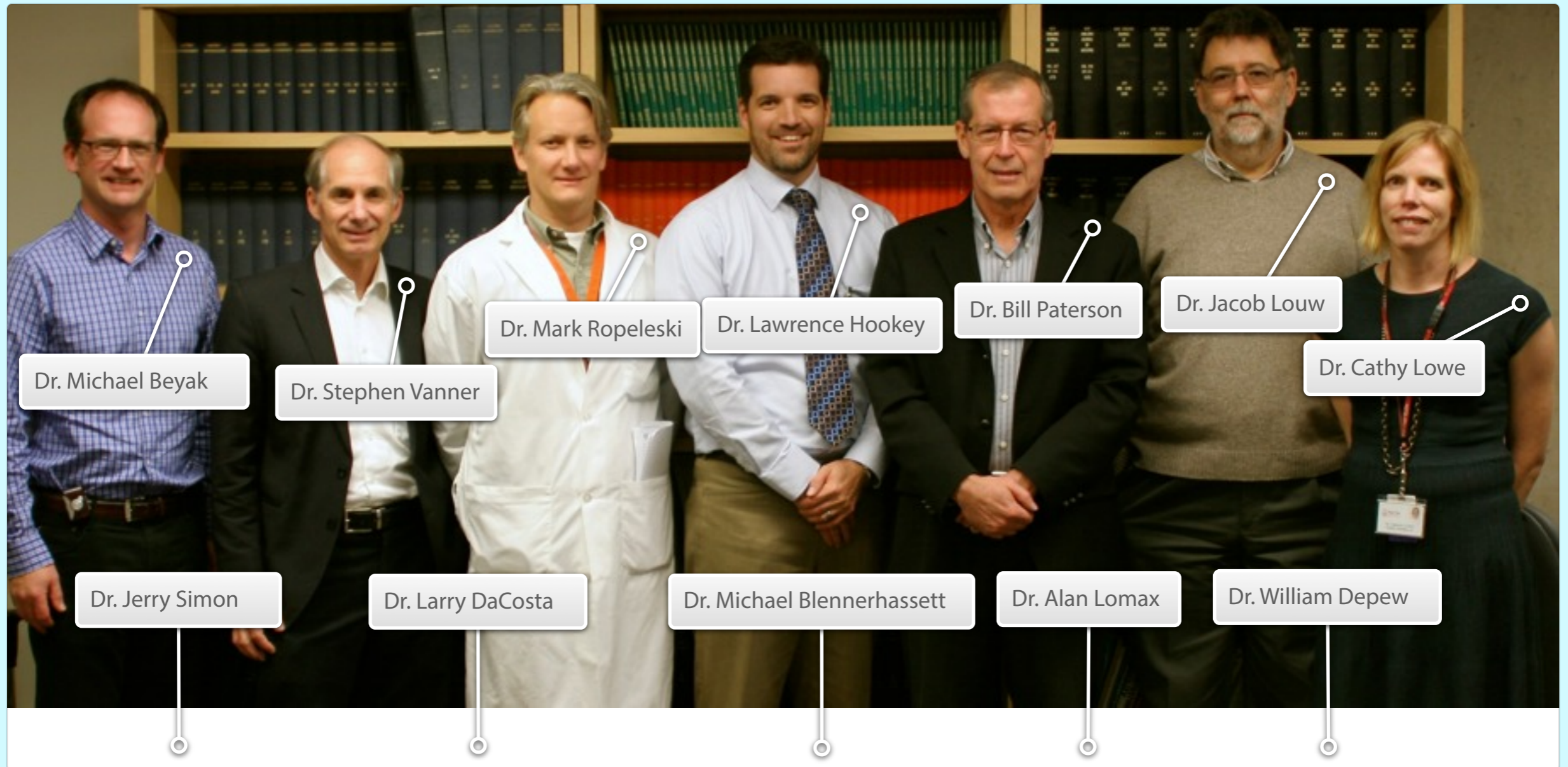
This year, the Department's internal Innovation Fund provided its first competitive grants to support educational research. The department also supports Dr. **Mala Joneja**'s prestigious Phoenix Fellowship and several members completing their Master's of Education.

Morning Report, led by Dr. **Ross Morton**, continues to be an acclaimed educational event to develop clinical reasoning for undergraduate and graduate medical students. Dr. **Adrian Baranchuk**'s Morning ECG Rounds are also a highlight, and are teleconferenced to multiple sites.



In October 2013, Department of Medicine faculty members participated in an e-Health Retreat to learn about the latest in medical apps and eHealth technology.

Division of Gastroenterology



Mission

To create a culture of excellence in the integrated care and study of patients with digestive diseases.

Division of Gastroenterology



The Division of Gastroenterology consists of seven full time clinical faculty, three PhD researchers, three clinical cross appointees and four part time adjunct clinicians. Internationally renowned for our accomplishments in research, we also take pride in our clinical services and education. Many many of our members take on leadership positions both within the Faculty of Health Sciences and on a national level.

In addition to a busy inpatient ward and consultative service at Kingston General Hospital (KGH), the Division has one of the largest outpatient practices in the Faculty of Health Sciences. This entailed close to 9000 outpatient clinic visits and 5000 procedures at Hotel Dieu Hospital (HDH) in 2012-13, an increase of 25% over the last five years. Maintaining our strong academic profile in the face of unrelenting growth in clinical workload remains an ongoing challenge.

Members of the Division are active in all levels of medical education, but take particular pride in our Gastroenterology Fellowship Training Program which continues to turn out high quality gastroenterologists, many of whom have gone on to distinguished academic careers.

The GI Diseases Research Unit (GIDRU) serves as the research arm of the Division. The Division has an active clinical research program with over a dozen clinical trials currently in progress, the majority of which are investigator-initiated projects funded through external grants. We have developed a 'seamless' translational research program whereby human tissue is retrieved on a daily basis from patients undergoing endoscopy at HDH or surgery at KGH for use in basic science research projects within the GIDRU.

Key Accomplishments in 2013

- ▶ Dr. Cathy Lowe developed a novel critical appraisal component for the Clinical Clerk medicine subspecialty training rotation and presented the results of this program at a national meeting on medical education.
- ▶ Drs. Ropeleski and Hookey spearheaded a fundraising effort to assist in the purchase of a new magnetic scope guide. This device is not only an invaluable tool for use in training future colonoscopists, but facilitates successful completion of the most challenging procedures.
- ▶ Drs. Vanner, Beyak and Depew raised over \$20,000 for the Canadian Digestive Health Foundation in their annual 'RISE' charity bike ride.

Professors

Dr. Bill Paterson
Dr. Jacob Louw
Dr. Stephen Vanner

Associate Professors

Dr. Michael Beyak
Dr. Lawrence Hookey
Dr. Mark Ropeleski
Dr. Michael Blennerhassett*
Dr. Alan Lomax*

Assistant Professors

Dr. Cathy Lowe

Professors Emeriti

Dr. Larry DaCosta
Dr. William Depew
Dr. Jerry Simon

**Research faculty member*

Subspecialty Training Program

The Division runs a fully accredited 2-year training program in Gastroenterology that currently has four fellows. At our most recent Royal College accreditation, the reviewer commented that our program was the best she had ever reviewed.

Major strengths of the program are the close daily interaction between faculty and trainee and the fact that there are no private practice gastroenterologists in the Kingston area, so that trainees get broad exposure to all aspects of the specialty. Queen's is unique in that all full time faculty have completed the "train the colonoscopy trainer" course, which has resulted in a high quality educational

Division of Gastroenterology

Programs of Distinction

► *Therapeutic Endoscopy:* The Division of Gastroenterology offers state of the art therapeutic endoscopic services including endoscopic ultrasound, endoscopic mucosal resection for dysplasia and early stage mucosal cancers, luminal stents for obstructing malignancies and endoscopic interventions for the treatment of pancreatitis and its complications. Our Division recently partnered with Pentax Canada to be the first in Canada to evaluate new endoscopic equipment, which attests to the stature of our endoscopic program under the directorship of Dr. Lawrence Hookey.



► *GI Motility:* The Division of Gastroenterology has long been recognized as a centre of excellence for research, training and clinical service in GI Motility and its disorders. A state of the art clinical GI function laboratory at HDH performs sophisticated studies of the motor and sensory functions of the GI tract, including high resolution manometry, esophageal pH and impedance monitoring, barostat sensory testing, anorectal function testing with biofeedback training and H2 breath testing for measurement of intestinal transit. We are recognized internationally for our expertise in this area and have had patients referred to us from academic centres across Canada for consultation and testing. Currently, we have two fellows receiving advanced training in GI Motility. These individuals were sent to us by other gastroenterology programs (Western and University of Calgary) and plan to return to academic positions at these Universities once their training at Queen's is complete.

Research Highlights

• Under Dr. Stephen Vanner's leadership, GIDRU was awarded a Canadian Foundation for Innovation/Ontario Innovation Trust grant for \$2,394,490 to develop a "Human Laboratory for the Study and Treatment of Gastrointestinal Disorders". This 'virtual laboratory' embeds vital research infrastructure into our clinical activity, thereby enabling human research to occur without hindering patient care. Carefully linked to our existing GIDRU basic science laboratories, this state-of-the art program will facilitate translational studies, (both 'bench to bedside' and 'bedside to bench') driven by our investigators and Industry partners.

• Dr. Beyak's lab has discovered that satiety-sensing nerves are hypo-responsive in an animal model of obesity, and that this is due to high leptin levels that decrease the electrical excitability of these nerves. This provides a pathophysiological basis for developing new pharmacological targets for the treatment of obesity.

• Dr. Vanner's lab, in collaboration with other GIDRU members, discovered the chemical factors underlying enhanced pain sensitivity in patients with diarrhea-predominant irritable bowel syndrome.

Patient Story: Kim McCabe



"I've never had a physician so involved in research and cutting-edge medicine. I'm thankful he looked for a solution for me"

Up until the age of 54, Kim McCabe couldn't go more than two weeks without needing to see a physician. McCabe suffers from benign esophageal strictures - otherwise known as non-cancerous narrowing of the throat. It's a condition she's lived with since mistaking a glass of lye (sodium hydroxide) for milk when she was just 22 months old.

"I've spent more time in hospital and had more doctors than people would ever dream," says McCabe who has undergone more than 500 surgeries and hundreds of endoscopies to alleviate the constriction of her throat which, until now, was no wider than a pencil eraser.

"Soup or broth was all I could eat," she says. Now, that's all changed. This month, McCabe became the first person in North America to receive a biodegradable esophageal stent. The procedure to install the revolutionary mesh tube that holds open the narrowing of the esophagus took place at Kingston General Hospital (KGH) and was performed by Dr. Lawrence Hookey, Medical Director of the Endoscopy Unit at Hotel Dieu Hospital (HDH) and KGH, along with members of KGH's Endoscopy team. The procedure has widened McCabe's esophagus to approximately 20 mm - the size of a woman's ring.

"We were anxious to find a solution," says Hookey, who has completed 125 endoscopies and stricture dilations on McCabe over the past four years. "After each procedure, she'd be able to eat for about a week or so and then she'd have to return to have her throat stretched again. Sometimes the slippery stent would even slide down into her stomach. It just wasn't working terribly well," he says.

Patient Story: Kim McCabe

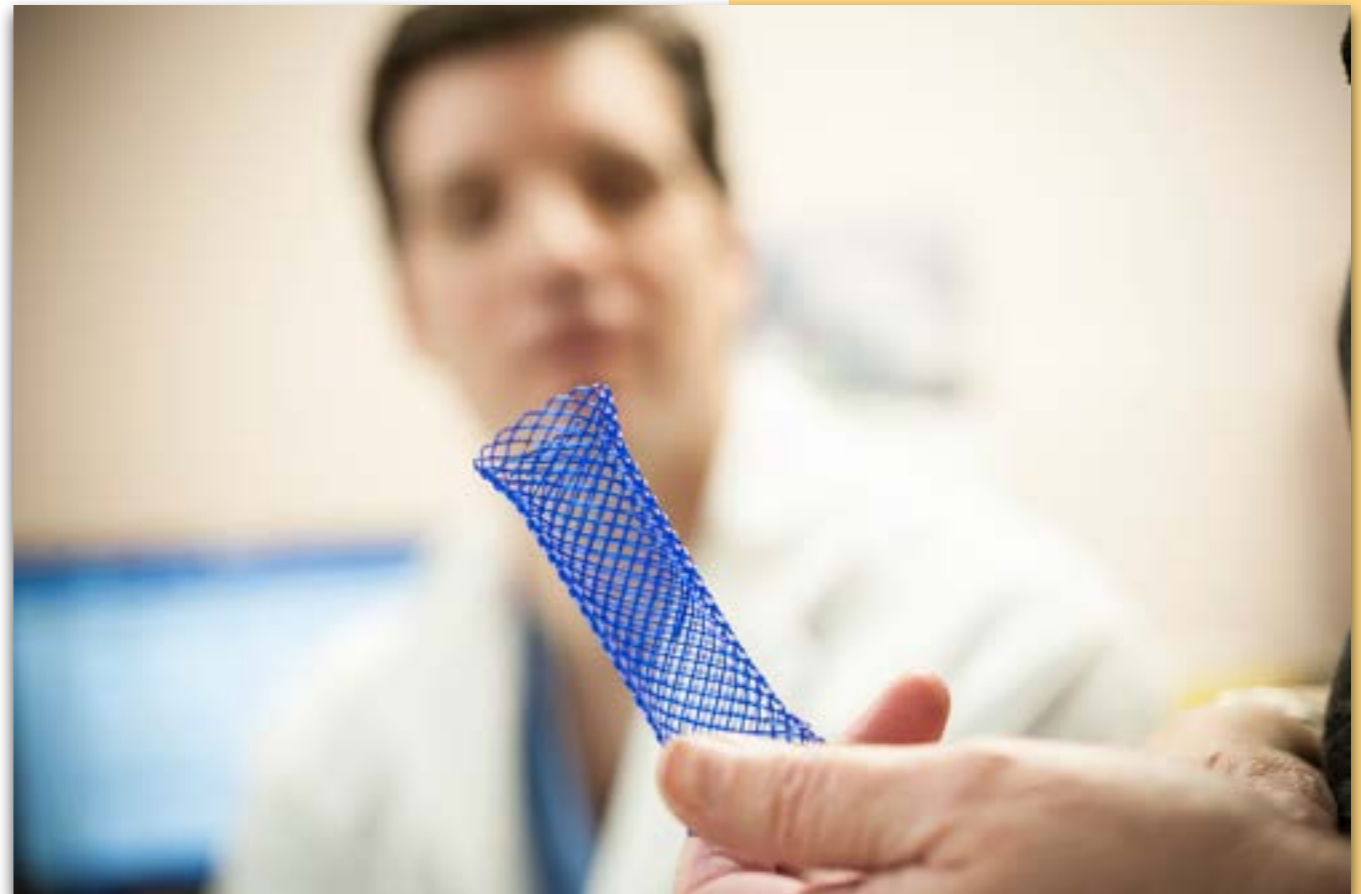
Hookey found an alternative with the biodegradable stent, a device currently available only in Europe. "Because the stent is uncovered, there's less chance of it slipping," says Hookey. "Plus the fact that it's biodegradable means that it doesn't need to be removed so there will be fewer trips to the hospital for endoscopies."

After getting McCabe on board, Hookey began the application process to Health Canada to acquire the device on a special-access basis. "Everyone at KGH worked hard to make this happen for this patient," says Hookey. With this new device, McCabe should be able to go at least four months between procedures.

"I was nervous going into this," says McCabe. "But it gave me hope to be able to eat and to not feel hungry all the time." A month after the procedure, McCabe says she's spending less time at the hospital and away from work and is enjoying a better quality of life.

"I'm experimenting with new foods and am enjoying going to restaurants now," says McCabe. What does it mean to McCabe that her physician worked with her to find the right solution?

"I've never had a physician so involved in research and cutting-edge medicine. I'm thankful he looked for a solution for me." Still, McCabe admits that she is experiencing an unanticipated side effect. "I'm missing the medical staff at HDH and KGH. I won't see them as often now."



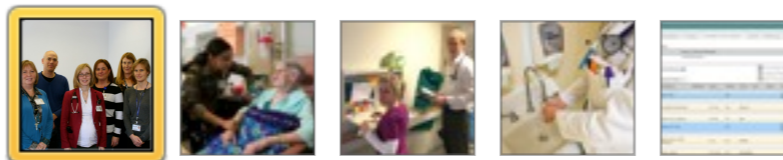
Quality Report

Quality Improvement Achievements in 2013



Focus on inter-professional integration:

Quality Improvement and Patient Safety Committee with multi-professional representation



Quality Report

Click on the buttons to view each Division's Quality Improvements in 2013

Allergy &
Immunology

Cardiology

Endocrinology

Gastroenterology

Geriatrics

General Internal
Medicine

Hematology

Infectious
Disease

Nephrology

Neurology

Palliative Care

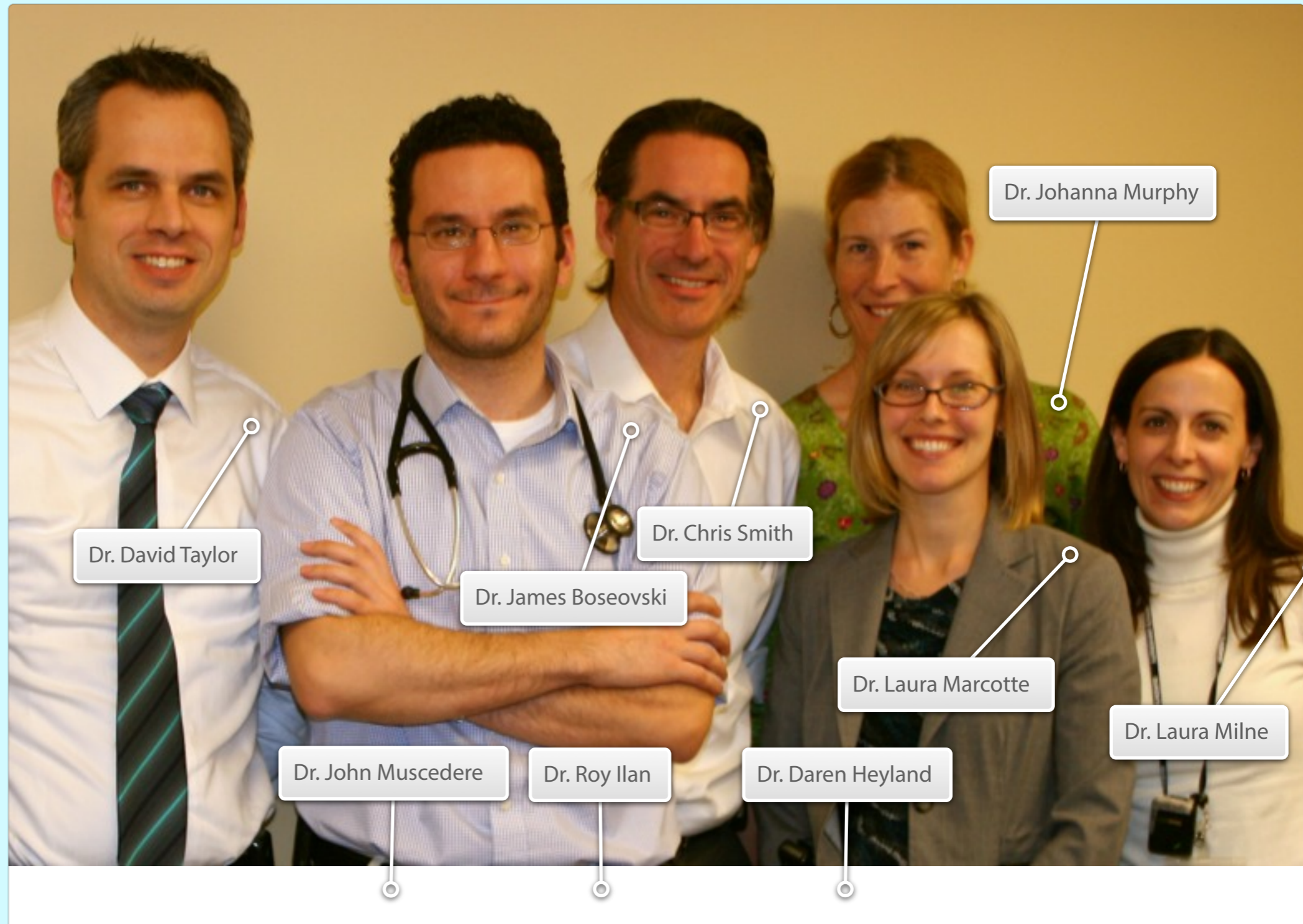
Respirology

Rheumatology

Division of General Internal Medicine

Mission

To provide excellence in patient care, research and teaching of internal medicine



Division of General Internal Medicine



The Division of General Internal Medicine (GIM) consists of 6.5 full time equivalent General Internists whose clinical work is focused mainly on the inpatient medicine wards - Clinical Teaching Units (CTUs) - and in providing a comprehensive GIM consult service to the non-medical specialties. We maintain several ambulatory clinics in general medicine as well as contributing to the stroke clinic, the bariatric clinic and a hypertension clinic. Another 2.5 members are affiliated with the ICU group in both research and clinical capacities. All members of the division are key personnel in running the core training program and providing education to the medical students when they rotate through their core medicine block.

There have been a number of changes in the organization and structure of the Division this year. In January 2013, Dr. Chris Smith accepted the position of Division Chair following Dr. Phil Wattam's departure. Dr. Kathy Kovacs transferred from GIM into the Division of Endocrinology in July 2013. Our Division members hold several key administrative positions in the Department: Dr. Chris Smith is Program Director for the Internal Medicine Training Program. Dr. David Taylor is Core Clerkship Director, Dr. Laura Marcotte is CTU Director, Dr. Jim Boseovski is the GIM 4/5 Subspecialty Program Director and Dr. Laura Milne is a Clinical Skills Course Director. Dr. Roy Ilan is the Chair of the Departments' Quality Committee and Patient Safety Committee, and Dr. Daren Heyland is Director of the Clinical Evaluation Research Unit at Kingston General Hospital (KGH).

Research Highlights

- Innovation grant for \$75K for the study of lactoferrin for prevention of infections in ICU patients. This will be a 40-patient single centre pilot.
- Multi-centre grant for \$400K for a large pilot study of prevention of infection in ICU patients, studying 210 patients in four centres.
- Funding for \$145K received for Outcome Preferences of ICU Patients (OPTICS) study.

Professors

Dr. Daren Heyland

Associate Professors

Dr. John Muscedere

Dr. Chris Smith

Assistant Professors

Dr. James Boseovski

Dr. Roy Ilan

Dr. Laura Marcotte

Dr. Johanna Murphy

Dr. Laura Milne

Dr. David Taylor



Division of General Internal Medicine

Key Accomplishments in 2013

► *Excellence in Clinical Teaching:* Several members of the Division have been recognized for their high quality teaching at the Undergraduate and Postgraduate levels. In 2013, Dr. Johanna Murphy was awarded the CTU Clinical Teacher of the Year Award.

► *Clinical Clerkship in Medicine:* Under Dr. David Taylor's leadership, the clerkship rotation in internal medicine has gone from being one of the lowest ranked rotations at Queen's to one of the highest.

► *Patient Safety Curriculum:* Drs. Roy Ilan and Johanna Murphy began teaching a new Royal College-inspired patient safety curriculum in the residency program.

► *Simulation Teaching:* Dr. Jim Boseovski has been involved in various simulation teaching programs with the residents: procedural teaching for the PGY1s, advanced simulation scenarios for senior residents. All members regularly teach on the Harvey simulator during the residents' GIM consult rotation.

► *Urgent Internal Medicine Clinic:* A GIM attending and the GIM fellows staff a weekly 'urgent' clinic where cases can be referred with a short waiting time, providing a rapid diagnostic service to the ER and Family Physicians.



Subspecialty Training Program

In 2013, the Royal College recognized General Internal Medicine as an official subspecialty and has begun to accredit programs for the 2-year subspecialty training (PGY4/5). There will be a written exam at the end of the second year and trainees will have to pass the exam and complete two years in order to qualify for the subspecialty designation.

We are planning a submission in December 2013 to the Royal College as a new subspecialty Program. From this year any resident seeking GIM subspecialty training will have to match into the 2-year GIM program.

We plan to offer three streams for the 2-year program:

1. *Academic Stream:* the second year will have significant protected time for research or a Masters in Education, Clinical Epidemiology etc.
2. *Clinical Stream:* the second year will allow more time for extended clinical and community rotations in preparation for transition to practice.
3. *Procedural Stream:* the second year will allow time for procedural training (e.g. echo, stress testing, bronchoscopy, endoscopy) to enable an internist with additional training to

Research Report

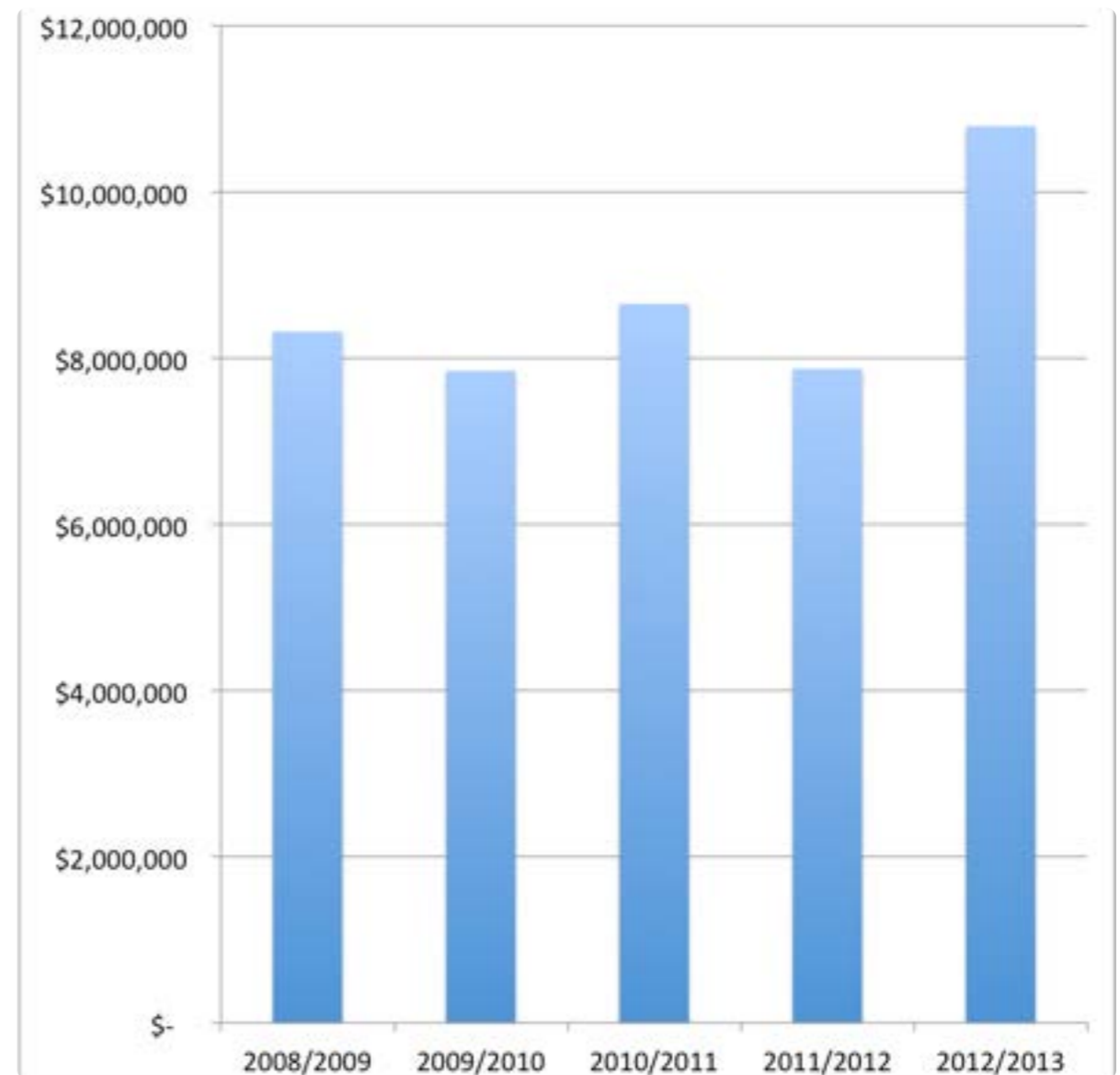


Research Report

Research Revenue by Fiscal Year

2013 Research Highlights

- ▶ Established a Departmental research office, directed by Ms. Clarrie Lam.
- ▶ Launched an Internal Grant Review Program.
- ▶ Launched a Mentorship Program for all junior clinician scientists.
- ▶ Competed for over \$6.8M in peer-reviewed funding and \$3.4M in clinical trials funding.
- ▶ Competed for seven new SEAMO clinician scientist positions.
- ▶ Awarded over \$750K in internal awards to build research capacity.
- ▶ Reported numerous innovations and discoveries in leading journals and the national and international media.



Research Report

Internal Grant Review Program

In 2013, the Department launched a successful **Internal Grant Review Program**. The grant review process has two stages. In Stage One, the applicant gives a 10-minute pitch of their rationale, hypothesis, objectives and research plan to an expert panel, followed by a 20-minute feedback session. In Stage Two, a subgroup of the panel works with the applicant to develop the complete grant application. To date, ten members have participated in the program, and the feedback has been excellent. The Department continues to successfully compete for Tri-Council and other external peer reviewed funding and it is anticipated the Internal Grant Review Program will increase our competitiveness. All **junior researchers** were enrolled in our new Mentorship Program, which will increase overall academic success and personal career satisfaction.

SEAMO Clinician Scientist Awards

The Department significantly bolstered its research capacity in 2013 by successfully competing in SEAMO's clinician-scientist competition. Five new clinician scientist recruitments were supported by the clinician scientist program: Drs. Jennifer Flemming (Gastroenterology), David Maslove (GIM/Critical Care), **Alberto Neder** and **Gordon Boyd**. In addition, four existing members of the department, Drs. **Lawrence Hookey**, **Denis O'Donnell**, **Diane Lougheed** and **Amer Johri**, successfully competed for SEAMO clinician scientist awards.

Innovation Fund

This year a Department of Medicine Innovation Fund was established, with over \$740K awarded for research through an internal competition. The scope of the Innovation Fund was broadened to provide targeted funds for operating grants (9 members), ICES grants (4 members), education scholarship grants (3 members), safety (1 member), equipment (1 member), and post-doctoral fellowships (2 members). In addition, funding was targeted to an ICES node to increase capacity by hiring a Clinical Epidemiologist who has expertise in study design as well as a Programmer, thus providing further opportunities for members.

The **Research Committee** promotes strategic planning for research activities consistent with the mission of the Department and disseminates research accomplishments. Members liaise with the Office of Research Services and the Hospitals on areas such as clinical trials, consultation and contract arrangements.



Division of Geriatric Medicine

Mission

To promote excellence in clinical service, education, research and innovation intended to improve health care outcomes for frail seniors throughout Southeastern Ontario.



Division of Geriatric Medicine

The Division of Geriatric Medicine promotes excellence in clinical service, education, research and innovation intended to improve health care outcomes for frail seniors throughout Southeastern Ontario.

In 2012-13, our clinical activities included 1273 clinic visits, 1890 Day Hospital visits, and 1599 consult visits in addition to supporting 5301 inpatient bed days.

Examples of innovation and leadership include:

- ▶ Planning for a restructuring of clinical services to expand both inpatient and ambulatory services capacity.
- ▶ An application has been made for a new Alternative Funding Plan (AFP) funding for Care of the Elderly (COE) in order to support physician recruitment.

Division members are active in supporting undergraduate, postgraduate and continuing professional development (CPD). At the Undergraduate level, the Queen's Geriatric Interest Group (QGIG) is actively supported through members offering a series of lunch and evening sessions outside the formal curriculum to engage and promote interest in aging and health. A new 8-week core clerkship rotation has been established for University of Queensland students coming to St. Mary's of the Lake, and a new Queen's University Geriatric Psychiatry and Medicine Journal Club targeting residents in both programs was successfully implemented through the leadership of Drs. Sudeep Gill and Dallas Seitz.

Two successful CPD events were organized in 2012-13. The most recent, "Care of the Frail Elderly: Navigating the Maze" Conference attracted over 140 participants from across Ontario.

Members of the Division are active in a number of Queen's, Hospital and Regional Local Health Integration Network (LHIN) initiatives. Many of our members are active in leadership both on a provincial and national level. Dr. Sudeep Gill is a member of the Ministry of Health and Long Term Care (MOHLTC) Committee to Evaluate Drugs; Drs. Gill and Angeles Garcia are members of the CIHR Health Services Evaluation & Interventions Research 2 peer review committee; Dr. Chris Frank is Chair of the CFPC Health Care of the Elderly Program Committee; Dr. John Puxty is Chair of the Regional Geriatric Programs of Ontario Network and Chair of Executive Committee of Seniors Health Knowledge Network.



Professors

Dr. Angeles Garcia

Associate Professors

Dr. Chris Frank

Dr. Sudeep Gill

Dr. John Puxty

Assistant Professors

Dr. Michelle Gibson

Dr. Agata Szlanta

Division of Geriatric Medicine

Key Accomplishments in 2013

► Ongoing work within the Southeastern Ontario LHIN wide Restorative Care CSR Project which is impacting the organization of hospital and community services with aim of reducing Alternate Level of Care.

► A pilot is underway for the use of a high-risk profiling tool for patients aged 75 and older who are admitted to the ER. Parallel developments around Senior-Friendly Hospital Strategy are the evolution of online education/training and resources supporting management of common challenges – falls, delirium, and functional decline, etc, targeting clinicians in primary care, hospital and long-term care.

► Dr. Michelle Gibson was awarded the prestigious W. Dale Dauphinee Fellowship in 2011 from the Medical Council of Canada (MCC) which supports medical educators in enhancing their knowledge and skills in physician assessment. Dr. Gibson applied the funding to completing her Masters thesis. She subsequently presented her thesis work at the Canadian Conference on Medical Education - A Qualitative Study of Formative Assessment Practices in an Internal Medicine Clerkship Rotation. Dr. Gibson has recently been appointed Director of Student Assessment for the Undergraduate Medical Education curriculum at Queen's, and the Director of Year 1.

► The ongoing funded work by Dr. Puxty and collaborators in the design, development and evaluation of new **online collaborative learning resources** has actively supported the education and training support of the new Behavioural Support Ontario teams and associated long term care sites in Southeastern Ontario.



Programs of Distinction

The Division of Geriatric Medicine's Memory Clinics have been included as an Ontario Brain Institute site for recruitment of patients with Alzheimer's disease (AD) and mild cognitive impairment in recognition of its quality of work.

Research Highlights

Members of the Division received over \$253K as principle investigators in peer-reviewed grants in 2012 and over \$1.9M as collaborators in research studies funded by CIHR and other sources of grants.

Recent work in which Dr. Garcia is a collaborator has identified a potential new method to diagnose AD that is non-invasive and painless: it is the 3-dimensional telomere analysis of buccal cells. The procedure provides information characteristic of the different stages of AD, and a patent is pending. The procedure will be included in the new "Brain Canada" proposal for new markers of AD.

Patient Story



When she was finally transferred back to SMOL, she was extremely frail, but cognitively intact and motivated to participate in rehabilitative efforts.

An eighty-nine year old woman was seen on consults and admitted to Geriatric Medicine at St. Mary's of the Lake (SMOL) for rehabilitation after a COPD flare-up. Unfortunately, she had a dramatic decline and within a week, experience respiratory failure. She was ultimately transferred back to the Clinical Teaching Unit at Kingston General Hospital for treatment for pneumonia and congestive heart failure.

When she was finally transferred back to SMOL, she was extremely frail, but cognitively intact and motivated to participate in rehabilitative efforts. We supported her in her desire to return home alone, and soon she had reached this goal. When we followed up with her three months later, she was happy to report that she continued to be functionally independent at home.

We later received this card:

Dear Dr. Gibson and the Moveable Co. of young Doctors,

I will forever be grateful to all of you who made the good decisions that pulled me through, and allowed me to come back to my own home. You are all so kind, thoughtful and clever. I thank you for my life. It's a gift.

With Love and appreciation to all of you!!!

X

Division of Hematology

Mission

To ensure excellence in the care of patients with blood disorders, to provide the highest standards of undergraduate and postgraduate Hematology education, and to advance knowledge in diseases of the blood to the benefit of patients and society.



Division of Hematology

The Division of Hematology is comprised of 3.5 members, and we work closely with members of the Division of Hematopathology, Department of Pathology and Molecular Medicine, and the Cancer Program to achieve our mission. This collaborative effort includes physicians, nurses, pharmacists, scientists, and technologists.

Ambulatory care for over 6,000 patients per year is provided at the Cancer Center of Southeastern Ontario (CCSEO), the Stem Cell Unit (SCU) in Kingston General Hospital (KGH), and Hotel Dieu Hospital (HDH). In addition to clinics for general hematology and malignant hematology, specialized regional clinics include the Inherited Bleeding Disorders Clinic, Stem Cell Transplantation Clinic, and the Anticoagulation Management Service.

The 8-bed Hematology inpatient ward located on Kidd 9 at KGH is the regional acute leukemia and stem cell transplant center, providing tertiary care to patients with acute leukemias, myeloma, and lymphoma. A Hematology consultation service is also provided.

The Division of Hematology delivers high quality education to a wide spectrum of learners, spanning a variety of settings from the clinics, ward, classroom, and lab. The Blood and Coagulation course has been widely recognized as a model course in the undergraduate medical curriculum, with evaluations consistently placing it among the best taught undergraduate courses in the School of Medicine. In 2013, Dr. David Lee was recognized with another Aesculapian Society Lectureship Award.

The Hematology Residency Training Program is fully accredited, and currently has three residents. Residents from Internal Medicine, Pathology, Medical Oncology, and Family Medicine also rotate through the Hematology ward, consult service and clinics. In 2013, Dr. Jill Dudebout was awarded a Department of Medicine Teaching Award for best teacher on a consultation service. Dr. Paula James' research program also provides an important educational platform for graduate and undergraduate life sciences students. She currently supervises three graduate students.

Dr. James has developed a highly successful, internationally recognized research program that has focused on both basic and clinical aspects of von Willebrand disease (VWD). She has made significant contributions to both the understanding of the molecular basis of VWD and the development and evaluation of novel clinical bleeding assessment tools.

Professors

Dr. John Matthews

Associate Professors

Dr. David Lee

Dr. Paula James

Assistant Professors

Dr. Cheryl Cline*

Dr. Jill Dudebout

**Director, Office of Bioethics*

Programs of Distinction

- Inherited Bleeding Disorders Clinic
- Stem Cell Transplant Program
- Anticoagulation Management Service



Division of Hematology



Research Highlights

- ▶ 1. Publication of a **Type 3 VWD Study** that describes, for the first time, the genetic basis of Type 3 VWD in Canada, and is also the first to demonstrate that those with mutations in the VWF propeptide have higher bleeding scores than those with mutations elsewhere. This observation has formed the basis for additional work in Dr. James' lab.
- ▶ Invited presentation "Bleeding Assessment Tools" by Dr. James at the 35th Congress of the Japanese Society on Thrombosis and Hemostasis in Yamagata, Japan on May 31, 2013.
- ▶ Publication of **The C-type lectin receptor CLEC4M (L-SIGN) binds to, internalizes and contributes to the clearance of von Willebrand factor and variation in plasma von Willebrand factor levels** in Blood, 2013.

Subspecialty Training Program

The year 2013 marks 20 years since the re-launch of the subspecialty training program in Adult Hematology at Queen's University. Since then, 15 Hematologists have been trained, and the program has received full approval status on each of five accreditation visits. The program provides graduates with a strong clinical and academic foundation to launch any type of career they wish, with the skills and attitudes necessary for life-long learning and leadership as the discipline of Hematology evolves in the 21st century. Graduates of the program have gone on to successful careers in both academic and community Hematology.

Dr. Matthews, the current Program Director, guided the program to full approval status following the last accreditation survey in 2011. The two-year training program is comprised of clinical, laboratory, and research rotations covering benign and malignant conditions, across ambulatory and inpatient settings, and spanning the spectrum of complexity from community to quaternary care. Additional longitudinal educational activities that run concurrently with the 4-week rotation blocks include the Resident Clinic at HDH, Hematology Academic Half-Day curriculum, Hematology Journal Club, Lymphoma conference, and Hematopathology conference. In 2013 there were three residents enrolled in the program.

Looking forward, the program is positioning itself for CanMEDS 2015 and the transition to competency-based medical education.

Core Internal Medicine Program Report



Medicine Subspecialty Match

Last year our 19 graduating trainees selected a wide range of Medical Subspecialties for further training:

- ▶ 7 to General Internal Medicine
- ▶ 3 to Cardiology
- ▶ 3 to Endocrinology
- ▶ 2 to Hematology
- ▶ 1 each to Gastroenterology, Oncology, Respiriology and ICU

53% remained at Queen's for their Fellowship training and the others transferred to the University of Toronto, Calgary, Manitoba, Western and McMaster.

The Core Internal Medicine Program at Queen's has grown steadily over the past several years. We currently have 55 residents in PGY1 to 3 and three residents in the PGY4 year. Our newest group of interns arrived from across the country (British Columbia, Manitoba, Ontario, Quebec, Nova Scotia, Newfoundland) and abroad (US, Syria, New Zealand).

There have been no major structural changes to the Program in 2013. Residents continue to work on the Clinical Teaching Units (CTUs) over three years; all work in the community and do an ICU rotation in the first year and two more blocks of training in the PGY2 year. Every resident must do a cardiology and Cardiac Sciences Unit block, and there are six blocks of elective time that can be tailored to the resident's interests; for example, some residents have chosen to work in Tanzania on Global Health electives with Dr. **Karen Yeates**. Our residents rotate at least once through all of the major medical subspecialties.

The residents' Academic Half Day has been consolidated into one session on Wednesday afternoons. The first two hours are reserved for didactic and interactive teaching led by a particular subspecialty, and we have a rolling curriculum that covers three years. The third hour is used for either practical hands-on teaching of bedside clinical skills, discussion of possible Royal College oral scenarios or presentation of the JAMA rational clinical exam series. Faculty involvement not only enhances the sessions, but has been much appreciated by the house staff.

Core Internal Medicine Program Report

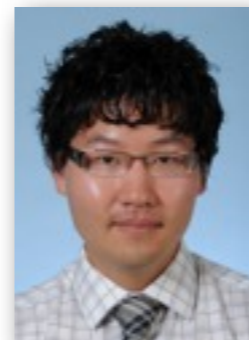
iPad Program

2013 marked the establishment of an iPad Program for Core Internal Medicine Residents, where each member is given an iPad for the period of their residency. The residents use the iPads on a daily basis for Case Presentations at Morning Report and the Chief Residents are diligently collating interesting cases with pictures, questions and commentary as part of the publication of a series of case-based iBooks.

The Core Internal Medicine Program is working with Kingston General Hospital to look at ways the iPads can be integrated with the Patient Care System (PCS) to provide better care for patients and enhance the educational environment for the residents.



Awards & Scholarship



Program Team

Dr. **Chris Smith** - Program Director
Dr. **Mala Joneja** - Associate Program Director
Denise Jones - Program Manager
Claudia Trost - Program Assistant

Residency Program Committee

2013-2014 Chief Residents:
Stephanie Dizon, Jeff Wilkinson, Evan Wilson

2012-2013 Chief Residents:
Catherine Barry, Pearl Behl, Genevieve Digby

Division of Infectious Disease



Division of Infectious Disease



The Division of Infectious Disease (ID) consists of four members. One member is a clinician-scientist; the remainder are clinician-teachers. Our members provide a vital tertiary level clinical consultation service to patients with complex medical problems at Kingston General Hospital (KGH) and to outpatients at Hotel Dieu Hospital (HDH). We provide care to regional patients living with HIV in the setting of a multidisciplinary clinic at HDH. We deliver comprehensive education in human infectious diseases at all levels of medical education including a Queen's Continuing Medical Education Annual ID Day.

Research in gut microbiology and immunology is the principal knowledge discovery activity of our Division. We have been involved in knowledge translation with one member serving as principal author on six national clinical practice guidelines for the management of common infectious diseases.

The Division continues to make collaborative contributions to HIV patient-based research at a provincial and national level. We have made major contributions to national and provincial leadership in the specialty of Infectious Diseases with the past presidency of the national specialty society, the vice chairperson of the provincial ID section and the provincial clinical lead in Antibiotic Stewardship in Infection Prevention & Control. We are involved in collaborative research with the Gastrointestinal Diseases Research Unit at KGH, Public Health Ontario Laboratories and IPAC, with colleagues at the University of Guelph, McMaster University and Columbia.

Research Highlights

- ▶ Development of a research protocol (**RePOOPulate Study**) to manage and examine difficult cases of recalcitrant Clostridium Difficile Infection (CDI) with fecal microbiome therapy.
- ▶ Principal authorship of national **guideline to manage cases of avian influenza A(H7N9) infection**.
- ▶ Co-authorship in **Canadian Tuberculosis Standards**, 7th Edition 2013

Professors

Dr. Gerald Evans

Associate Professors

Dr. Elaine Petrof

Dr. Wendy Wobeser

Assistant Professors

Dr. Jorge Martinez-Cajas



Division of Infectious Disease



Dr. Evans comments on the influenza outbreak in 2013.

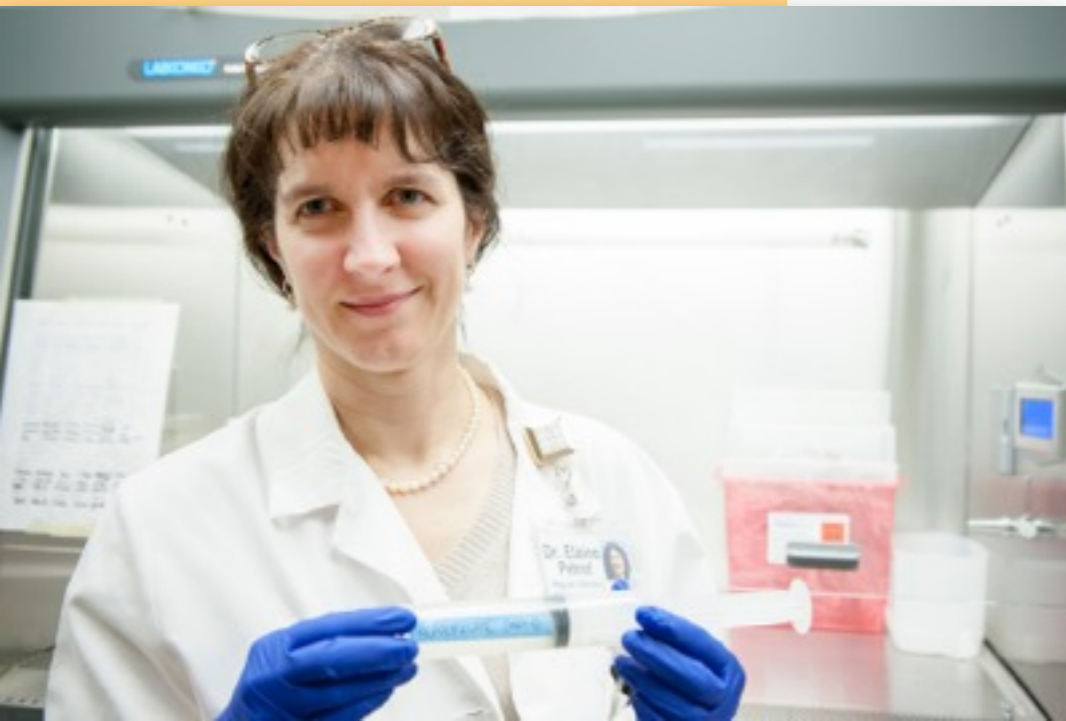
Programs of Distinction

- ▶ Research program in gut microbiology and immunology in Inflammatory Bowel Disease and CDI.
- ▶ Knowledge translation in the development of national clinical practice guidelines in infectious diseases.
- ▶ Local, regional and provincial leadership in Antibiotic Stewardship. Development and implementation of an Antibiotic Stewardship Program (ASP) at KGH.
- ▶ Interdisciplinary care for persons living with HIV.

Key Accomplishments in 2013

- ▶ Education-focused inpatient consultation service at KGH.
- ▶ Amalgamation of clinics at HDH including: Tuberculosis clinic collaboration with Division of Respiratory and KFLA Public Health, HIV interdisciplinary care and collaboration with Ontario HIV Treatment Network, and four weekly education-focused clinics in general ID.
- ▶ Canada-Colombia Collaboration in HIV research.
- ▶ Leadership in regional & provincial Infection Prevention and Control and Antibiotic Stewardship Program

Patient Story: Cynthia Morgan-Robson



This abridged version of an original story by Paul Dalby, published in Watershed Magazine, is reprinted with the author's permission. [Click here](#) to read the full story.

At 75, Cynthia Morgan-Robson has a twinkle in her eye and a quick wit that belies her Welsh upbringing. But at this time last year, the Port Hope woman was a very different person – often incoherent, almost a ‘prisoner’ of isolation wards in one hospital or nursing home after another, and on the brink of death.

Cynthia had contracted the C.difficile infection, a highly contagious bacteria found in the human bowel that is the modern-day scourge of hospitals and healthcare facilities. Every year thousands of Canadians contract C.difficile, which attacks the digestive system after antibiotics have killed off the good gut bacteria that protects us against the bug.

“When I told her about the stool transplant, she laughed so hard.”

“It was hell. I never thought I was going to get better,” Cynthia said. “I couldn’t recognize anybody, I couldn’t look after myself; I couldn’t stand; I couldn’t walk.” But Cynthia’s remarkable recovery in just a few weeks – the first of its kind in the world thanks to an exciting new synthetic stool transplant treatment pioneered by scientists including Dr. Elaine Petrof, an infectious diseases specialist with the Gastrointestinal Diseases Research Unit at Kingston General Hospital – has earned the irrepressible grandmother the affection of researchers in Kingston and at Guelph University...and the nickname of “the Comeback Kid”.

Using human stool transplants – essentially topping up a patient’s healthy fecal bacteria with donor stools supplied by a family member and inserted into the patient through a colonoscopy – has gained in popularity in recent years. But there are still many unanswered questions about the stool transplant’s long-term predictability.

Patient Story: Cynthia Morgan-Robson

But Dr. Petrof and her team's development of a synthetic stool, dubbed 'Re-POOPulate' to replace the need for human fecal matter used in stool transplants, has broken new ground and earned plaudits from the scientific community in North America.

The advantage of a synthetic stool transplant is that scientists have much more control over the types of bacteria that go into the fecal matter. They have even developed an "antibiotic cocktail" which can, if necessary, neutralize any potential harmful side effects of the transplant.

The synthetic stool, which looks like cloudy water, was later infused into Cynthia Morgan-Robson during a colonoscopy. A day later she was allowed to go home and within days started to show an improvement in her health.

"Within three weeks she recognized us and started to get better. Within six months she was asking us what had been happening to her," Linda said. "When I told her about the stool transplant, she laughed so hard."

Dr. Petrof says the potential of this treatment for C.difficile sufferers is "exciting". "Our hope is that this could become an alternate therapy for treating C.difficile. It has many benefits, including being safer for patients and medical staff as well as being easily and quickly reproduced based on a patient's needs," says Dr. Petrof.

Faculty Development Report



Mentorship pairs: Drs. Stephen Archer & Amer Johri (above)
Drs. Ross Morton & Pendar Farahani (below)



In 2013, the Department of Medicine launched a formal Mentorship Program that matched 24 mentors with 28 mentees.

Fundamental Components of the Program:

- ▶ Mentor/mentee face-to-face meetings at least twice per year with formal reporting
- ▶ Provision of working tools to guide mentor/mentee interaction
- ▶ Resources and planned faculty development

[Click here](#) to learn more.

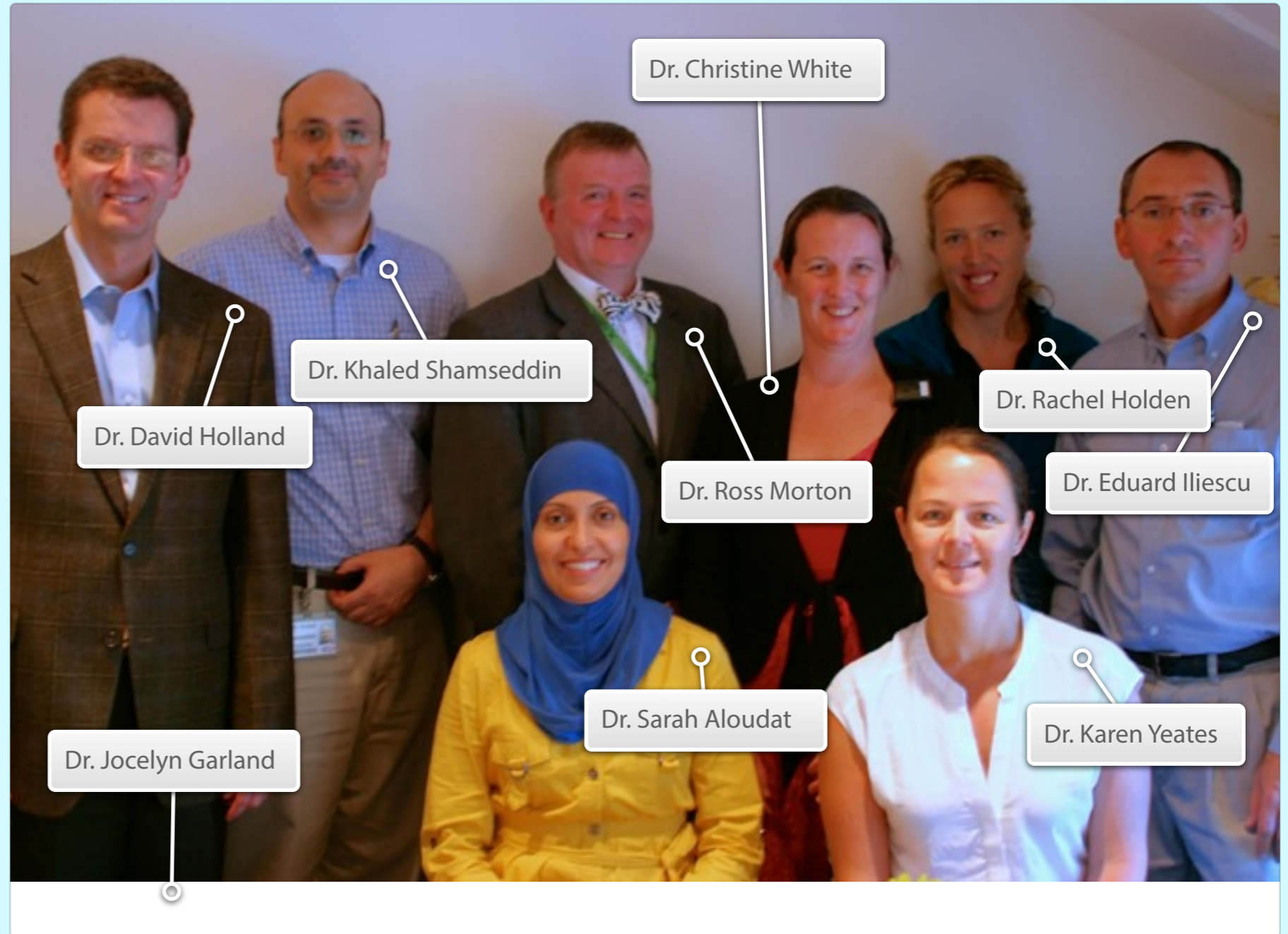
In addition to a Mentorship Program, several other priorities were identified by the Department, including advanced technology training, student assessment, and leadership training. In 2013, the Department held a faculty development eHealth retreat presented by Apple Canada, a student assessment training session for Term 4 Clinical Skills tutors, and identified seven Departmental leaders who will attend external leadership training courses in 2014.

Division of Nephrology

Mission

The Nephrology Division in the Department of Medicine at Queen's University strives to provide:

- Excellent clinical care throughout the Kidney Disease continuum.
- Comprehensive training in adult nephrology to undergraduate, postgraduate, established physicians, allied health care professionals and education in preventative strategies to family practitioners and the general public.
- New scientific information to the medical community in general and the nephrology community specifically.
- Leadership in clinical care delivery, research and education in underserved areas recognized to be at high risk for chronic kidney disease.



Division of Nephrology

Comprised of individuals with strong academic backgrounds, the Division of Nephrology's prime responsibility is the provision of exemplary medical services to the End Stage Kidney Disease (ESKD) population of Southeastern Ontario and the Moose Factory zone.

The second responsibility is scholastic; both in the contribution of scholarship to current clinical problems, leadership in medical education, and furthering research within the field of Nephrology.

The wide clinical expertise of our Division members enables our group to function as outstanding role models in the practice of clinical medicine in the academic environment. This teaching role extends from lay and undergraduate programs, to the postgraduate curriculum, including Continuing Medical Education.

Participation in such community institutions as the Kidney Foundation, and as a consultant to various public (Ministry of Health and Long Term Care via the Ontario Renal Network) and private (granting agencies, insurance companies, etc.) organizations, is an expected function of an Academic Nephrology Division.



Professors

Dr. Ross Morton

Associate Professors

Dr. Rachel Holden

Dr. David Holland

Dr. Eduard Iliescu

Dr. Christine White

Dr. Karen Yeates

Assistant Professors

Dr. Sarah Aloudat

Dr. Jocelyn Garland

Dr. Khaled Shamseddin

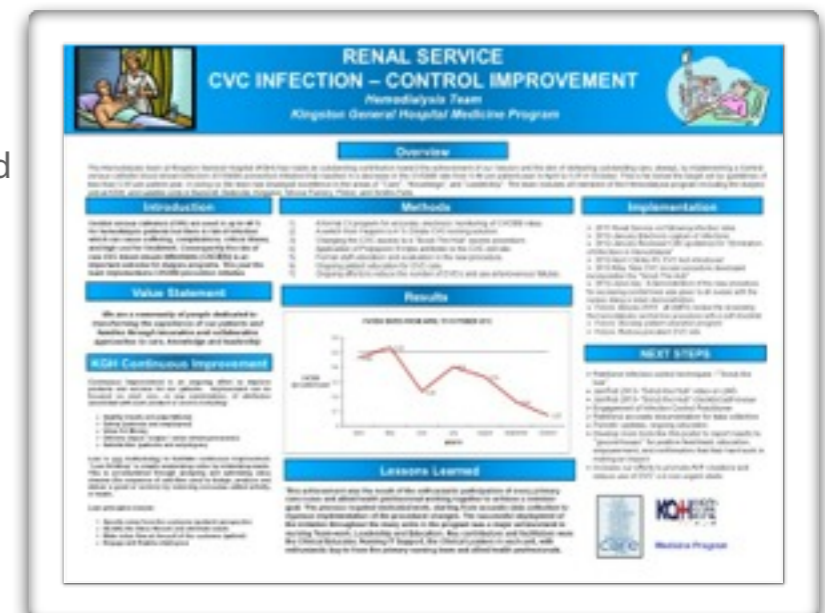
Programs of Distinction

► The Queen's University Nephrology group delivers Satellite Hemodialysis care to one of the largest number of Satellite Units in Ontario. This function is strongly supported by the mandate of the Ontario Renal network which is to reduce travel distances for patients with ESKD. Satellite dialysis units are present in Kingston itself, as well as Smith Falls, Brockville, Picton, Belleville, Bancroft, and in Moose Factory.

► The Deceased Donor Renal Transplant Program was highlighted in the Kingston General Hospital (KGH) Accreditation Canada document, with the program being noted for its strength in Clinical Leadership, to Dr. David Holland's credit. Also noted was the existence of the opportunity for Living Donor Transplants, a goal which continues to be actively pursued by the Division.

► KGH Hemodialysis and Satellite Continuing Quality Improvement (CQI) Committee achievements:

- Reduction in central venous catheter infection rates by implementing a multi-faceted intervention based on evidence and Centers for Disease Control (CDC) guidelines.
- Changes in dialysis filters to avoid low platelets.
- Diabetes mellitus education delivered in the dialysis unit is ongoing.



Division of Nephrology

Key Accomplishments in 2013

► Clinical Medicine & Education at Queen's: The Division of Nephrology delivers a consistently highly rated rotation with the Core General Internal Medicine and other Specialty Programs. Dr. Ross Morton leads Morning Report, delivering case-based scenarios for trainees at all levels to work through, and is actively involved with the Chief Residents in the creation of an iBook relating to cases presented at Morning Report.

► Education in Nephrology: Drs. Khaled Shamseddin & Sarah Aloudat have developed a program to meet the need to advance the delivery and evaluation of Nephrology education to trainees as learners from the point of view of competence-based knowledge and practice. To minimize teaching gaps generated during Nephrology educational process, they aim to design and to evaluate an Online Modular Nephrology Curriculum as a reliable reference for medical students and residents at Queen's University.

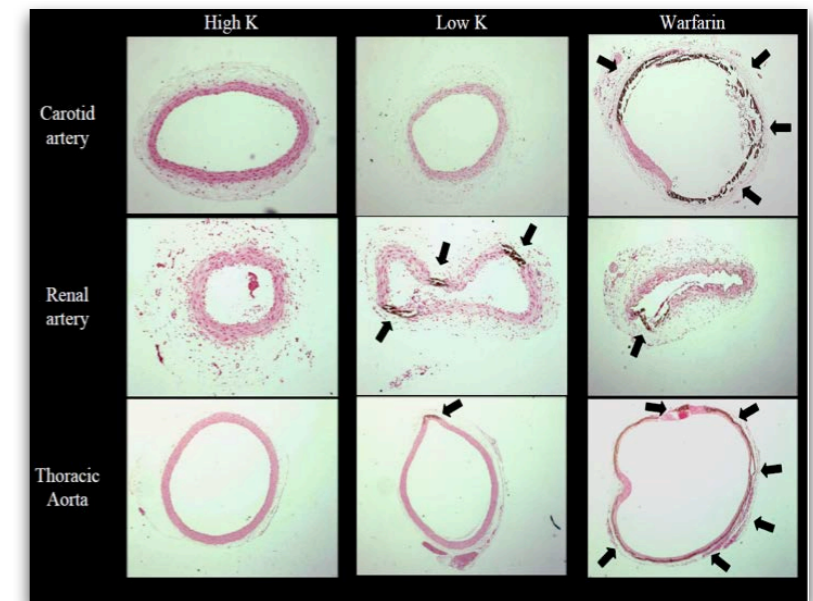
► Education of Family Physicians: A major goal of the Ontario Renal Network (ORN) is to prevent chronic kidney disease (CKD) progression to end stage kidney failure. In 2012, the ORN launched two initiatives to help with this goal.

Early Detection & Prevention of Progression Program is a program where screening tools for CKD have

Research Highlights

Dr. Jocelyn Garland is active in clinical research, and her focus is the epidemiology of **chronic kidney disease** (CKD): its diagnosis, and morbidity and mortality related outcomes. She is currently researching the role of obesity and insulin resistance states as risk factors for vascular calcification development, and kidney function deterioration.

Dr. Rachel Holden has received National and International acclaim for her work on **vitamin K** in renal disease, and has established a successful animal model of vascular calcification. Dr. Holden and colleagues' study was the first to have demonstrated that a therapeutic dose of the vitamin K antagonist, warfarin, depletes tissue vitamin K concentrations and markedly increases the susceptibility of all vessels to vascular calcification in experimental chronic kidney disease.



Dr. Christine White continues to expand her research program which focuses on the measurement and estimation of **kidney function** using conventional and novel markers. In collaboration with Dr. Mike Adams, Department of Biomedical and Molecular Sciences, she established iohexol measurement at Queen's with the aim to become the reference center for glomerular filtration rate measurement in Canada.

Dr. Karen Yeates has developed a global health research program in non-communicable diseases in Tanzania, East Africa. Her Global Alliance for Chronic Diseases study was one of 15 funded globally that uses an implementation science framework to work at all levels of the health care system to tackle the problem of hypertension which has a prevalence rate of 26-38% in sub-Saharan Africa. The final phase of the trial will roll-out an SMS e-voucher-based mechanism to provide continuous access to low cost anti-hypertensive medication in order to test a scalable and reproducible model for hypertension care in Tanzania.

Patient Story: Karen Nicole Smith



“Not realizing, this doctor had initiated a mind-shift. A doctor had never spoken to me like that before. I also had never thought of my self as an important part of health care.”

My Experience as a Patient Experience Advisor

I’ve lived with Chronic Kidney Disease since 18 and I am 41 now. My journey encompasses all modalities of dialysis and 13 years with a kidney transplant. I’ve lived in different cities and been followed by teams in Kingston, Toronto and Montreal. Now I do home hemodialysis on an “aggressive” schedule (20 hours a week). I round this schedule off with an intense gym schedule. Despite living with renal failure and heart disease I live a pretty amazing, full life.

In 2012, Dr. Ross Morton recommended I become a Patient Experience Advisor at Kingston General Hospital. I met with the head of this advisory committee apprehensively. My apprehension stemmed from concern that my voice would not be heard (and was probably unwelcome). Out of curiosity, I still joined the group. I’d try a few meetings but if I didn’t feel heard I would graciously resign.

It wasn’t long before I had my first positive confirmation. At a conference, as a new national committee formed, I volunteered to become its first patient-partner. I was later approached by a retired, senior-nephrologist. He told me I was the driver of this committee. That my role was to keep the clinicians and medical executives on track. If our committee focus wasn’t towards bettering the lives of patients my job was to get us to something that did.

Not realizing, this doctor had initiated a mind-shift. A doctor had never spoken to me like that before. I also had never thought of my self as an important part of health care. I had never considered myself a ‘partner,’ but he did.

Patient Story: Karen Nicole Smith

Once I saw myself as a valued partner, there was no looking back. I've joined many committees. Many related to nephrology. Some specific to Kingston General Hospital, some regional or provincial. I've attended many conferences too. Many as a patient experience advisor or panel member and some as a speaker. A highlight for me was speaking as a member of the Canadian Renal Rehabilitation Network at the Canadian Society of Nephrology Conference this past spring. I gave a 20 minute power-point presentation on my "sick to fit journey" and the benefit of aggressive dialysis and exercise. My place as a "partner" was further validated when the group of nephrologists and physiotherapist regaled me with questions. (A few even asked to use my slides in their talks.)

I can't speak for other patient advisors but I can say, my voice is being heard, appreciated and valued. My involvement has even blossomed into the pursuit of professional advocacy, advising, writing and public speaking.

Being a patient experience advisor means a lot. I can speak for those who are too sick to speak. I turn my health challenge into something constructive and positive. My life experience is helping to make the lives of other people better through my impact on policy and practice. My health changed from a burden to a blessing.

Are doctors, clinicians and executives responsive to my input? Yes. Time and energy is precious – especially with this much dialysis and fitness to juggle. If being a patient experience advisor hadn't been meaningful I would have walked away years ago. I invest this time because I know I'm contributing to positive change.

Clinical Report: Outpatients



Dr. Michael Fitzpatrick
Chair, Ambulatory Clinics
Committee

The majority of the Department of Medicine's clinical activity is conducted in the ambulatory care and procedure clinics. In the spring of 2013, the new ambulatory care clinics opened at Hotel Dieu Hospital (HDH) and the great majority of the Department of Medicine's ambulatory clinic activity transferred from Kingston General Hospital (KGH) to the new clinic facilities at HDH. Many Departmental physicians had been concerned about the impact of this move on the efficiency and safety of patient care at HDH and KGH, however the transfer of this very large volume of ambulatory clinic activity was carefully planned and was completed successfully this year.

Currently, all departmental ambulatory clinic activity occurs at the HDH clinics except for Nephrology clinics (KGH), Geriatric clinics (St. Mary's of the Lake Hospital), Multidisciplinary Neuromuscular Clinics (St. Mary's of the Lake Hospital), and the Respiratory Rehabilitation Clinic (St. Mary's of the Lake Hospital). [Click here](#) to see an overview of the Department of Medicine outpatient clinical activity for 2012-2013.



Clinic room and waiting room in the Hotel Dieu Ambulatory Clinic area

Clinical Report: CTU

The Internal Medicine Clinical Teaching Units (CTUs) remain the largest inpatient ward component of the Department of Medicine's clinical activities, and of the Internal Medicine Core Residency Training Program.

There was a major change to the structure of our on call system this year, which was initiated due to steady increases in the volume of patients presenting for assessment and admission to the CTUs. Previously, the four ward-based teams (A-D) were on call 1:4, admitting most patients in a 24-hour period with identified short stay patients going to the ER-based CTU-E. As of September 2012, our dual-take system was implemented, whereby teams are paired on call, so that new admissions are split evenly each night between teams A and C, or B and D, with identified short stay patients still going to CTU-E. In this way, review of overnight cases is shared in the morning by three teams and three Attending staff, and there is a more consistent, smaller volume influx of patients to each team. This system appears to be working well, and is supported by both Attending staff and residents.

Another innovation was the introduction of Care Navigators: one per ward-based team. These are RNs assigned to each team who help patients navigate through our hospital system and assist the CTU teams with much of the discharge planning work associated with complicated discharges, transfers to other institutions etc.

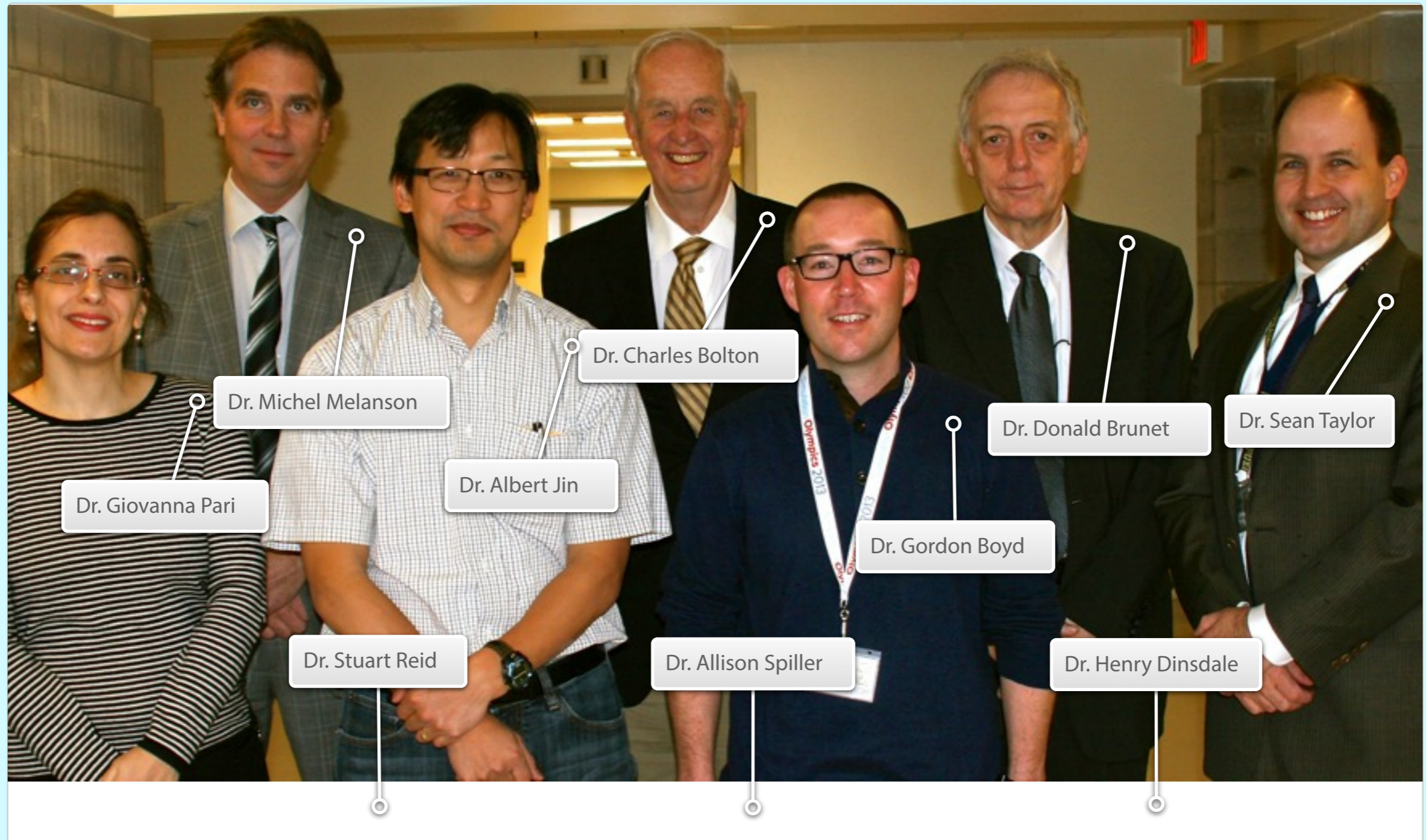
Large team sizes have been a challenge, but with many process improvements they are steadily improving. After a few challenging winter months when the CTUs were affected by a particularly bad influenza season, team sizes have improved, and at the time of this report, are averaging 18-23 patients, which is near the ideal range for providing both good patient care and teaching opportunities.

In the coming year, maintaining the progress we have made in these areas will be important. Given the improvements in patient load and overall functioning of the CTUs, the plan is to return the focus to making CTU a quality educational experience for residents and medical students. We will start by aiming to standardize Attending expectations and commitments to teaching, and return to bedside teaching and rounding.



Dr. Laura Marcotte
CTU Director

Division of Neurology



Division of Neurology

The Neurology Division has eight attending staff and five part-time outpatient specialists. We provide comprehensive in-patient and ambulatory care in general neurology and most of the neurological subspecialties for a wide area of Eastern Ontario. We are particularly known nationally for our Regional Stroke Program which delivers active therapies including rTPA to patients with acute stroke symptoms. We have a well-staffed acute stroke unit and regional rehabilitation facilities. The Division has an active specialty training program with eight residents, which over the years has had an exemplary record of educating new specialists in the discipline.

Programs of Distinction

- ▶ The Regional Stroke Program, under the medical leadership of Dr. Al Jin, has received Accreditation Canada's "Stroke Distinction" designation. This is a model program of collaboration of neurologists, nurses and other health professionals to deliver high quality care to stroke patients. Kingston General Hospital (KGH) is one of only two hospitals in Canada to be so designated.
- ▶ The Division continues to provide access to novel therapies for multiple sclerosis through its clinical trials program.
- ▶ The EEG Department continues to expand its testing, now providing continuous EEG recording in the intensive care unit to complement its active epilepsy monitoring program for adults and children.

Key Accomplishments in 2013

- ▶ Stroke Accreditation.
- ▶ Active clinical trials program by multiple faculty members.
- ▶ Successful move of all ambulatory clinics to HDH, with a new EMG laboratory.
- ▶ Recruitment of a second epilepsy specialist, Dr. Lysa Boisse.
- ▶ Continuation of our successful residency program with the recruitment of highly qualified physicians to train at Queen's University.



Professors

Dr. Donald Brunet
Dr. Charles Bolton

Associate Professors

Dr. Michel Melanson

Assistant Professors

Dr. Gordon Boyd
Dr. Albert Jin
Dr. Giovanna Pari
Dr. Stuart Reid
Dr. Allison Spiller
Dr. Sean Taylor

Professors Emeriti

Dr. Henry Dinsdale

Division of Neurology

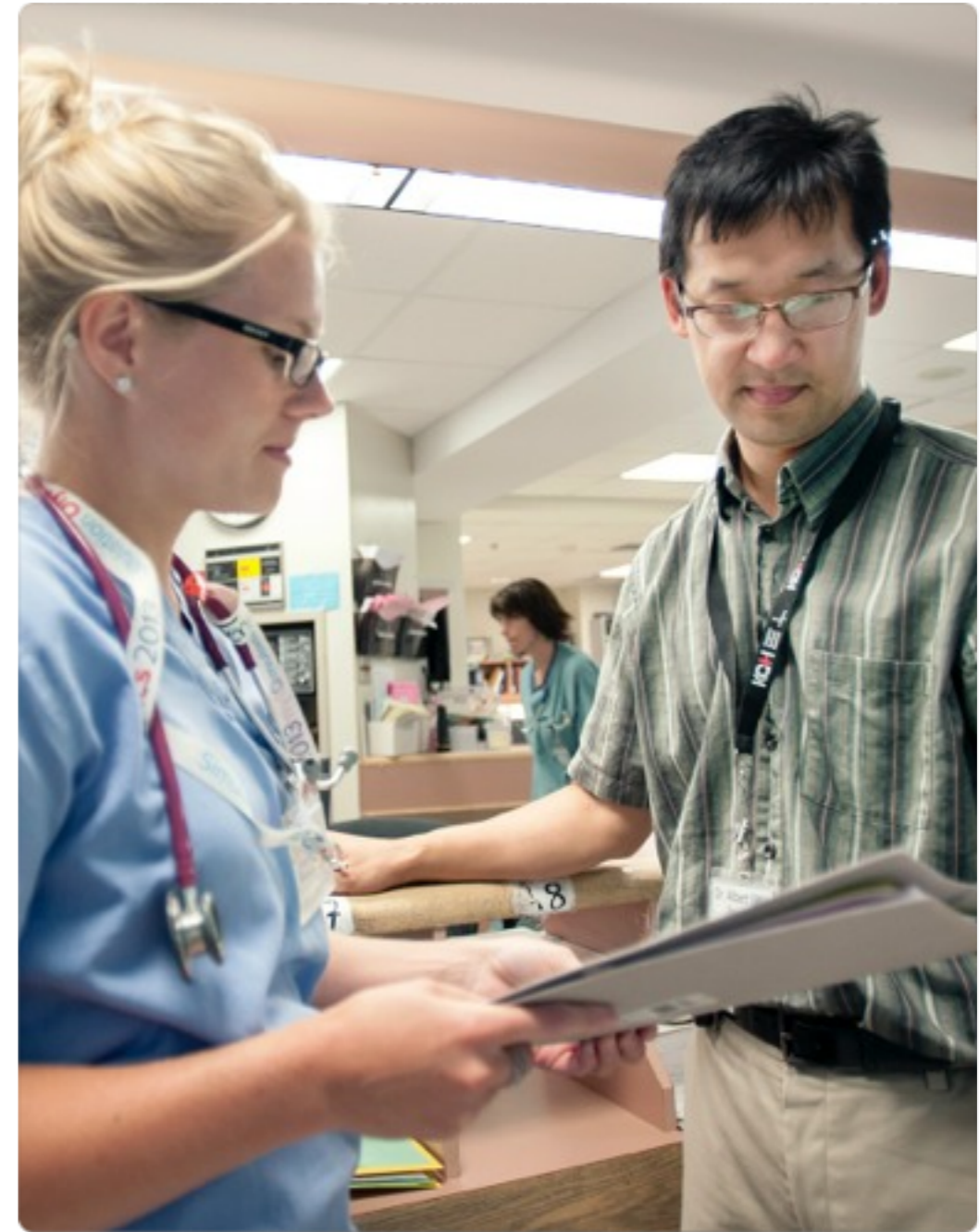
Research Highlights

- ▶ 13 active clinical studies in MS, the highest level of activity in the 30-year history of the clinic.
- ▶ Recruitment of Dr. Gordon Boyd as a clinician scientist with special interest in coma prognosis in the ICU.
- ▶ Installation of new research equipment for autonomic nervous system testing to be conducted by Dr. Sean Taylor.

Subspecialty Training Program

Our program continues to attract well-qualified doctors for further training in Neurology. Over the 40 year span of this program, all resident have been successful in the specialty examinations and are in academic and community practice across the country.

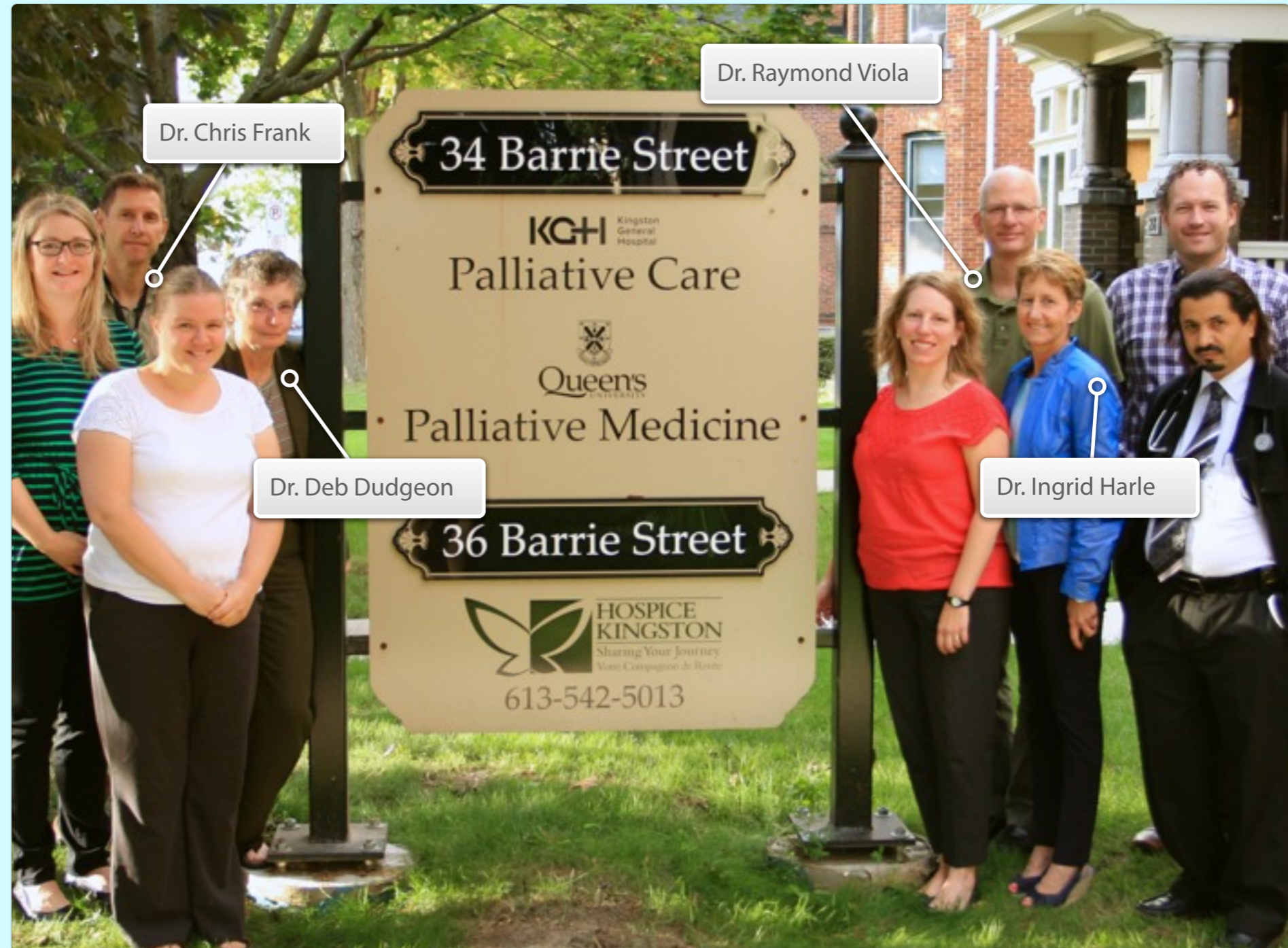
We are up to date with current requirement of the Royal College concerning formal teaching and evaluations and considerable energy is devoted to successful education of doctors at all levels of training. Our residents, for instance, have a weekly Academic Half Day that focuses on the evidence-based and ethical issues when working with patients who have neurological disease.



Division of Palliative Medicine

Mission

We are dedicated to the development and provision of a regional Palliative Care Network that will provide an integrated programmatic approach of accessible, quality palliative care to all persons in the region. The Palliative Care group has a mandate to develop patient care systems throughout the Region, to educate undergraduates, postgraduates and practicing physicians, and to conduct research.



Division of Palliative Medicine



Professors

Dr. Deb Dudgeon

Associate Professors

Dr. Raymond Viola

Assistant Professors

Dr. Ingrid Harle

The Palliative Care Medicine Program of Queen's University is structured to reflect the interdisciplinary nature of palliative care with the Departments of Medicine, Oncology, and Family Medicine all responsible for the program. Four members of the Palliative Care Medicine group are primarily appointed to the Department of Medicine; one primarily to the Department of Oncology and four to the Department of Family Medicine. Many of our members have cross-appointments to the other responsible departments.

The Palliative Care Medicine Program provides: consultations to inpatients at Kingston General Hospital; outpatient clinics in the Cancer Center and an Advanced Dyspnea clinic at Hotel Dieu Hospital; primary care for 13 beds at St. Mary's of the Lake Hospital; and primary care and consultation to patients in the community.

Programs of Distinction

A new Advanced Dyspnea Management Clinic was started for persons with advanced COPD, interstitial lung disease, congestive heart failure; MRC dyspnea grade 4 or 5; NYHA classification 3 or 4 and on optimal treatments for the underlying disease.

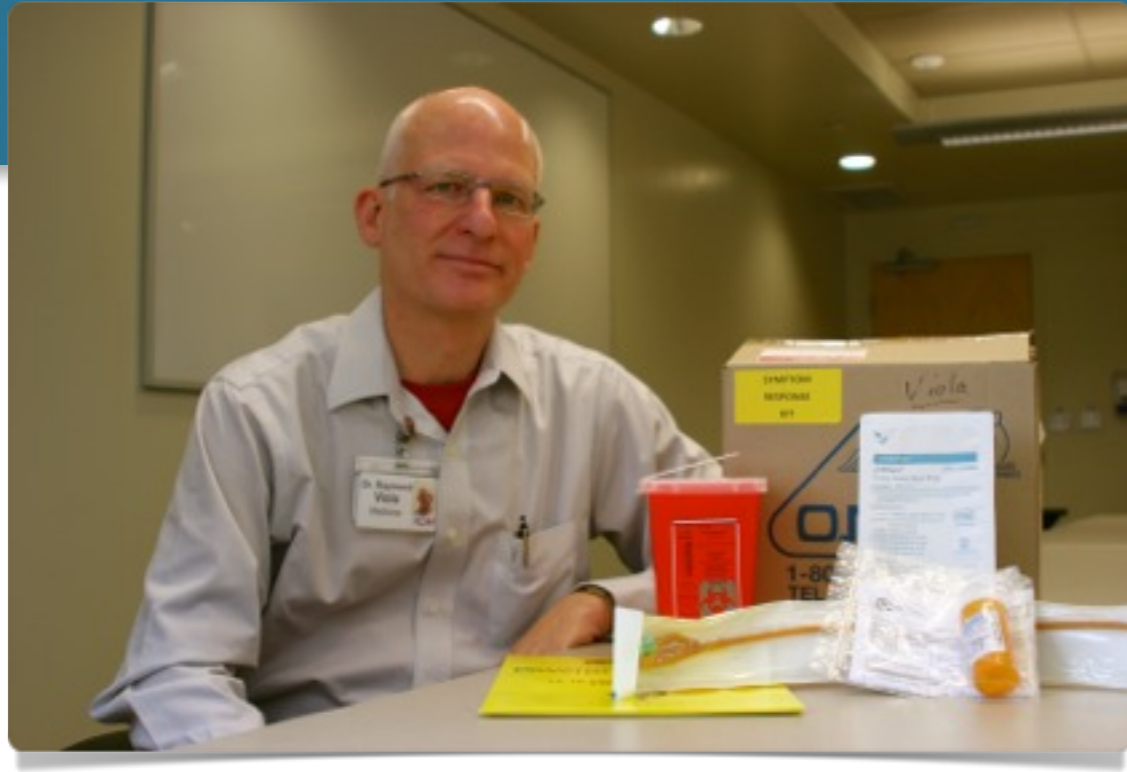
Referrals are accepted from the Divisions of Respiriology, Cardiology or Palliative care. The goal of the clinic is to improve symptom management and quality of life for patients and to decrease unnecessary acute care hospital utilization.

Subspecialty Training Program

Palliative Medicine is currently a one-year of added competence accredited by the College of Family Physicians of Canada and the Royal College of Physicians and Surgeons of Canada. The Palliative Medicine Program at Queen's University received approval status from the two Colleges when reviewed in 2011.

At the exit interview the reviewers commented that the Palliative Medicine Training Program at Queen's was "a model for palliative care residency training nationally".

Division of Palliative Medicine



Research Highlights

Evaluation of Community Palliative Care Initiatives to Reduce Hospital Utilization in Southeastern Ontario

This project evaluates two initiatives introduced in the homes of terminally ill patients in Southeastern Ontario: a yellow folder containing planning information for the community nurse to use with the family, and a Symptom Response Kit containing medications and supplies for use if the patient's condition suddenly changes. The project will evaluate whether these help keep patients home longer, prevent emergency room visits and increase home deaths. The information will assist in improving the effectiveness and efficiency of community palliative care in Ontario.

Key Accomplishments in 2013

Since 2012, Dr. Viola has facilitated the ten "Difficult Conversations" sessions in Term 4 of the second year medical curriculum, involving a team of standardized patients, staff at the Clinical Education Centre of the School of Medicine and Clinical Skills tutors. These sessions primarily address communication skills for breaking bad news, providing the opportunity to learn and practice using the model with standardized patients and then reflect on the experience. These have been overwhelmingly well-received by the medical students.

Key Presentations

- Development of Multidisciplinary Symptom Management Tools Using the ADAPTE Approach. Harle I.A., Bak K., Molloy S., Green E.; Oral presentation at the 10th Guidelines International Conference, San Francisco California, USA. August 20, 2013
- Development of a Multidisciplinary, Evidence Based Symptom Management Tool for Oral Care in Cancer Therapy. Harle I.A, Saunders D, Bak K, Knight A. et al; Poster session at the MASCC/ISOO Symposium in Berlin, Germany. June 27, 2013
- Fireside Chat- Discussions of Audience Cases in End of Life Care. Harle, Ingrid; Seminar at the 51st Annual Scientific Assembly, College of Family Physicians of Canada, Toronto Ontario. November 28, 2013, 13:30-15:00 hrs
- Integrating Palliative Care into Advanced Cardiorespiratory Illnesses. Harle, Ingrid; Seminar at the 51st Annual Scientific Assembly, College of Family Physicians of Canada, Toronto Ontario. November 29, 2013, 10:30-12:00 hrs

Patient Story

“I wish I could have started this care 18 months earlier”

The Advanced Dyspnea Management Clinic is a joint initiative by the Division of Respiriology and Division of Palliative Care and aims to help with management of dyspnea in patients with end-stage lung disease. This is the experience of one of the patients who was treated and followed in this clinic.

This man with advanced COPD was very grateful for the positive experience and care he received in this multidisciplinary clinic. He described his experience to others and to us as “feeling as if someone cares and is there to help him” with his incurable illness. He highly recommended consultation at this clinic to others with his same condition and told them how beneficial his experience had been. He repeatedly commented that he was amazed at how the introduction of opioids, as part of his pharmacotherapy, improved his stamina and increased his ability to exercise through the Pulmonary Rehab Program and allowed him to engage in activities with his family.

He was always a very motivated individual and his motivation was sustained and possibly increased as a result of attending this clinic. This gentleman often expressed that he wished he could have “started this care 18 months earlier” as it made an incredible difference in his life. The numerous discussions that occurred during his clinic visits provided this man and his family with more knowledge, awareness and acceptance of his condition and provided him with the impetus “to get off my butt to sort things out”. He always valued the amount of time that was spent at his visits, in the delivery of care in an attentive and caring manner, which allowed him to gain trust in his health care providers, to express his inner most feelings and to experience empathy and compassion.

2013 Departmental Awards

Department of Medicine Awards Recipients *Selected by the Awards Committee*

Dr. Lutz Forkert

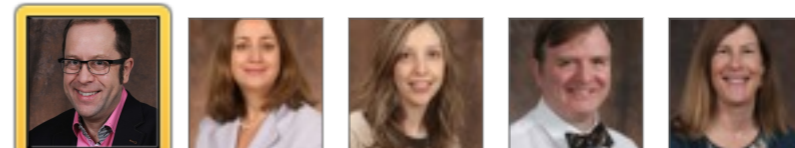
Department of Medicine Bill Depew & Ron
Wigle Master Clinician Award



Last Call Ball Awards Recipients *Selected by Housestaff and Undergraduate students*

Dr. Henry Avern

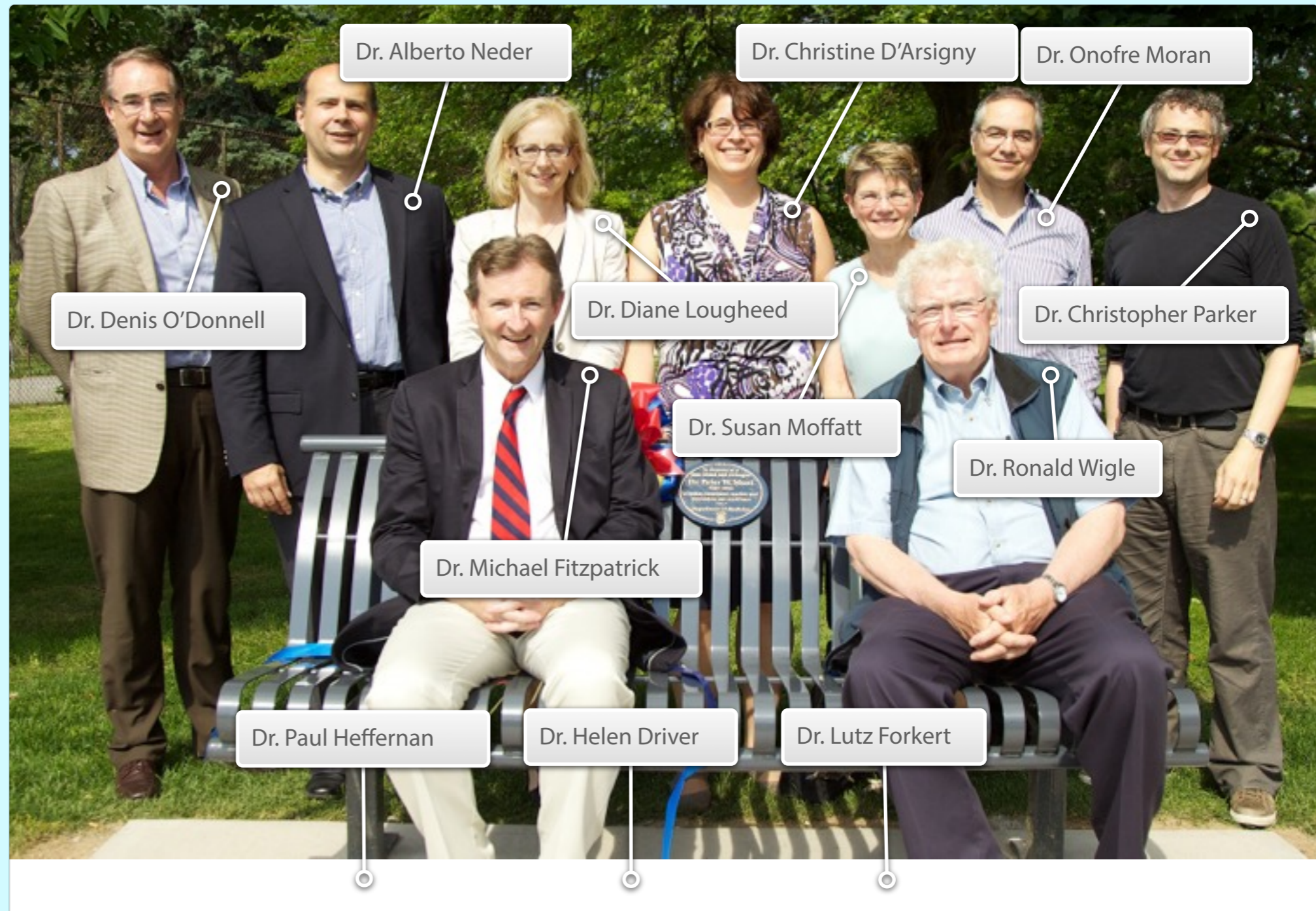
Clinical Teaching Award



Division of Respiriology

Mission

To provide excellence in the care of patients with respiratory illness in our community. To continuously improve the treatment and prevention of respiratory illnesses by conducting and supporting high quality clinical research, and by educating students and caregivers in state of the art clinical practice of respiratory medicine.



Division of Respiriology



The Division of Respiriology takes particular pride in announcing two new recruits in 2013: Dr. Alberto Neder, a world-renowned clinician scientist with extensive research experience in integrative respiratory physiology and pulmonary function testing, commenced work within the division as a clinician scientist in January. Dr. Paul Heffernan joined the division in October. Dr. Heffernan completed his undergraduate medical education and internal medicine residency at Memorial University, Newfoundland, and both respirology and intensive care residency training at Queen's University. He has a particular interest and expertise in interventional respirology, including endobronchial ultrasound.

The Divisional activity profile includes a major emphasis on research. Drs. Denis O'Donnell and Diane Lougheed successfully competed to obtain Clinician Scientist Development Funding, which secures protected research time for a period of three years. Both Drs. Lougheed and O'Donnell have established and highly renowned externally-funded research programs of excellence, and continue to produce high quality peer-reviewed research publications to the respirology literature. Dr. Neder's recruitment has further strengthened the research focus within the division.

Divisional clinical activity during the last year included 7,000 outpatient visits, 18,000 lung function tests, 1500 sleep studies, 350 bronchoscopies, 600 inpatient consults, and approximately 100 thoractenteses/chest tube insertions. Division members also contribute 4-5 months of inpatient attending on the Internal Medicine Clinical Teaching Units, and three Division members also contribute to Intensive Care Unit attending duties.

Key Accomplishments in 2013

- ▶ Drs. Chris Parker & Sue Moffatt are renowned educators, with numerous previous accolades and prizes for educational excellence. Dr Moffatt was the recipient of the Ford Connell Award in 2013, as well as the Frank Rutledge teaching award.
- ▶ The Pleural Space Clinic saw the insertion of more than 40 tunneled indwelling pleural catheters for management of patients with dyspnea caused by recurring pleural effusions.
- ▶ In collaboration with Palliative Care, the Advanced Dyspnea Management Clinic was established for the management of dyspnea in patients with end-stage lung disease.
- ▶ Expansion of the Adult Cystic Fibrosis Clinic.

Subspecialty Training Program

The Division of Respiriology continues to support a very active and successful subspecialty training program. The training program is fully accredited by the Royal College of Physicians and Surgeons of Canada.

Each year, we offer two PGY4 positions with entry through the subspecialty CaRMS match. In 2013 there were a total of five residents in core respirology training, and an additional four residents undertaking either fellowships in sleep medicine or respiratory research. We are fortunate to attract foreign-trained

Professors

Dr. Michael Fitzpatrick
Dr. Diane Lougheed
Dr. Alberto Neder
Dr. Denis O'Donnell

Associate Professors

Dr. Christine D'Arsigny
Dr. Lutz Forkert
Dr. Susan Moffatt
Dr. Onofre Moran-Mendoza
Dr. Christopher Parker

Assistant Professors

Dr. Paul Heffernan
Dr. Helen Driver*

Professors Emeriti

Dr. Ronald Wigle

**Coordinator, Sleep Disorders Laboratory*

Division of Respirology

Programs of Distinction

► *Interstitial Lung Disease Clinic:* this new clinic established by Dr. Onofre Moran-Mendoza uses state of the art standardized assessment and management tools, from which Dr. Moran is developing a research database in interstitial lung disease. This is the first interstitial lung disease clinic ever to be established at Queen's.

► *Pleural Disease Clinic:* Dr. Christine D'Arsigny played a pivotal role in establishing this clinic for the diagnosis and management of pleural effusions. The clinic provides diagnostic and therapeutic thoracentesis but also provides tunneled "PleurX" catheters for management of malignant pleural effusions.

► *Advanced Dyspnea Management Clinic:* This new clinic, established in collaboration between Drs. Denis O'Donnell and Ingrid Harle, helps with management of dyspnea.

► *Adult Cystic Fibrosis Clinic:* This clinic has grown rapidly over the last few years, such that the Adult CF Clinic is now larger than the Pediatric CF Clinic and includes more than 30 adult CF patients.

► *Asthma Program:* Dr. Diane Loughheed played a major development role in establishing this program, including the Emergency Asthma Management Pathway.

Research Highlights

► Dr Denis O'Donnell and his team discovered that traditional methods of estimating breathing reserve during physical activity have resulted in considerable over-estimation when applied to patients with

chronic obstructive pulmonary disease (COPD) with ostensibly mild airway obstruction. In experiments that involved selective respiratory muscle loading in patients with mild COPD, Dr. O'Donnell and colleagues provided evidence that the respiratory system had, in fact, reached it's physiological limits during the stress of moderate exercise. This paper was published in the [American Journal of Respiratory and Critical Care Medicine](#).

► The mechanisms and management of dyspnea (breathlessness) in patients with pulmonary diseases have been a major research focus of the Respiratory Investigation Unit at Kingston General Hospital (KGH) for over 20 years. Dr. O'Donnell and his team have established that intensity of activity-related dyspnea in patients with COPD is closely linked to the degree of gas-trapping within the lungs (lung overinflation) that happens dynamically as ventilation increases and published these results in the [European Respiratory Journal](#).

► Dr. Michael Fitzpatrick and his team completed a clinical trial comparing the use of well-validated questionnaires and a level III home screening device against conventional polysomnography in the diagnosis and exclusion of obstructive sleep apnea. The study demonstrated, contrary to conventional wisdom, that previously validated questionnaires had neither sufficient sensitivity nor sufficient specificity to have significant clinical utility in the diagnosis or exclusion of obstructive sleep apnea. This paper is currently in press at the Journal of Clinical Sleep Medicine.



Patient Story: JK



Suffering from severe shortness of breath caused by a build-up of fluid in and around the lungs, JK, at the age of 54, was diagnosed with lung cancer in the summer of 2013.

JK was hospitalized, and through needle drainage, the fluid in her lungs was removed. Although this relieved her shortness of breath and accompanying dyspnea, the fluid quickly returned, as did her shortness of breath.

Once referred to the Pleural Space Clinic, JK had a permanent indwelling pleural catheter (PleurX) inserted into her lungs. The device, which rests between the chest wall and outer surface of the lung, can be drained at home, and JK has this done three times a week by a Community Care Access Nurse who visits her home. As a result, JK has had significant relief her shortness of breath.

The device, which rests between the chest wall and outer surface of the lung, can be drained at home.

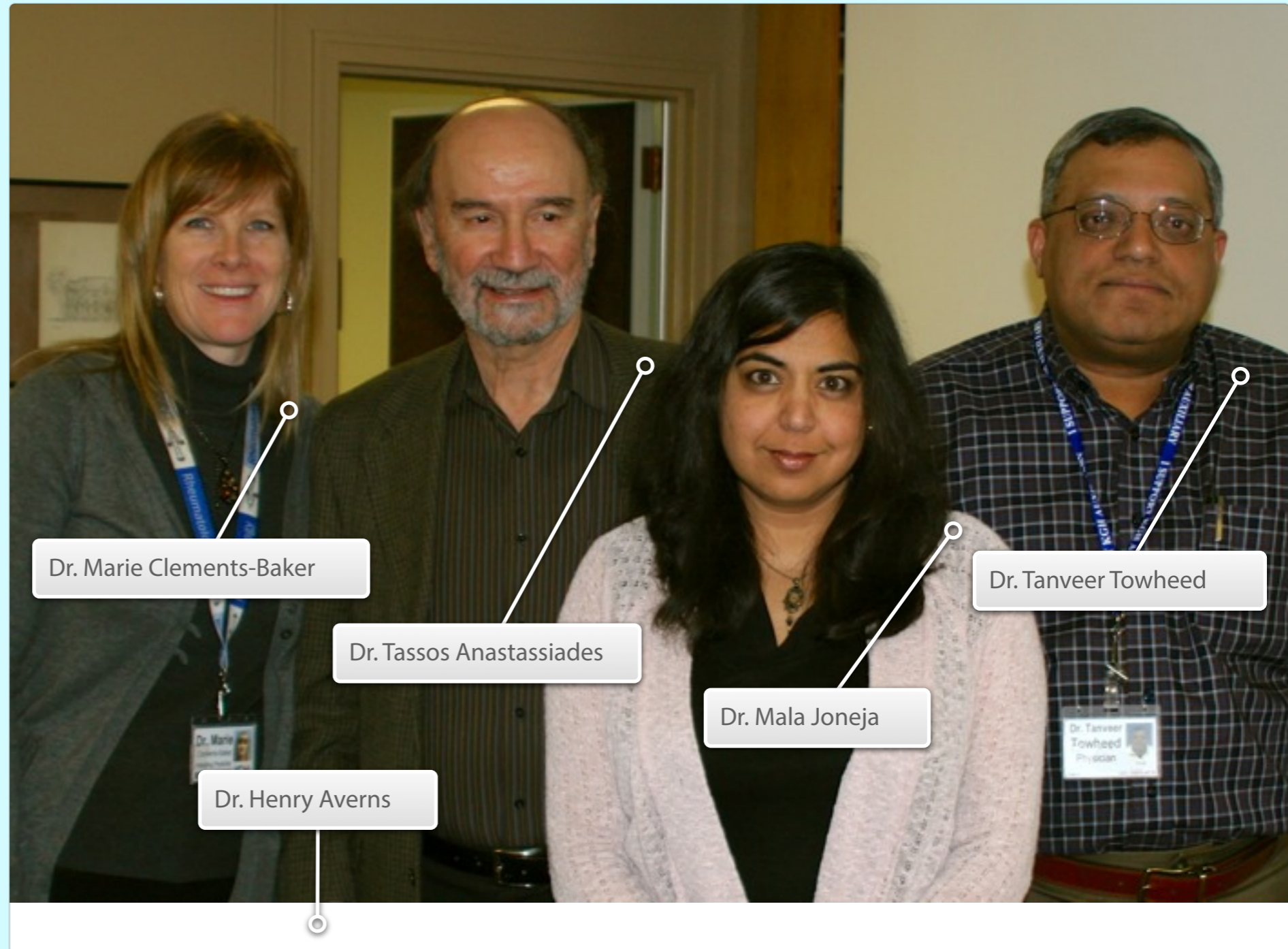
In speaking with JK, there was a great sense of relief that came with the implementation of this device. She not only has a mechanism to prevent recurrence of her shortness of breath, but it is home-based, and has eliminated the need for repeated hospital visits.

Division of Rheumatology

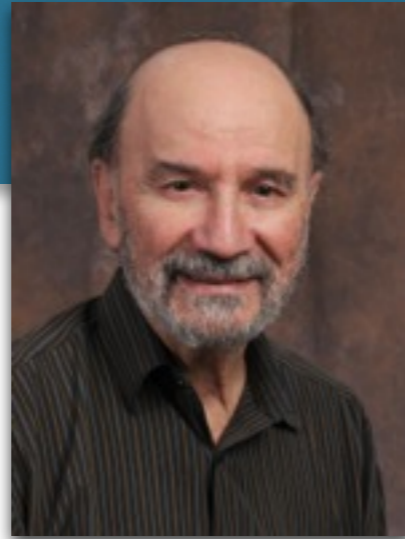
Mission

To provide:

- Exemplary care for patients with rheumatic diseases in our Region
- A high quality training program in the subspecialty of Rheumatology
- Leadership in teaching about rheumatic diseases to both medical students and residents in Internal Medicine, and to a number of other subspecialties at Queen's University
- Provide cutting edge, translational research in pathological conditions of cartilage and bone, in glycobiology and in the epidemiology of osteoporosis.



Division of Rheumatology



The Division of Rheumatology has six academic members: Dr. Tassos Anastassiades, the Division Chair, is a Clinician-Scientist working primarily on basic research in cartilage and bone and a clinical interest focused on osteoporosis. He is also the Director of the Canadian Multicentre Osteoporosis Study (CaMos) for the Kingston site. Dr. Tanveer Towheed has a research focus on the epidemiology of osteoporosis. His clinical interests include inflammatory joint disease and osteoporosis and he is the Associate Director of CaMos. Dr. Henry Avern is Director of the Clinical Skills Program in the School of Medicine and has a clinical focus on inflammatory joint disease and early rheumatoid arthritis (RA). Dr. Mala Joneja is the Director of the Subspecialty Program in Rheumatology. Her clinical interest is in connective tissue diseases and inflammatory joint disease. Dr. Marie Clements-Baker has a specific interest in postgraduate education with clinical interests in vasculitis, and inflammatory joint disease. Dr. Inka Brockhausen is a basic scientist in the field of glycobiology with applications in several disease states. Our Division serves the entire Southeastern Ontario region for primary, secondary and tertiary referrals in the breadth of rheumatic diseases. Some of the connective tissue diseases have complex problems, often involving younger individuals, with multi-system involvement requiring multidisciplinary participation. Dealing with the sheer volume of referrals remains a major challenge, with waiting times being up to one year. Our clinics are now all held at Hotel Dieu Hospital, and through our activities, we have a close association with the Human Mobility Research Centre (HMRC). Division members also make sizable contributions to the Internal Medicine Training Program, including work in the Clinical Teaching Units.

Key Accomplishments in 2013

- ▶ Earned full approval for the postgraduate training program in rheumatology, including the final Accreditation Committee internal review in August 2013.
- ▶ Dr. Avern was a key player in negotiations with Non-Insured Health Benefits (NHIB), including provision of biological agents for RA treatment, and influenced Aboriginal rheumatic care nationally by being on the access to care group of the Canadian Rheumatology Association.
- ▶ Dr. Anastassiades was awarded a Diamond Jubilee Medal for Leadership in Arthritis Treatment and Research.

Professors

Dr. Tanveer Towheed

Associate Professors

Dr. Henry Avern

Dr. Mala Joneja

Dr. Inka Brockhausen*

Assistant Professors

Dr. Marie Clements-Baker

Professors Emeriti

Dr. Tassos Anastassiades

**Research faculty member*



Division of Rheumatology



Programs of Distinction

- ▶ Establishment of an Early Rheumatoid Arthritis Clinic which optimizes triaging and intake in order to meet guidelines of early treatment, especially with biologic agents.
- ▶ Basic research discovery on pathogenesis and treatment of inflammatory joint disease.
- ▶ New Generic Subspecialty Clinic for osteoporosis established at Hotel Dieu Hospital with capability of training at different levels.
- ▶ Canadian Multicentre Osteoporosis Study (CIHR) now in its 16th year, funded for another five years.
- ▶ The Connective Tissue Diseases and Vasculitis Clinic continues to be expanded and there is significant interest from rheumatology fellows in subspecialty training in this field.

Research Highlights

- ▶ Hyaluronan is a naturally-occurring polymer, containing the sugar N-acetyl glucosamine. Hyaluronan is found in high concentrations in joint fluid, skin and bone. In joints, hyaluronan is protective. However, when degraded, it stimulates inflammation and this may be important in maintaining chronic inflammation in arthritis. Dr. Anastassides' lab has been chemically modifying the N-acetyl glucosamine sugar in hyaluronan to make novel compounds, including one which blocks inflammation. There is significant translational potential to this discovery, and a US provisional patent has been issued.

Subspecialty Training Program

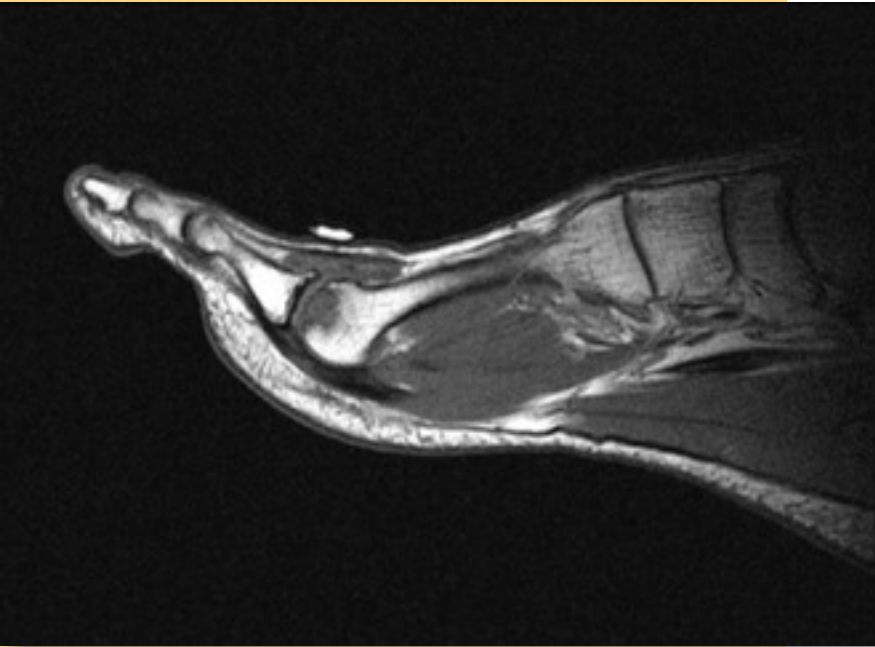
The Rheumatology Training Program is a fully accredited Royal College Program that offers vast clinical exposure to rheumatological diseases and a strong academic curriculum including ultrasound training and basic science lectures. In addition to the Subspecialty Training Program, the Division of Rheumatology hosts a number of rotating learners including clinical clerks and residents from General Internal Medicine, Orthopedics, Physical Medicine and Rehabilitation, Orthopedics and Ophthalmology.

Dr. Joneja was a recipient of the 2012 Associated Medical Services Phoenix Fellowship and has received a second year of funding to continue her work. This fellowship is a key

- ▶ Dr. Anastassides' **Publication of N-acylated glucosamines for bone and joint disorders: effects of N-butyryl glucosamine on ovariectomized rat bone.**

- ▶ Several forms of bone and joint disease are due to Gram-negative bacterial infections, including those occurring after joint replacement. The understanding of O antigen synthesis in Gram-negative bacteria is crucial in understanding how to deal with infections. Dr. Brockhausen's lab is developing enzyme inhibitors for bacterial enzymes, to enable blocking of the synthesis of the protective O-antigenic polysaccharide coats of pathogenic bacteria, thus inhibiting their growth.

Patient Story: Samantha



Samantha's point of view, to be given a diagnosis and to actually be able to visualize and understand the process was a major step in her journey with arthritis.

Samantha is a 48 year old woman who has searched for an explanation for her widespread joint pain and stiffness from multiple specialists for four years. Despite numerous blood tests and x-rays, no explanation was found, and clinical examination showed that there was tenderness but no definite synovitis.

Finally, Samantha was referred for ultrasound examination of the joints.

The ultrasound showed that Samantha had highly developed synovitis which was not at all obvious by clinical examination alone. The ultrasound was also able to demonstrate early erosive change in her feet. This allowed us to make a definite diagnosis of rheumatoid arthritis and to start appropriate therapy.

From Samantha's point of view, to be given a diagnosis and to actually be able to visualize and understand the process was a major step in her journey with arthritis. Samantha's case demonstrates that ultrasound has acquired a very clear place in the assessment of patients with inflammation, sometimes revealing information that could not otherwise be seen.

2013 Departmental Milestones

New Faculty

In Memoriam



Dr. Robert Hudson



Dr. Alberto Neder



Dr. Laura Milne



Dr. Pendar Farahani



Dr. Gordon Boyd



Dr. Paul Heffernan

Advisory Panel on Education

This committee is comprised of: Dr. Stephen Vanner (Chair), Dr. Susan Moffatt, Dr. Michelle Gibson, Dr. James Boseovski, Dr. Cathy Lowe, Dr. David Taylor, Dr. Mala Joneja, Dr. Chris Smith, Dr. Laura Milne and Dr. Tony Sanfilippo.

Related Glossary Terms

Drag related terms here

Index

Interventional electrophysiology

Standard and complex ablations, pacemaker, ICD, CRT and ILR implants and patient follow-up.

Related Glossary Terms

Drag related terms here

Index

Junior faculty members

Faculty members who are within five years of their appointments.

Related Glossary Terms

Drag related terms here

Index

Research Committee

This committee is comprised of: Dr. Stephen Vanner (Chair), Dr. Rachel Holden, Dr. Paula James, Dr. Diane Loughheed, Dr. Denis O'Donnell, Dr. Elaine Petrof, Dr. Mark Ropeleski, Dr. John Fisher (ex officio), Dr. Roger Deeley (ex officio) and Dr. Stephen Archer (ex officio).

Related Glossary Terms

Drag related terms here

Index

Residency Program Committee

This committee is comprised of: Dr. Jim Boseovski, Dr. Mike Beyak, Dr. Chris Frank, Dr. Laura Marcotte, Dr. Chris Parker, Dr. Amar Thakrar, Dr. Christine White, Chief Residents and Resident year Reps.

Related Glossary Terms

Drag related terms here

Index

Chapter 18 - Untitled

Specialized outpatient clinics

The Division of Cardiology runs several outpatient clinics that include heart failure, congenital, heart rhythm, inherited heart rhythm disease and hypertension.

Related Glossary Terms

Drag related terms here