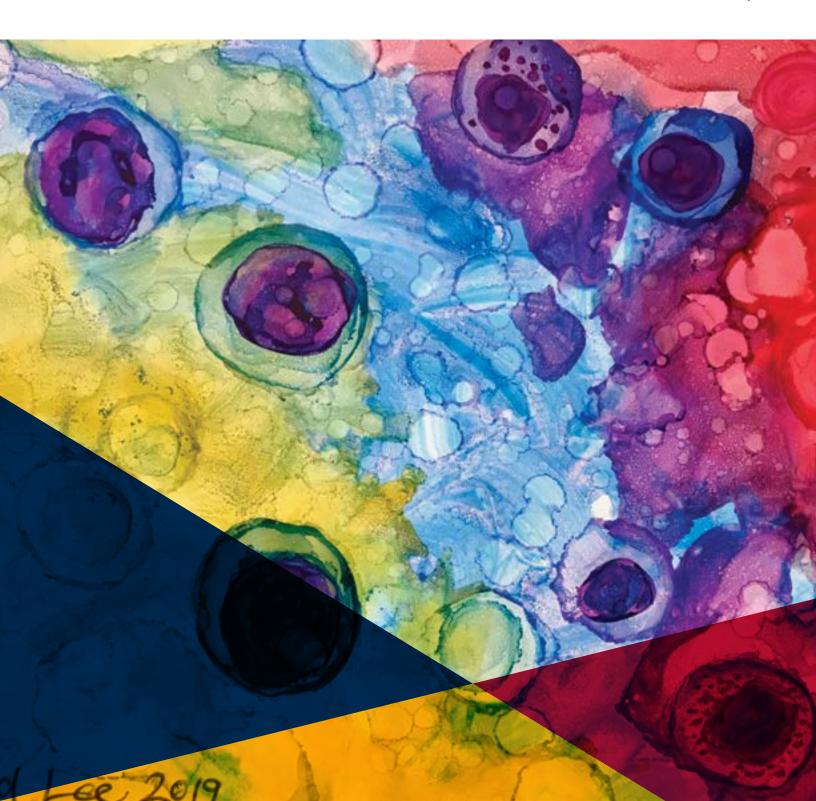
DEPARTMENT OF



Medicine 2018/19

Annual Report



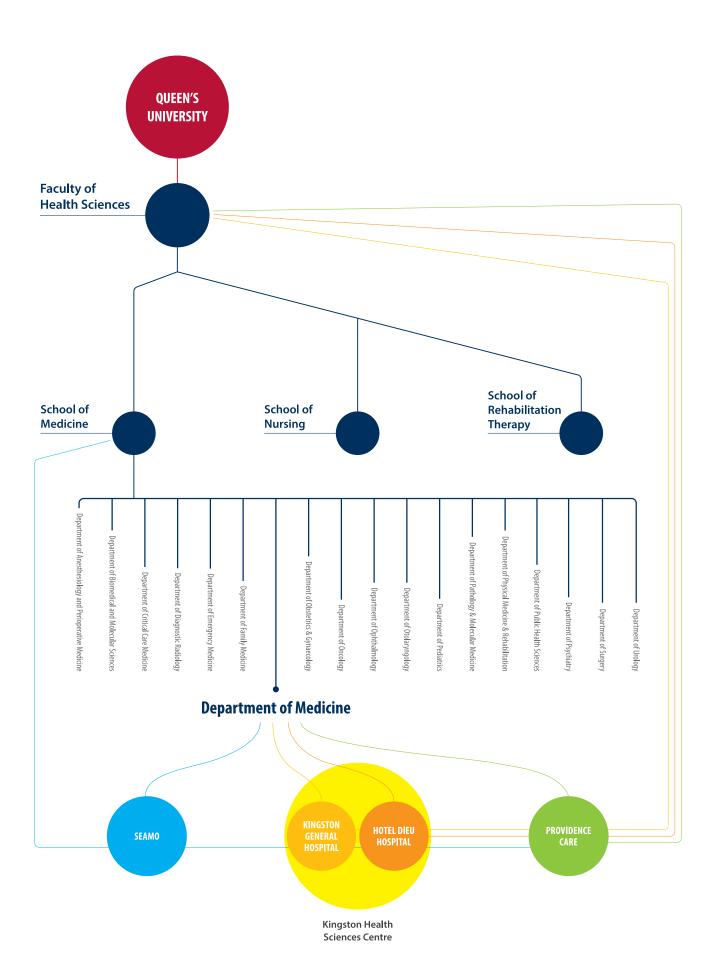


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Message From The Department Head

As an introduction for the 2018 Department of Medicine Annual Report, I would like to do something a little different and offer some thoughts on the value of leadership in Medicine.



I offer this because my colleagues are themselves leaders and their activities inspired my speech. Before doing this, I will take the opportunity to thank my amazing administrative team, led by Ms. Anita Ng. Without them the Department would not only be less efficient and less accomplished but would be missing a huge well of kindness and empathy. I would also encourage you to visit my blog (https://deptmed.queensu.ca/dept-blog) which highlights many of the exciting and innovative achievements of faculty members in this Department. Now, on to a recent speech on leadership that I had the honour to give at the 2019 Meeting of The Association of Faculties of Medicine of Canada (AFMC) held in Niagara Falls. I hope you enjoy our 2018 annual report.

You too are leaders, so I'm sure you will therefore agree that Leadership is important! Society needs leaders who are substantive people, people who strive for the greater good. The need for leadership is no less in Academic Medicine. When considering whether to take on a leadership role, I remember the words of Irish parliamentarian Edmund Burke, "The only thing necessary for the triumph of evil is for good men to do nothing." That includes good women too!

Leaders must have a functioning moral compass, a sense of social accountability and a passion to achieve excellence. In cynical moments, faculty members often say, university leadership doesn't matter! Meet the new department head; same as the old department head! Nothing could be further from the truth. Look at larger society and consider the protean consequences of poor leadership.

We need smart principled, people who are willing to step up and lead, willing to commit their lives to solve important problems; problems that have no simple solutions. Indeed, good leaders recognize that their actions may not lead to success during their terms. This aspect of leadership philosophy is embodied in the Greek proverb, "Societies grow great when old people plant trees, who's shade they will never see".

I've had the privilege of leading volunteer organizations, such as the American Heart Association in Chicago, and medical organizations, such as the Divisions of Cardiology at the University of Alberta and the University of Chicago. Most recently it's been my honor to serve as Head of Medicine at Queen's University.

So what have I learned in my attempts at leadership?

Good leaders assemble great teams. In each of my leadership positions I set about determining my mission by first consulting broadly with constituents and then crafting a strategic plan. I next assembled a team who shared and shaped this vision. I empowered those teams to be frank and honest, so that they could provide critical appraisal and forge and deliver on our ideas. Great teams always trump a single individual in the quest for excellence!

A good leader serves the people, but in so doing shapes their vision, always nurturing their best attributes; never giving into their fears or weaknesses, and always, as Abraham Lincoln said, nurturing "the better angels of our nature."

Leaders communicate and avoid isolation. Good leaders are visible and accessible, if not at the front they are always nearby! I blog, tweet, speak at departmental meetings, promote citizenship and meet with each faculty member annually. I try to understand their hopes and dreams through coffee lubricated conversations. My admin team keeps me informed of the faculty members' struggles and losses; keeping me attuned to their challenges even more than to their successes. Leadership is a lot of handwritten notes, gift baskets, one on one chats, signed books and pats on the back! Everyone has their own style but one has to be accessible and present at all relevant tables. As a friend of mine says, "If you're not at the table; you're on the menu!"

Leaders should be kind and empathetic, understanding the wisdom of treading lightly. The people we serve often carry heavy loads, many unknown to the leader.

Leaders are principled. If you stand for nothing... you fall for everything, or so says the variously attributed quote. Following their well enunciated principles, a good leader guides the team but is willing to step aside if they are no longer the right vehicle to carry the team over the finish line.

Leadership can be lonely so it's important to proactively attend to one's health, both physical and mental. Read, exercise and play! Spend time with family and cultivate friendships. You may love the job but the job will not love you back! Only friends and family can do that.

I adhere to president Woodrow Wilson's leadership advice, "You are not here merely to make a living. You are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. You are here to enrich the world, and you impoverish yourself if you forget the errand."

In closing, I would like to acknowledge that all the successes of the Department of Medicine are not possible without the immense effort and leadership put forth by faculty, residents, house-staff and support staff. I would like to specifically thank Dr. Stephen Vanner, Deputy Head of Medicine, the Departmental leadership team, as well as the talented administrative team that I am honoured to work with each and everyday.

Dr. Stephen Archer Department Head

We need smart principled, people who are willing to step up and lead, willing to commit their lives to solve important problems; problems that have no simple solutions.



In 2018, the Department of Medicine Welcomed 15 New Faculty



Cardiology
Dr. Andres Enriquez



Cardiology
Dr. Samir Hazra



Cardiology

Dr. Zardasht Jaff



Dermatology
Dr. Sonja Molin



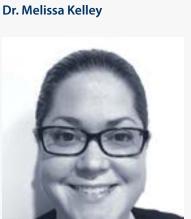
Dermatology
Dr. Thomas Herzinger



Gastroenterology
Dr. Jessica Noelting



Gastroenterology
Dr. Melissa Kelley



Geriatric Medicine
Dr. Leah Nemiroff



Palliative Care
Dr. Leonie Herx



General Internal Medicine Dr. Steven Montague



Nephrology **Dr. Hasitha Welihinda**



Palliative Care
Dr. Danielle Kain



General Internal Medicine
Dr. Lisa Nguyen



Neurology Dr. Garima Shukla



Respirology
Dr. Sophie Crinion



Core Internal Medicine

The Internal Medicine residency program at Queen's University is nationally respected for its collegial atmosphere, high faculty-to-resident ratio, research opportunities, and strong focus on teaching in all of the major subspecialties as well as General Internal Medicine. It is fully accredited by the Royal College of Physicians and Surgeons of Canada.

NOTABLE HIGHLIGHTS

Canadian Association of Medical Education (CAME) Certificate of Merit

Dr. David Taylor, Division of General Internal Medicine, was awarded with a certificate of merit from the Canadian Association of Medical Education (CAME). This certificate of merit promotes and recognizes medical education in Canadian Medical Schools while acknowledging the hard work and dedication of the faculty members who make medical education a success. Dr. Taylor has been pivotal in the launch of Competency Based Medical Education at Queen's University.

2018 PARO Residency Program Excellence Award

Queen's Internal Medicine Program, under the leadership of Dr. David Taylor, was selected as the recipient of the 2018 PARO Residency Program Excellence Award. This award underscores the amazing work that is done by the program, and the Department of Medicine is extremely proud of this accomplishment. Thanks are extended to all involved in the Internal Medicine Program, and to Dr. Taylor for his excellent leadership.

Number of Residents

Translational Medicine Graduate Program

In September 2018, the Department of Medicine launched the new and innovative Master of Science (MSc) and Doctor of Philosophy (PhD) in Translational Medicine. These programs are the first research-based graduate programs focused on translational medicine at both master's and doctoral levels in Canada. The programs are entirely unique in that they offer a curriculum interweaving graduate level research with authentic clinical experiences in a multidisciplinary environment across departments at Queen's University. As the first of its kind, the programs link graduate level research skills with a variety of clinical experiences including patient interactions, clinical observerships and medical rounds to enhance translation of basic science research to clinical practice and inspire research that is impactful to patients.

"The Graduate courses and seminars afford us the opportunity to not only learn from the world-class clinician-scientists at Queen's, but also interact with a diverse group of students with unique research interests and high-profile visiting researchers, expanding our understanding of the current state of translational research. Our courses have given us the opportunity to extend our learning outside of the traditional seminar model of graduate courses."

MATTHEW JAMES, MSc. Candidate (Translational Medicine)

Number of MSC. Students



TMED Faculty

Translational Medicine Graduate Program (TMED) Wall Of Fame

You Can't Put a Price on Time or Knowledge. All of these incredible faculty and staff went above and beyond in support of the TMED graduate program. The tremendous success of the program's inaugural year was made possible by everyone on the TMED Wall of Fame. Thank you so much!



Paula James Graduate Program Director, Course Chair, Supervisor, Presenter, Observerships



Stephen Archer Committee Member, Course Chair, Supervisor, Observerships



Gord Boyd Committee Member, Presenter



Anne Ellis Committee Member, Course Chair, Presenter, Observerships



Rachel Holden Committee Member, Course Chair, Observerships



Don Maurice Committee Member, Presenter



Mark Ormiston Committee Member, Course Chair, Supervisor



Stephen Vanner Committee Member, Presenter



Julie Heagle **Program Staff**



Wei Yan **Program Staff**



Charles Hindmarch Course Chair



Jennifer Flemming Supervisor



Denis O'Donnell Supervisor, Observerships



Annette Hay Supervisor, Observerships



Joe Pater Supervisor



Jeanna Healey Presenter



David Lillicrap Presenter



Tara Baetz Presenter



David Lee Presenter



Amer Johri Presenter, Observerships



Ben Glover Presenter



Lawrence Hookey Observerships



Genevieve Digby Observerships



Marie Clements-Baker Observerships



Rasika Wijeratne Observerships



Ramana Appireddy Observerships



David Taylor TMED Research Project



Medical Grand Rounds

Medical Grand Rounds (MGR) is a well-attended traditional medical education venue whereby faculty at the Department of Medicine and visiting guest speakers, share discoveries and advances in their field of expertise. The Department of Medicine Medical Grand Rounds experience is robust and engaging and provides an excellent learning opportunity for all in attendance.

Highlights of Medical Grand Rounds at Queen's University include the welcoming of numerous guest speakers hosted by the various divisions. The Department thanks Dr. Mala Joneja for her leadership of MGR. Our lecture series now includes a variety of special lectures each year, including named lectureships, a medical education lecture, a global health lecture, a diversity and equity lecture, a combined lecture with the Department of Oncology and the Chief Resident's lectures. The Rounds schedule is available through our app, Well-Rounded@Queen's. While MGR is the key venue for guest speakers, visiting professors often stay to meet with faculty and teach residents and students during their visit. Medical Grand Rounds will continue to educate, in a broad sense, the faculty and residents in the Department of Medicine by expanding horizons in topics related to medicine, science and society. This venue allows all DOM members to understand colleagues' interests and areas of expertise. Audience members continue to have the opportunity to walk away with new ideas for their own careers including research, education and clinical practice.

NOTABLE HIGHLIGHTS

2018 has seen a number of great presentations on a range of hot topics including, but not limited to:

- Dr. Chris Frank "Fountain of Youth"
- Dr. Anne Ellis "Allergy Research at Queen's: A Quest for Prevention, Understanding and Treatment"
- Dr. Jorge Martinez-Cajas "The Bug Stops Here: Outpatient Parenteral Antimicrobial Therapy at KHSC"
- Dr. Mark Ropeleski "Celiac Disease and Non-Celiac Gluten Sensitivity: Sorting the Wheat From the Chaff"
- Dr. Denis O'Donnell "When You Can't Breathe, Nothing Else Matters"
- Dr. Samir Hazra "Worked to Death"
- At the end of the year, Dr. Paula James was awarded Best Grand Rounds on her presentation titled "Let's Talk Period" for her work on women who bleed excessively during menstruation due to conditions like Von Willebrand disease. Queen's and the University of Ottawa sponsor exchange featuring the Best Grand Rounds speaker each year.

2017-2018 Distinguished Lectures

- The Peter Munt Distinguished Lecture "Demystifying Challenges in Management of IPF," presented by Dr. Martin Kolb, McMaster University
- The Henry Dinsdale Distinguished Lecture "Multiple Sclerosis: Basis of Tissue Injury and Repair," presented by Dr. Jack Antel, McGill University
- The John O. Parker Distinguished Lecture "Mechanisms of Atrial Fibrillation in Patients with Mitral Valve Disease," presented by Dr. Ralph Damiano Jr., Washington University, St. Louis, Mo





(top) **Dr. Stephen Archer** and Dr. Ingrid Harle at MGR (above) Dr. Samir Hazra presenting 'Worked to Death' at MGR



DOM Research Funding

The total research revenue received by the Department of Medicine in Fiscal 2017/2018 was \$8.9M. Approximately \$5.7M was received from peer-reviewed funding and almost \$2.3M from clinical trials funding.

DOM Innovation Fund

In 2018 the Department of Medicine held its annual grant competitions for the DOM Innovation Fund, DOM Research Award and John Alexander Stewart (JAS) Fellowship to support research opportunities within the Department.

A total of \$269,833 was awarded across the three categories for the 2018 competition. Eight faculty members received DOM Research Awards, and four faculty members were awarded DOM Innovation Fund grants (three ICES project grants on population health topics and one Educational research grant). Two JAS fellowships were awarded to Post-Doctoral Fellows, Caroline Tuck, supervised by Dr. Stephen Vanner, and Mathieu Marillier, supervised by Dr. Alberto Neder.

2017/2018 Research Grants

During the 2017/2018 academic year, DOM faculty members were awarded a number of external grants. A few examples include:

Dr. Anne Ellis was the recipient of a total of \$25,000 for the eighth Allergy/Asthma Information Association (AAIA) and Canadian Allergy, Asthma and Immunology Foundation (CAAIF) Award for Ontario Research in Food Allergy for her project entitled "FaCES Filaggrin and the Cutaneous Environment Study." Congratulations to Dr. Ellis on her continued research successes!

Dr. Samuel Silver, Division of Nephrology, has been funded for his application to the 2017/18 Ontario Renal Network Call for Research Proposals. His application, entitled "The Effect of Specialized Nephrology Care on Long-Term Kidney Health After an Episode of Severe Acute Kidney Injury" was approved for \$64,159.

A donation ceremony took place on February 8, 2018 to accept \$500,000 from the W.J. Henderson Foundation. This donation will support innovative research into Atrial Fibrillation (AF). This condition is the most common cause of cardiac arrhythmia (irregular heart beat) and affects approximately 1 in 4 Canadians. This study looks at how lifestyle modifications could improve outcomes for patients as the risk of developing AF increases with age and with other factors such as diabetes, obesity, and hypertension. This study was spearheaded by Dr. Ben Glover and is now lead by Dr. Chris Simpson. The Department gratefully acknowledges the ongoing support of Dr. David Pattenden, trustee of the William J. Henderson Foundation for his generous support that has advanced our translational research program.

Dr. Don Maurice, Division of Molecular Biomedical and Molecular Sciences, and member of Queen's CardioPulmonary Unit, received the CIHR Grant for his study "Compartmented CAMP-signaling Regulates Human Arterial Endothelial Cell Inflammatory and Angiogenic Responses" or more easily known as "Better Targeting with Drugs: Location, Location, Location." These studies could identify new and better treatments for several heart and blood vessel diseases.

Dr. Christine White, Division of Nephrology, Department of Medicine, received funding via the SEAMO Innovation fund for her D-LITE pilot project.

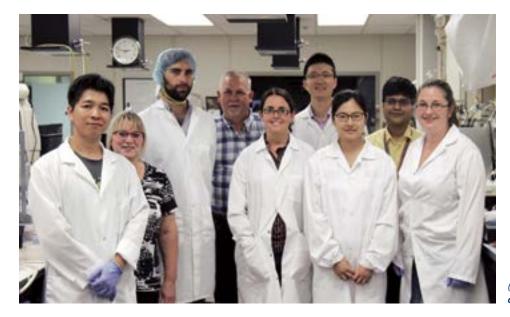
Dr. David Reed, Division of Gastroenterology, Queen's Department of Medicine, received \$30,000 funding via the American Gastroenterological Association (AGA) for the 2018 AGA-Allergan Foundation Pilot Research Award in Irritable Bowel Syndrome. His study investigates whether diet can modulate release of specific mediators by the microbiota in subpopulations of IBS patients that in turn increase the excitability of nociceptive nerves in the gut.

Dr. Amer Johri, Division of Cardiology, Queen's Department of Medicine, published an article in the Journal of the American Society of Echocardiography entitled "Cardiac Point-of-Care Ultrasound: State of the Art in Medical School Education." In the article Johri summarizes the variable approaches taken by several medical training programs with respect to duration of Point of Care Ultrasound training, prerequisite knowledge, and methods of delivering these skills. Additionally, Dr. Johri was the recipient of \$120,000 for his award of the John R. Evans Leaders Fund for his project "The Precision Imaging Program: Advanced Computational Methods for Quantification of Cardiovascular Diseases."

The DOM awarded over \$269,000 at its annual grant competition.



(above) Dr. Anne Ellis, recipient of the F. Estelle R. Simons Award for Research, with Dr. Charles Frankish (left) and Dr. David Fischer (right)



(left) Some members of the Archer Lab team

NOTABLE RESEARCH NEWS & HIGHLIGHTS

Dr. Jennifer Flemming was the recipient of the 2018 Clinical, Translational and Outcomes Research Award in Liver Diseases from the American Association for the Study of Liver Diseases Foundation (AASLD Foundation).

Congratulations to Dr. Yuka Asai who won a CIHR Planning and Dissemination Grant.

Congratulations to Dr. Anne Ellis for being the recipient of the F. Estelle Simons Research Award! This award is presented to a Canadian Society of Allergy and Clinical Immunology (CSACI) member in recognition of his or her exemplary research in the field of Allergy, Asthma, and Immunology. To be considered for this award, the candidate's research should be viewed as significant and of benefit to the specialty.

Dr. Alberto Neder awarded the prestigious title of Fellow of the European Respiratory Society (ERS). The Fellow of ERS award recognizes excellence in contributions to research, education and clinical leadership in respiratory medicine from amongst the ERS membership. He is the only respirologist from a Canadian university to receive this Award in the past four years. It provides recognition to those leaders in the field by entitling all selected Fellows to use the designation 'FERS' after their name. Dr. Neder is the second member of the Department of Medicine to receive this Award after Dr. O'Donnell (2014). Congratulations Dr. Neder!

Congratulations to Dr. Denis O'Donnell who was selected as the 2018 recipient of the CIHR-ICRH/CTS Distinguished Lecturer in Respiratory Sciences Award — an award given in recognition of outstanding contributions by a Canadian to respiratory science in Canada and internationally.

Resident Research Fair

The Core Internal Medicine Residency Training Program & Department of Medicine teamed up to host the 3rd Annual Resident Research Fair in September 2018 at the University Club. Born in a response to needs identified by resident leadership, the event aimed to inspire research connections and collaboration between residents and faculty through networking, sharing best practices for new residents' approach to research, and highlighting research opportunities for residents within the Divisions.

Dr. Jennifer Flemming was the Faculty keynote for the event, and the resident presentation was by Dr. Matthew Hanson; both shared their experiences with research and 'tips for success' for their resident peers.

SEAMO Research and Innovation Showcase

The following DOM Faculty were invited to present at the SEAMO Research and Innovation Showcase event held at the Isabel Bader Centre in Kingston on June 6, 2018:

Dr. Gord Boyd for his project entitled "Taking a Peek Under the Hood: Non-invasive Assessments of Brain Function in Critically III Patients."

Dr. Jennifer Flemming for her project entitled "Birth Cohort Effects on Cirrhosis Incidence: A Population-Based Study."

Dr. David Maslove for his project entitled "Precision Critical Care How Data Can Help Us Find the Zebra in a Herd of Horses."

Dr. Alberto Neder for his project entitled "The Laboratory of Clinical Exercise Physiology: Lung-Heart Interactions and Their Clinical Consequences."

TIME (Translational Institute Of Medicine)

Led by Dr. Stephen Vanner (Interim Director, TIME), the concept for Translational Institute of Medicine (TIME) was first presented to DOM Faculty members at the 2015 Fall Annual Retreat and subsequently made a strategic priority by DOM membership and the DOM Executive. The aim of TIME is to optimize expertise and state-of-the-art research platforms, improve collaboration and enhance access to technology and infrastructure resources. TIME saw many successes in 2018.

Institute Approval

The full proposal requesting formal Institute status for TIME was submitted to the Faculty of Health Sciences (FHS) in October 2018, for review by the FHS Faculty Board, Queen's Senate Advisory Research Committee (SARC), the Queen's University Planning Committee (QUPC) and Queen's Senate. The proposal has since been approved by Queen's Senate (March 2019) to officially grant TIME with Institute status, as a Faculty of Health Sciences Research Institute.

TIME Constitution and Implementation of Administrative Structure

In 2018, TIME and DOM leadership, in consultation with the TIME Advisory Committee and DOM Research Committee, developed the TIME Constitution outlining the aims of the Institute and its administrative structure. Implementation of the administrative structure is underway with the establishment of the TIME Executive Committee and the TIME Management Team, with the inaugural meetings of both groups held in September 2018. The TIME Management Team has since continued to meet on a monthly basis. Forward initiatives include holding an inaugural business meeting, development of a strategic plan, and establishing metrics of success.

TIME UNIWeb Research Equipment, **Expertise and Services**

In Fall of 2018 TIME formally launched a new web-based research networking tool, TIME UNIWeb, to enhance research connections and access to research infrastructure for its members. TIME UNIWeb includes a custom-designed research platforms module with an inventory of research equipment, expertise and services relevant to the field of Translational Medicine. TIME UNIWeb is a virtual "Who's Where" and "What's Where." It improves the transparency and connectivity of our translational research network thereby catalyzing the formation of new research connections. This enhanced connectivity and cross pollinization assists in building the competitive teams necessary for large group grants. It also optimizes sharing of expertise and research tools that were previously siloed in research groups. TIME UNIWeb also reduces duplication of equipment and enhances access of equipment for new faculty. A special thanks to Dr. Charles Hindmarch and Whitney Montgomery for bringing TIME UNIWeb to life and enrolling faculty members on the platform. TIME UNIWeb aims to improve our translational research network through forming new research connections (cross-pollinizing of research ideas and building



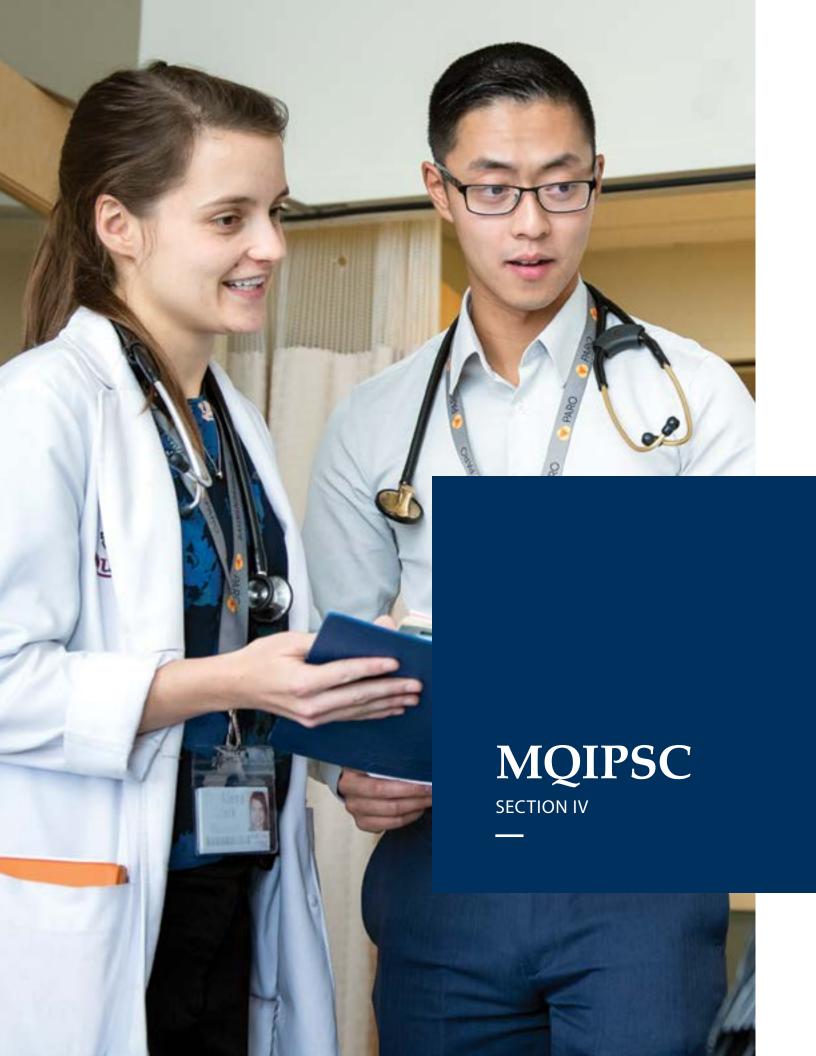




(top) Dr. Stephen Vanner, Interim Director, TIME (above) **Dr. Paula James** and a member of her research group

competitive teams for large group grants), optimizing sharing of expertise and research tools that are currently siloed in research groups, and reducing duplication of equipment across the faculty.

Usership in the early stage of implementation exceeded our expectations; over 200 faculty users have signed up for TIME UNIWeb, including all faculty in Department of Medicine and in Department of Biomedical and Molecular Sciences, and key collaborators from other FHS and Queen's Faculties.



The Medicine Quality Improvement and Patient Safety Committee (MQIPSC)

The Medicine Quality Improvement and Patient Safety Committee (MQIPSC) is co-chaired by Dr. Geneviève Digby and Dr. Joseph Abunassar. In 2018, the committee expanded their membership and has become more inclusive of interdisciplinary team members and allied health practitioners.

MQIPSC 2018 HIGHLIGHTS

- MQIPSC presented quarterly at the DOM meetings
- MQIPSC launched a Patient Safety Rounds Working Group to improve the education of Internal Medicine Residents in QIPS concepts
- The Internal Medicine Resident Training Program awarded its first resident QI award at Resident Research Day where there was an increased focus on QI specific projects, which will continue in future years
- Successful completion and publication of an initiative to reduce hemodialysis patient bloodwork frequency from every 4 weeks to a 6-week frequency (Efficiency)
- · Successful completion and publication of quality improvement initiative within a multidisciplinary lung cancer clinic that dramatically reduced time from lung cancer diagnosis to oncology assessment and definitive treatment. A concurrent qualitative study demonstrated improved convenience for patients and high levels of patient satisfaction
- · Launch of the KHSC COPD Clinical Pathway with Standardized Order Sets and COPD Patient Care Navigation and comprehensive approach for patients with severe COPD
- Hiring of new neurology staff and improved triage leading to 2.5-year improvement in time to epileptologist assessment
- · Launch of a post-discharge phone call project to improve transitions of care for discharged medicine patients (Pay for Performance funding)

MQIPSC Mission Statement

Improving healthcare quality and patient safety in the DOM



(left) The MOIPS Committee









Events & Awards

SECTION V







Events & Awards

Department of Medicine CME Day

The 5th Annual Department of Medicine CME day was held on May 30th, 2018, and was a tremendous success. With seventeen informative and educational seminars presented throughout the day, the audience was provided with top quality education on a wide range of topics. The day's Keynote Speaker, Dr. Johanna Murphy, captivated the audience with a presentation on Persuasion in Medicine and the role of Cognigens.

Annual Awards Ceremony Overview

The Annual Awards Ceremony is a memorable event hosted by the Department of Medicine to celebrate the outstanding contributions our faculty members have made to the Department and to their fields. Winners of the Distinguished Service Award, Research Achievement Award, David Ginsberg Mentorship Award, Young Clinician Award, Master Clinician Award and Master Educator Award, including those deserving a special mention, are announced at the Annual Awards Ceremony. It is a night where we all have a chance to come together as a Department and reflect on everything that we have accomplished throughout the year — it is a night that should not be missed!

It is a night where we all have a chance to come together as a department and reflect on everything that we have accomplished throughout the year.

Other Events Include:

- Faculty Family Fun Day
- DoM Admin and Research Support **Staff Appreciation Events**
- · Lunch and Learn Sessions for DoM Admin Support Staff
- · Women in Medicine
- Resident Research Fair

The 2018 Department of **Medicine Annual Award** Winners



Dr. Paula James Department of Medicine Distinguished Service Award



Dr. Gordon Boyd Department of Medicine Research Achievement Award



Dr. Lawrence Hookey Department of Medicine David Ginsburg Mentorship Award



Dr. Siddhartha Srivastava Department of Medicine Young Clinician Award



Dr. Hoshiar Abdollah Bill Depew & Ron Wigle Master Clinician Award



Dr. Barry Chan Department of Medicine Master Educator Award



Allergy and Immunology



Division Chair DR. ANNE ELLIS

Dr. Anne Ellis is a clinician scientist with 70% protected time for research. She has served as the Chair of the Division of Allergy & Immunology since May 2010, and is the Director of the Allergy Research Unit at the Kingston Health and Science Center. The flagship of this research program being the Environmental Exposure Unit (EEU), an internationally recognized and validated controlled allergen challenge model of allergic rhinitis. She also has gained considerable expertise in direct nasal allergen challenge and is a Principal Investigator within AllerGen NCE.

Faculty Members & Rank

Professor Dr. Anne Ellis

Associate Professor Dr. Rozita Borici-Mazi

Education/Training Program Update

The Division contributes broadly to the education of Undergraduate Medical Students through lectures and the facilitation of small group learning (SGL) sessions in the 1st year of training. In addition to the pre-clerkship course, the Division contributes to the Licentiate of the Medical Council of Canada (LMCC) review program. They contribute to postgraduate education through participation in Academic Half Day, and Allergy/Immunology rotation, and both members contribute to teaching on the Internal Medicine CTUs.

NOTABLE HIGHLIGHTS

- Dr. Ellis and Dr. Borici-Mazi collectively run 8 to 9 half-day clinics per week at Hotel Dieu Hospital and provide year-round in-patient consult coverage at Kingston General Hospital and Providence Care. In their outpatient Allergy/ Immunology clinics, a full spectrum of allergic and immunologic disorders are evaluated and treated, including (but not limited to) allergic rhinitis, asthma, atopic dermatitis (eczema), urticaria, angioedema, food allergy, anaphylaxis, drug allergy, stinging insect allergy and immunodeficiency.
- The Queen's University Allergy and Immunology clinic at Hotel Dieu Hospital is extremely busy, efficient and productive. Over the past year, just over 5000 patients were seen in this clinic!
- · Members of the Division continue to be active within the Canadian Society of Allergy and Clinical Immunology (CSACI), as well as the American College of Allergy, Asthma and Immunology (ACAAI) and the American Academy of Allergy, Asthma and Immunology (AAAAI). Dr. Ellis is on the Executive of the Board of Directors for the CSACI (Secretary/Treasurer) and is the Chair of the Anaphylaxis committee for the ACAAI. Dr. Borici-Mazi sits on the Royal College Subspecialty Training committee for Clinical Immunology & Allergy.

Mission Statement

To provide high quality care 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

Number of Publications

Number/Value of Grants



Awards

Dr. Anne Ellis

F. Estelle Simons Research Award

Faculty Spotlight

Dr. Anne Ellis – Research

The research activities within the Division are tremendous, and are highlighted by the clinical trials conducted by the Allergy Research Unit led by Dr. Ellis. In 2018 the Allergy Research Unit conducted several industry funded clinical trials, self-funded studies, as well as made numerous advancements to remain on the cutting edge of clinical research.

The Environmental Exposure Unit was used for two rather large studies — one evaluating the objective benefit of an over-the counter antihistamine/decongestant combination compared to a nasal steroid, the other looking at the augmentation of allergic rhinitis symptoms when pollen exposure is coupled with diesel exhaust pollution. This latter trial enrolled 375 participants, and the results will be presented at the 2019 World Allergy Congress in December.

The Division has newly established a collaborative research program with Dermatology examining the genetic basis of peanut allergy and how it relates to allergic rhinitis. This project is funded by the Canadian Allergy, Asthma and Immunology Foundation and 76 participants have been enrolled (recruitment ongoing). Questionnaires (family history of allergic disease), patch test responses (to peanut and birch pollen protein), and blood samples have been collected from all enrolled participants. Isolated DNA samples from blood will be sent to our collaborators at Dalhousie University (Peter Hull) and genotyped for Filaggrin mutations.

The Kingston Allergy Birth Cohort has over 400 participants, the oldest being about 7 years of age. The health and environment of these participants is being followed annually via mailed surveys. We recently published findings on the two-year outcomes of our cohort in Annals of Allergy, Asthma and Immunology. This publication consisted of a detected association between in-home use of scented products and parental report of childhood wheeze.





In 2018 the Allergy Research Unit conducted several industry funded clinical trials, self-funded studies, as well as made numerous advancements to remain on the cutting edge of clinical research.

Cardiology



Division Chair DR. CATHY MCLELLAN

Dr. Cathy McLellan is an interventional Cardiologist and is the Clinical lead, Percutaneous Coronary Interventions. She is a respected leader and mentor not only in the division but with her colleagues outside of cardiology and women in medicine as she is 1 of 7 female chairs in the DOM.

Faculty Members & Rank

Assistant Professor Dr. Cathy McLellan

Professor Dr. Hoshiar Abdollah Dr. Stephen Archer

> Dr. Adrian Baranchuk Dr. John McCans Dr. Damian Redfearn Dr. Tony Sanfillipo

Dr. Chris Simpson

Associate Professor Dr. Amer Johri

Assistant Professor Dr. Joe Abunassar Dr. Wael Abuzeid.

> Dr. Peggy DeJong Dr. Gerald Adams Dr. Samir Hazra Dr. Zardasht Jaff Dr. Henry Kafka Dr. Stephen LaHaye Dr. Paul Malik Dr. Michael O'Reilly Dr. Raveen Pal Dr. Amar Thakrar

Education/Training Program Update

The Cardiology training program's innovative leadership in creating CBME curriculum and assessment tools, under the leadership of Dr. Peggy Dejong, has helped inform the national CBME rollout for Cardiology. Our curriculum and assessment plan received excellent feedback at our Royal College Accreditation in 2018, with full accreditation granted to our program. Our graduating trainees from 2018 successfully completed their certification exam and went on to advanced cardiology fellowships. Two trainees were also finalists in the ACC Rockies Resident Research competition in 2018. Finally, Dr. Michael O'Reilly received the Outstanding Teacher award in 2018 from our Cardiology trainees.

Awards

Dr. Michael O'Reilly Dr. Amer Johri

Dr. Hoshiar Abdollah Fellow of the American Heart Association Cardiology Training Program Clinical Teaching Award CFI John R. Evans Leaders Fund Award (JELF) Year II, Early Researcher Award Year III: Ministry of Research

and Innovation,

HSF Clinician Scientist Award Phase 1 Year IV

Mission Statement

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

Number of Learners

Number of Publications

161

Number/Value of Grants

\$2.6M+

Cardiology (cont.)

NOTABLE HIGHLIGHTS

- Satellite echo labs opening in Perth and upcoming in QCPU (2019) allowing for patients to be seen with reduced wait times!
- The development of the KHSC cardiac imaging group, which is a collaboration between cardiology and radiology. This allows improved access with a streamlined referral process in hopes to reduce wait times!
- Continuing to collaborate with Cardiac Surgery on structural heart diseases such as the minimally invasive mitral valve program, TAVI, and PFO Closure

QUEEN'S CARDIO PULMONARY UNIT (QCPU)

Cardiopulmonary diseases are the leading cause of death in Canada. The Canada Foundation for Innovation and the Ontario Ministry of Research, Innovation and Science jointly awarded the QCPU team \$7.7M to establish the QCPU facility, a state-of-the-art 8,000-square-foot facility housed within Queen's Biosciences Complex at 116 Barrie Street. QCPU is directed by Dr. Stephen Archer who in partnership with Dr. Don Maurice and Dr. Mark Ormiston lead this exciting enterprise. QCPU opened in late 2017, the goal of the QCPU team is to conduct world-class, transformative heart, lung, blood and vascular research to identify novel therapeutic targets and evaluate them in rigorous preclinical studies. QCPU harnesses the talents of basic scientists, clinical trialists, population health scientists and clinician scholars. QCPU includes a team of 10 named investigators, 9 affiliated investigators and two project managers (Clarrie Lam and Whitney Montgomery). This team provides QCPU with a breadth of expertise that extends from basic science (to be applied to the discovery of mechanisms underlying diseases) to translational research (preclinical testing of experimental therapies and early



(above) Dr. Adrian Baranchuk with nurses in KHSC's cardiac sciences unit

phase clinical trials in humans) and disease epidemiology. The QCPU team translates these preclinical discoveries to humans through investigator-initiated clinical trials conducted by its international network of clinics in Kingston, Ottawa, Edmonton, Chicago, Minneapolis, Salt Lake City, and Sao Paulo. QCPU will introduce a paradigm shift in drug development. QCPU offers users access to genomics, proteomics, molecular imaging and micro-PET-SPECT CT cores, each operated by a PhD scientist. QCPU is fortunate to have the services of Dr. Charlie Hindmarch, Dr. Patricia Lima and Dr. Elahe Alizadeh. It also offers exam rooms for clinical trials patients and a training area and conference room for our TMED students. QCPU also includes a clinical satellite echocardiography laboratory and a cardiopulmonary laboratory, operated in partnership with KHSC. Due to the comprehensive 'bench to bedside' scope of QCPU research, its investigators can better control the discovery-therapy pipeline so that novel targets that pass testing in preclinical studies can be moved directly into multicenter, investigator-initiated trials throughout North and South America.

Faculty Spotlight

Dr. Hoshiar Abdollah

This past year, Dr. Hoshiar Abdollah was awarded with the Fellowship of the American Heart Association (FAHA) designation. which recognized his scientific and professional accomplishments, volunteer leadership and service.

His major interest is in patient care, particularly adult cardiology and non-invasive clinical electrophysiology. He has an interest in undergraduate and postgraduate education. He is currently the President of CTAQ (Clinical Teacher Association at Queen's), a member of SEAMO Governing Committee, a Queen's University Senator, and a member of Research Ethics Committee of Queen's University.

Dr. Abdollah is admired by faculty and learners alike and has been recognized by various awards. You may often run into him at the hospital auxilary café grabbing soup for lunch!

Dr. Adrian Baranchuk

Did You Know that Lyme carditis is an electrical signalling problem in the heart that can rapidly progress to complete heart shut down?

Dr. Adrian Baranchuk and his research team developed a tool to help physicians identify Lyme carditis. The research team has created the SILC (Suspicion Index of Lyme carditis) which is a checklist with a simple scoring system that helps identify the condition. Dr. Baranchuk says "We have discovered that once this condition is identified, treatment with antibiotics and sometimes an external temporary pacemaker, can lead to complete recovery in two weeks or less. It can avoid the more invasive treatment of a permanent pacemaker."

Dermatology

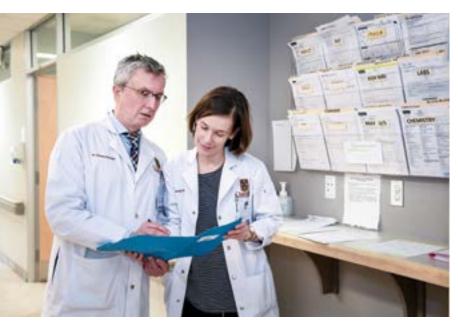


Division Chair DR. SONJA MOLIN

Dr. Sonja Molin is an academic Dermatologist with all her heart, committed to high-quality patient care, innovative treatments, research and passionate about teaching. She has more than 10 years of experience in the field. She is principal investigator of several ongoing research projects. The main focus of her clinical expertise and research are inflammatory skin diseases, mainly hand eczema and psoriasis, contact allergy and occupational dermatology.

Message from the Chair

Dermatology is one of the newer divisions within the Department of Medicine. After a time of change, 2018 was finally the year when the division was able to grow to a team size of four dermatologists. Dr. Sonja Molin and Dr. Thomas Herzinger came from the Dermatology Department of the Ludwig Maximilian University in Munich, Germany, to join Dr. Yuka Asai, who is the research lead of the division and Dr. Benvon Moran, who is Kingston's Mohs Micrographic Surgeon. Though being a small division, the depth of knowledge and experience together with a broad spectrum of services help to serve Kingston's patients with skin diseases.



(above) Dr. Thomas Herzinger and Dr. Sonja Molin, Division Chair

Mission Statement

To provide specialist-level medical and surgical care for individuals with skin disease

To educate undergraduate and postgraduate learners and health professionals on the diagnosis, prevention and treatment of skin disease

To educate the public and promote awareness of the causes, prevention and impact of skin disease

To advocate for patients

To advance knowledge of skin disease through research

Number of Publications Peer Reviewed Articles/Book Chapters

16/2

Number/Value of Grants

\$120K+

Dermatology (cont.)



(above) Dr. Benvon Moran became a Fellow of the American College of Mohs Surgery

"It's been a very positive experience moving to Canada. We were attracted to Kingston because we were excited by the opportunity to help shape a growing department.

We have been impressed by the quality of life in Kingston as well as how warmly we have been welcomed by our patients and colleagues."

DR. SONJA MOLIN

Faculty Members & Rank

Associate Professor Dr. Sonja Molin

Professor Dr. Thomas Herzinger

Assistant Professors Dr. Yuka Asai Dr. Benvon Moran

Education/Training Program Update

The Division of Dermatology is teaching residents, medical students and clinical observers. All faculty are also involved in undergraduate medical teaching with clinical skills courses, partly within their own faculty. Postgraduate education through participation, e.g. in Academic Half Days is another way of spreading dermatology knowledge. The feedback received from the dermatology rotation has been very positive. Residents in training have come from internal medicine, ophthalmology and family medicine.

NOTABLE HIGHLIGHTS

- The dermatology division grew to include Dr. Sonja Molin and Dr. Thomas Herzinger, a dermatology powerhouse from Germany
- Dr. Yuka Asai published two important articles in the Journal of Allergy and Immunology, a top-ranked journal on data from genome wide association studies and meta-analyses in multiple populations that identified new loci for peanut allergy and confirmed HLA as a risk factor for peanut allergy independent of asthma.
- Dr. Yuka Asai successfully defended her PhD-thesis in Experimental Medicine at McGill University
- In 2018, the Division of Dermatology saw 3357 patients, The MOHS clinic saw 1093 patients
- Dr. Benvon Moran became a Fellow of the American College of Mohs Surgery

Faculty Spotlight

Dr. Sonja Molin

Dr. Molin and her husband Dr. Herzinger recently moved to Canada with their two daughters and are enjoying their busy life in Kingston.

When asked why she approached a career in Dermatology, Dr. Molin expressed a desire to help people. Her personality and willingness to help her colleagues and patients has been apparent since the day she arrived at the Department of Medicine. Sonja noted that dermatology fits well with her visual memory, allowing her to visually assess skin conditions and decide on the best course of treatment. She also enjoys the diverse patient population from young to old, and the various skin diseases that she sees which range in severity from patient to patient. Her approach to each person, and each case, is always met with enthusiasm, and her passion for medicine is evident.

Dr. Sonja Molin was designated as the official first chair of the Division of Dermatology. She is a Dermatologist with experience (and a strong interest) in Allergy and looks forward to establishing a collaborative working relationship between the two divisions.

Dr. Molin has impressive goals for the Division of Dermatology with a focus on continued physician growth. The need for Dermatology in our region is large, and Dr. Molin hopes to increase the cadre of dermatologists to meet this demand (or come closer to it). Additionally, Dr. Molin aims to launch a dermatology training program to train future dermatologists. Her goal is to make Kingston a Centre of Excellence for Dermatology Training in Canada.

Endocrinology & Metabolism



Division Chair DR. ROBYN HOULDEN

Dr. Robyn Houlden is a consultant in adult endocrinology at the Kingston General and Hotel Dieu Hospitals. She is the Medical Advisor for the Diabetes Education and Management Centre at the Hotel Dieu Hospital in Kingston, and Specialist Lead for the Southeast Ontario Diabetes Regional Coordination Centre. She serves as the lead for undergraduate medical education in Endocrinology and Metabolism, as well as the clinical programs. She has an interest in diabetes; diabetes and pregnancy; insulin pumps and continuous glucose monitoring; as well as inpatient management of diabetes.

Highlight from the Chair

A dynamic and growing Division developing innovative clinical programs to meet the rapidly expanding needs for patients with endocrine disease in Southeastern Ontario.

Faculty Members & Rank

Professor Dr. Robyn Houlden

Assistant Professors Dr. Sara Awad Dr. Katherine Kovacs

> Dr. Joshua Lakoff Dr. Bikrampal Sidhu

Awards

Faculty Award for Residents' Clinics Dr. Sara Awad

and Consult Service Teaching

(below) Dr. Sarah Awad



Mission Statement

To provide the best possible care for patients with endocrine disease in **Southeastern Ontario:**

To teach undergraduate students and postgraduate trainees at Queen's University, and regional healthcare providers about optimal management of endocrine disease;

To educate patients and the public about endocrine disease and advocate for the best endocrine care; and

To conduct research in clinical care and education related to endocrine disease

Number of Publications

13

Number/Value of Grants

\$50K+

Dr. Lakoff is in the final stages of establishing a residency program in Endocrinology and Metabolism at Queen's University.

Education/Training Program Update

The Division continues to innovate in undergraduate medical education in Endocrinology with the development of new online learning modules.

Dr. Lakoff is in the final stages of establishing a residency program in Endocrinology and Metabolism at Queen's University. Endocrinology is amongst the most highly competitive training programs in Canada and there is a need to expand the number of endocrinologists in Canada to meet the growing population of individuals with endocrine disease particularly in the rapidly expanding number of people with diabetes and obesity.

NOTABLE HIGHLIGHTS

- The Division of Endocrinology cares for one of the largest insulin pump patient populations worldwide with over 600 adults and 100 children on insulin pumps
- The Diabetes and Pregnancy Clinic continues to 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. A significant portion of pregnant women serviced are from the James Bay region.
- Dr. Houlden recently completed her term as Chair of the 2018 Diabetes Canada Clinical Practice Guidelines. The guidelines contain 37 chapters outlining recommended management for the prevention and management of diabetes in Canada, and are recognized internationally as amongst the finest diabetes guidelines (Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Can J Diabetes 2018;42(Supp 1):S1-S325)
- Research continues in the Division of Endocrinology most notably in the field of diabetes.



(above) The Division of Endocrinology team

Faculty Spotlight

Dr. Bikram Sidhu

Dr. Bikram Sidhu joined the Division of Endocrinology & Metabolism at the end of 2018. Fate had his young daughter flipping through the CMJA magazine, and pointing at a pretty picture of Queen's, alongside an ad for a job posting for an Endocrinologist. After only a few months in Kingston, Bikram can fully agree that Kingston is the best kept secret in medicine!

Before obtaining his medical degree, Bikram completed an undergrad degree in math, and a master's degree in Neuroscience. Despite this background he decided to pursue endocrinology as his speciality after completing a block during his Internal Medicine residency. He is currently completing a Masters of Health Professions Education at Maastricht University.

Bikram's interests include: diabetes, diabetes and pregnancy, diabetes in rural populations; and transgender medicine. Over the next year, he will be collaborating with the Department of Obstetrics & Gynecology to support a clinic for transgender care. In addition to his clinical and research interests his educational interests include value-based medicine!

The Department of Medicine and the Division of Endocrinology & Metabolism are very excited to welcome Bikram!

Gastroenterology



Division Chair DR. LAWRENCE HOOKEY

Dr. Lawrence Hookey is a Gastroenterologist and the Medical Director of the Endoscopy Units at Kingston Health Science Centre. His practice includes general GI with a focus on therapeutic endoscopy and pancreatic and biliary disease. His research program includes investigating optimizing bowel preparation for colonoscopy, quality assurance in endoscopy, and education for colonoscopy.

Faculty Members & Rank

Associate Professor Dr. Lawrence Hookey

Professor Dr. Michael Blennerhasset, PhD

> Dr. Jacob Louw Dr. Stephen Vanner

Associate Professor Dr. Alan Lomax, PhD Dr. Mark Ropeleski

Assistant Professor Dr. Robert Bechara Dr. Michael Beyak

> Dr. Jennifer Flemming Dr. Melissa Kelley Dr. Catherine Lowe Dr. Jessica Noelting

Dr. David Reed

Education/Training Program Update

Under the leadership of Dr. Mark Ropeleski, the Division of Gastroenterology residency program once again received full accreditation from the Royal College in 2018. The Division of Gastroenterology welcomed 3 new residents this year filling all our CaRMS residency spots. On the flip side we had to say good bye to 3 of our residents as they successfully completed their training. Residents continue to engage in research due to the robust support and opportunities available. The GI division had a success full roll out of competency-based education framework, with Dr. Ropeleski being recognized as a national expert in this field in the GI world. Dr. Ropeleski received a Royal College of Physicians and Surgeons of Canada Competence by Design Innovator award.

NOTABLE HIGHLIGHTS

• 2018 saw the launch of Home Total Parenteral Nutrition (TPN) program, with a team spearheaded by Dr. Mark Ropeleski and Angela Hollett, dietician. This program provides continuity of comprehensive care for patients receiving TPN at home, and it recently received permanent funding from the Local Health Integration Network (LHIN) in recognition of the team's incredible success with the pilot project.

Mission Statement

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

Number of Learners

Number/Value of Grants

\$1.5M+

- Dr. Robert Bechara continues to be a national and international leader in Peroral Endoscopic Myotomy and endoscopic submucosal dissection. In 2018 alone, more than 50 patients from Kingston and across the country have been spared more significant surgery and recovery times through the expertise of Dr. Bechara in these procedures.
- Peroral Endoscopic Myotomy (POEM) is becoming the standard of care for the treatment of achalasia worldwide. Currently, KHSC is the only centre in Canada to have a formally trained operator in POEM. KHSC is currently the only centre taking referrals for the most complex POEMS in Canada and we are supporting and proctoring other physicians around Canada with their training
- · Dr. Michael Beyak had several papers published this year, including "Inducible Nitric Oxide Synthase-Derived Nitric Oxide Reduces Vagal Satiety Signalling in Obese Mice." Yu Y1, Park SJ1, Beyak MJ1,.J Physiology, 2019, which was the subject of an editorial and press release, and "Increased Task Channel-Mediated Currents Underlie High-Fat Diet Induced Vagal Afferent Dysfunction." Park SJ, et al. Am J Physiol Gastrointest Liver Physiol. 2018, which was chosen by the editorial board for APS select, a collection of the best papers of the month published in the American Physiological Society journals.

Gastrointenstinal Disease Research Unit (GIDRU)

GIDRU is the co-lead on a CIHR Team Grant entitled "The Role of Gut Microbiota in Chronic Abdominal Pain" that was successful in Phase I of the competition. \$25,000 in funding was awarded for Phase II, where a full application will be assembled to apply for \$2M over 5 years.

GIDRU co-leads the Irritable Bowel Syndrome (IBS) cohort enrolment in our National multi-center CIHR funded \$25M POR (patient-oriented research) grant called IMAGINE, charged with enrolling a total of 8000 IBS, IBD patients or healthy controls.

The goal is to understand how the intestinal microbiome interacts with diet and psychological factors to modify symptoms and disease activity. GIDRU has enrolled more IBS patients than any other center and biobanked the most samples.

Faculty Spotlight

Dr. Jennifer Flemming

Dr. Jennifer Flemming is a Gastroenterologist and a clinician scientist with 70% of her time protected for research. Jennifer grew up in Halifax and always knew she wanted a career that involved problem solving and interaction with people. She originally thought she wanted to pursue a medical oncology speciality but that all changed during her internal medicine residency. While on rotation during her GIM residency Jennifer had seen a patient with liver failure on her CTU. This patient was extremely unwell and was in dire need of a liver transplant. About a year later when Dr. Flemming was walking down the hall on a different rotation she heard someone call her name. She turned around and it was the patient looking like a brandnew person, happy and healthy — they had received the liver transplant. This patient helped inspire Jennifer to pursue Gastroenterology and her research in liver disease.

Dr. Flemming's research interests include liver diseases in young people, pediatric liver diseases, the impacts of liver disease and beating the stigma surround them! She hopes to better characterize liver disease and find out what has happened to increase the numbers of cases of liver disease in children and young adults.

In 2018, Dr. Jennifer Flemming was awarded a highly competitive American Association of the Study of Liver Disease grant, valued at 200,000 USD, for her project entitled: Epidemiology, Natural History, and Healthcare Utilization in Young Adults with Cirrhosis (ENHAnCe): A Population-Based Study.



(left) The Gastrointestinal Diseases Research Unit or GIDRU

General Internal Medicine



Division Chair DR. CHRISTOPHER SMITH

Dr. Christopher Smith is an Internist. He performs most of his clinical duties on the clinical teaching units (CTU's) and on the GIM consult service. His main interests are in medical education, evidence-based medicine and clinical skills.

Faculty Members & Rank

Associate Professor Dr. Christopher Smith Associate Professor Dr. David Taylor

Assistant Professor Dr. Barry Chan Dr. Stephen Gauthier

> Dr. Laura Marcotte Dr. Kristen Marosi Dr. David Maslove Dr. Laura Milne Dr. Steven Montague Dr. Johanna Murphy Dr. Lisa Nguyen Dr. Siddhartha Srivastava Dr. Don Thiwanka Wijeratne Dr. Rasika Wijeratne

Education/Training Program Update

The GIM subspecialty program under the leadership of Dr. Laura Marcotte has successfully adopted CBME principles and received full accreditation from the Royal College. The competitiveness of the program and popularity of GIM as a career continues to increase and we have attracted strong candidates since the inception of the program.

Awards

Dr. Barry Chan W. Ford Connell Award for Excellences in Clinical Teaching,

Excellence in Teaching and Mentorship Award,

New Faculty Master Teacher Award

Dr. Stephen Gauthier DOM Clinical Teaching Award Dr. Kristen Marosi Clinical Teaching Award,

CBME Assessment Leader Faculty Award

Dr. David Maslove Publons Peer Review Award "Top 1%" in Clinical Medicine

NOTABLE HIGHLIGHTS

• The GIM division provides 2/3 of the coverage for the patients admitted to CTUs and the Medical Short Stay unit — these services account for 40% of the total hospital admissions to KHSC. The CTUs are a core component of the residency program and the hub for team-based learning. Volumes are the highest they have ever been but efficiencies have been maintained with no increase in the length of stay or readmission rates. The GIM Consult Service provides medical consultations 7-days a week for non-medical services at KGH. **Mission Statement**

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

Number of Publications Peer Reviewed Journals

Number of Learners

Number/Value of Grants

\$281K+

- Dr. Lisa Nguyen was hired to develop the Obstetric Medicine program at KHSC. She has established a shared clinic with our Obstetric colleagues and provides an enhanced consultative service for Ob/Gyn. One of our former trainees (Dr. Zijing Wu), is spending a year specializing in Obstetric Medicine at the University of Toronto, and will return to join Lisa in enhancing this program.
- Both Dr. Barry Chan and Dr. Steven Montague are Queen's University representatives on the Canadian Internal Medicine Ultrasound (CIMUS) group advancing Point of Care Ultrasound (POCUS) knowledge and education across Canada. They are well respected instructors in national workshops and were involved in publishing consensus guidelines.

Research and Scholarship

This was a successful year for the Division in terms of academic scholarship:

- Dr. David Maslove was appointed as an associate editor of Critical Care Medicine while maintaining a successfully funded research program. He had nine peer-reviewed publications in 2018 including an article in JAMA on medical preprints and another on Blockchain technology to manage clinical trials data
- Dr. Thiwanka Wijeratne published on the increasing incidence and prevalence of pulmonary hypertension in Ontario
- Other division members were involved in clinical studies illustrating the mortality effect of bedspacing off internal medicine wards, and differences between general internists or specialists attending on medicine teams
- In the field of medical education, Dr. David Taylor published an important article on Entrustable Professional Activities (EPA) development. Dr. Stephen Gauthier analyzed faculty and resident perceptions of direct observation and Drs. Chan, Srivastava and Wijeratne assessed the effects of a resident led curriculum on physical examination skills.

The was a successful year for the Division in terms of academic scholarships.

The number of women in medicine continues to grow in the Department of Medicine.

GIM tops the charts with these 6 superstar physicians!



Dr. Laura Marcotte Assistant Professor



Dr. Kristen Marosi **Assistant Professor**



Dr. Johanna Murphy Assistant Professor



Dr. Laura Milne **Assistant Professor**



Dr. Lisa Nguyen **Assistant Professor**



Dr. Rasika Wijeratne **Assistant Professor**

Geriatric Medicine



Division Chair DR. JOHN PUXTY

Dr. John Puxty is an experienced Geriatrician and the Director of the Centre for Studies in Aging and Health at Providence Care.

He has special interests in the development of eldercare services, age-friendly communities, distance- education and the use of information technology both as an aid to learning and strategies for effective knowledge and Information transfer.

Faculty Members & Rank

Associate Professor Dr. John Puxty **Professor** Dr. Chris Frank Associate Professor Dr. Sudeep Gill

Assistant Professor Dr. Michelle Gibson Dr. Leah Nemiroff

Dr. Erica Weir Dr. Agata Szlanta

Education/Training Program Update

We recently launched SAGE (Seminars in Advanced Geriatrics Education) initiative to enhance our Division's Continuing Faculty Development. Dr. Nemiroff chairs the initiative showing great enthusiasm and leadership.

A working group within the Division (Drs. Puxty, Szlanta and Nemiroff) have commenced reviewing our core teaching in Geriatrics for clerks and residents. We have developed core competency objectives for each topic, complementary recommended readings and presentation materials. Each topic will be developed as webinars and archived as online resources.

A new Collaborative Education in Geriatrics webinar series was recently launched. There have been 9 topics offered in the first six months which had over 1800 registrants from across the Ontario.

Dr. Erica Weir as Master of Public Health Program Director played a leadership role in doubling the number of students with work experience accepted into the accelerated MPH program, strengthening the "evidence to action" theme, extending student practicum opportunities and fostering student welfare by establishing an academic advising program.

NOTABLE HIGHLIGHTS

· Referral and activity levels have expanded in both ambulatory and inpatient services since our move to the new hospital. Ambulatory visits **Mission Statement**

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

Number of Publications Peer Reviewed Journals

Number/Value of Grants

S200K+

Awards

Dr. Chris Frank

Canadian Geriatric Society - Ronald Cape Award for Distinguished Service Geriartic Medicine (cont.)





have increased by 78% and inpatient volumes by 18% but our waiting list have also increased with wait times of 6 weeks for Senior Day Rehabilitation and 4-5 months for clinics. We recently through Assess and Restore Funding were able to implement several service improvements aimed at reducing future wait

- Drs. Puxty and Frank successfully completed a funded pilot project (\$99,000) of delivering a blended e-learning education program regarding Care of the Older Offender for CSC staff. Discussions are underway with Correctional Services Canada for a national rollout of the program.
- Funding for the Provincial Age Friendly Outreach Program was recently renewed (\$106,000 in 2019-20) with Drs. Puxty and Lewis as principle investigators and the Centre for Studies in Aging and Health at Providence Care as the lead organization.

Selected Publications Feature:

- Frank CC, Feldman S, Wyman R. Caring for Older Patients in Primary Care: Wisdom amnd Innovation From Canadian Family Physicians. Can Fam Physician. 2018 Jun;64(6):416-418. PubMed PMID: 29898929; PubMed Central PMCID: PMC5999256.
- Holbrook A, Liu JT, Rieder M, Gibson M, Levine M, Foster G, Perri D, Maxwell S. Prescribing Competency Assessment for Canadian Medical Students: A Pilot Evaluation. Can Med Educ J. 2019 Mar 13;10(1): e103-e110. eCollection 2019 Mar. PubMed PMID: 30949264; PubMed Central PMCID: PMC6445319.
- Gill SS. All, Some or None? Statin Prescribing for Frail Older Adults. CMAJ. 2019 Jan 14;191(2):E30-E31. doi: 10.1503/cmaj.181671. PubMed PMID: 30642822; PubMed Central PMCID: PMC6333547.
- Gill SS, Bai AD. Beta Testing the Potential Link Between the Alpha Antagonist Tamsulosin and Dementia. Pharmacoepidemiol Drug Saf. 2018 Mar;27(3):349-350. doi: 10.1002/pds.4382. Epub 2018 Jan 17. PubMed PMID: 29341324.
- Nemiroff L, Marshall EG, Jensen JL, Clarke B, Andrew MK. Adherence to "No Transfer to Hospital" Advance Directives Among Nursing Home Residents. J Am Med Dir Assoc. 2019 May 27. pii: S1525-8610(19)30329-9. doi: 10.1016/j.jamda.2019.03.034. [Epub ahead of print] PubMed PMID: 31147290.
- Puxty J, Rosenberg M, Crow B, and Carver L. Report on Core Housing Needs for Seniors. Commissioned by Employment and Social Development Canada (ESDC). Submitted March 2019.

Hematology



Division Chair DR. DAVID LEE

Dr. David Lee is a Hematologist, the Chair of the Dept. of Medicine Morbidity and Mortality Rounds, and Director of the Anticoagulation Management Service. His practice and teaching encompasses benign and malignant conditions across ambulatory and inpatient settings. He is an excellent educator and has been recognized on numerous occasions by his learners.

Faculty Members & Rank

Associate Professor Dr. David Lee **Professor** Dr. Paula James **Associate Professor** Dr. Annette Hay

Assistant Professor Dr. Sita Bhella Dr. Janet Lui

Education/Training Program Update

Under the leadership of Drs. Lui and Dudebout, and with the collaboration of the Division of Hematopathology, the Hematology training program continues to provide exceptional and innovative training for our residents. In 2018, the residency training program in Adult Hematology underwent RCPSC review and was fully accredited. Successful programs breed successful residents: our residents have won awards at research and societal meetings this year for best abstract/paper.

The hemostasis research program led by Dr. James continues its tradition of training graduate students, post-docs, and clinical fellows across laboratory and clinical domains. In 2018, there were three graduate students and one clinical fellow.

The Blood and Coagulation Course continues its dynastic run as a model course in undergraduate medical education, under the helm of course chair Dr. James. The course consistently garners high ratings by students and its teachers are honored by teaching awards, year after year. 2018 was no exception.

(below) Artwork by Dr. David Lee



Mission Statement

To ensure excellence in the care of patients with blood disorders

To provide the highest standards of undergraduate and postgraduate Hematology education

To advance knowledge in diseases of the blood to the benefit of patients and society

Number of Learners



Number/Value of Grants

\$275K+

Awards

Dr. David Lee

Aesculapian Society Lectureship Award W. Ford Connell Award for Excellences in Clinical Teaching

Hematology (cont.)







(top) Dr. Sita Bhella consulting with a patient (above middle) **Dr. Paula James** and members of her research team (above) Dr. Jill Dudebout

NOTABLE HIGHLIGHTS

- Dr. Sita Bhella and the Malignant Hematology team developed the Day +1 Transfer Partnership with Lakeridge Health. This early repatriation arrangement allows patients to access care closer to home, which advancing resource stewardship at KHSC. This program will be launched in early 2019.
- The strengthening of the malignant hematology program, made possible by collaboration and partnership with the Cancer program and Department of Oncology
- In 2018, Dr. James' internationally recognized hemostasis research program published 8 papers and renewed two grants, including a prestigious NIH project to study the genetic determinants of von Willebrand Disease.
- As Senior Investigator in the Canadian Clinical Trials Group, Dr. Annette Hay has provided important leadership in advancing a national CAR-T cell translational initiative, aligning data linkage across multiple large national cancer databases, and spearheading an international clinical trial in acute myeloid leukemia.
- Dr. Sita Bhella led the Choosing Wisely Task Force to develop the first Choosing Wisely BMT list of five transplantation practices that clinicians should consider. These recommendations are supported and followed by ASBMT & CBMTG.

Faculty Spotlight

Dr. Jill Dudebout

Dr. Jill Dudebout is not your typical cross-appointee! Jill is actually a Hematologist, working in the Department of Oncology, with a cross appointment to the Division of Hematology. She works alongside the other hematologists but with special interest in malignant hematology. It doesn't stop there!

For the past 4 years she has led the Hematology Training Program to success as the Program Director. She also serves as the co-lead for the transition to Competency Based Medical Education in Hematology. In addition to her roles in medical education she is serves as the Co-chair of the Malignant Hematology Disease Site Group and the Director of the Adult Aftercare Program. Jill goes above and beyond and represents Oncology and Hematology on multiple local and provincial committees to further the care of patients with malignant hematologic diseases and adult survivors of childhood cancer.

Jill truly is a superstar and the Division of Hematology is very fortunate to have such an involved cross-appointee!

Infectious Diseases



Division Chair DR. GERALD EVANS

Dr. Gerald Evans is a Professor in the Departments of Medicine, Biomedical & Molecular Sciences, and Pathology & Molecular Medicine at Queen's University. He is a former President of the Association of Medical Microbiology and Infectious Disease (AMMI) Canada, the professional society for Medical Microbiologists and Infectious Disease physicians in Canada. He is a member of the Ontario Anti-infective Review Panel, and Chair of the Guidelines Committee of AMMI Canada. His research interests include clinical guidelines development, antimicrobial pharmacology, and health technology assessment for optimal drug utilization.

Faculty Members & Rank

Professor Dr. Gerald Evans Associate Professor Dr. Elaine Petrof

Assistant Professor Dr. Jorge Martinez-Cajas Dr. Evan Wilson

NOTABLE HIGHLIGHTS

- With new recruitment to the division, there is a planned expansion of outpatient ID clinics to increase the number of TB clinics (held jointly with the Division of Respirology) to meet increasing demands for consultative care. Added clinics are planned in general ID (for Outpatient Parenteral Antibiotic Therapy [OPAT] and expanding numbers of referrals for Lyme disease) as well as HIV and viral hepatitis to meet the increasing demands for ID specialty care.
- Regional leadership in Infection Prevention & Control under Dr. Evans has expanded and now includes providing expertise in Infection Prevention and Control (IPAC) to Lennox and Addington County General Hospital (LACGH) and Brockville General Hospital.
- The division is actively involved in research into Lyme disease in Canada participating in the recently CIHR-funded Canadian Lyme Disease Research Network (CLyDRN).
- The division is also collaborating with the Department of Critical Care Medicine in the CIHR-funded BALANCE study looking at duration of therapy for patients hospitalized with non-S. aureus bloodstream infections.
- The division is rejoining the Ontario HIV Treatment Network as a full partner with participation in the OHTN Cohort Study (OCS) under the directorship of site lead, Dr. Martinez-Cajas.

Number of Publications Peer Reviewed Articles/Book Chapter

Number/Value of Grants

S600K+

The right antibiotic, at the right dose, via the right route for the right duration.





Antimicrobial Stewardship Program

Dr. Evan Wilson

The Antimicrobial Stewardship Program was relaunched in 2017 as asK — Antimicrobial Stewardship at KHSC. Dr. Evan Wilson joined the Infectious Diseases Division to be the medical lead for this important clinical service.

What is this program you ask, well Dr. Wilson provided the perfect explanation as:

"The right antibiotic, at the right dose, via the right route for the right duration."

Dr. Wilson co-chairs this program with Susan McKenna and Heather Wise, 2 pharmacists at KHSC (Kingston Health Sciences Centre). This multidisciplinary team is working hard on optimizing the use of antibiotics given to patients who are admitted to KHSC. Dr. Wilson states that on average over half of the patients in hospital who are receiving antibiotics are receiving them inappropriately. In fact, a recent study suggests that the in the USA, 60% of patients in hospital receive antibiotics and 40% of the time the prescribing of antibiotics is inappropriate.

Dr. Wilson emphasizes that "the priority of this program is Patient Safety. We want to protect the patient from potential harm, by ensuring the correct dosage, being aware of any potential drug interactions or allergies, finding the best method of administering the antibiotic (orally or intravenously) and to minimize or slow the development of antibiotic resistance." The ripple effect of this priority would decrease overall hospital costs by the reduction in antibiotic related complications and readmissions.

Going forward the plan is to increase the education provided to healthcare providers on the proper use and prescribing of antibiotics. Currently, the team performs an Audit and Feedback. This is done by a targeted review of (audit) in-hospital patients currently on antibiotics and providing feedback to the physicians on optimal prescribing. On the horizon, the plan to integrate Antimicrobial Stewardship into the new hospital computer system will enhance the ability to perform audit and feedback throughout the hospital ensuring patients are receiving the most appropriate antibiotic therapy possible.

(above left) Dr. Evan Wilson

Faculty Spotlight

Dr. Jorge Martinez-Cajas

Dr. Jorge Martinez-Cajas is the Director of the Infection and Immunity Clinic (IIC) at Kingston Health Sciences Centre. He leads the implementation of HIV PrEP services at KSHC and has worked collaboratively with KFL&A Public Health to help set up services at their site. Dr. Martinez-Cajas continues to work with international partners in Columbia under the Canada- Colombia HIV/AIDS collaboration. This work has led to the validation of tools for assessment for people living with HIV/AIDS, the description of HIV drug resistance in Colombia, the study of HIV transmission networks, and the implementation strategies to reach hard-to-reach populations in Colombia. His international team was recently awarded a research grant from the Colombian COLCIENCIAS to study the preparedness of Colombia for HIV PrEP implementation. Dr. Martinez-Cajas has a strong interest in improving care for people suffering with infections and is currently conducting a study to identify better strategies to use intravenous antibiotics to patients at home.

(left) Dr. Jorge Martinez-Cajas

Nephrology



Division Chair DR. DAVID HOLLAND

David Holland is a Nephrologist with a busy clinical practice in general nephrology and kidney transplantation. His research interests include outcome-based studies in chronic kidney disease and kidney transplantation. Dr. Holland has been extensively involved in undergraduate and postgraduate medical education and has been the recipient of numerous Aesculapian Society Teaching Awards and the 2018 Faculty of Health Sciences Education Award.

Faculty Members & Rank

Associate Professor Dr. David Holland

Associate Professor Dr. Jocelyn Garland Dr. Rachel Holden

> Dr. Eduard Illiescu Dr. M. Khaled Shamseddin

Dr. Ben Thomson Dr. Christine White

Dr. Karen Yeates

Assistant Professor Dr. Samuel Silver Dr. Hasitha Welihinda

Education/Training Program Update

The Adult Nephrology Training Program at Queen's University was once again fully accredited by the Royal College of Physicians and Surgeons of Canada in 2018. Since adopting an innovative competency based medical education (CBME) curriculum in 2017, the CBME model has allowed our Nephrology trainees to achieve their academic and training milestones and enhanced their performance as competent Nephrologists serving their societies.

Under the current Program Director, Dr. M. Khaled Shamseddin, our training program will expand significantly with eight trainees starting in July 2019. There are currently three Canadian Nephrology residents in addition to three clinical fellows from Saudi Arabia. Five more trainees (two residents and three fellows) will join the program in July 2019.

Awards

Live Renal Transplant Team KHSC Team Leadership Award

Dr. Jocelyn Garland Prix-d'Excellence – Specialist of the Year Award Dr. David Holland Aesculapian Society Undergrad Teaching

Award Term 3,

Health Sciences Education Award

Dr. Samuel Silver Fellow of the American Society of Nephrology Dr. Ben Thomson Performance Improvement Award - CCO,

Achieved Target Award – CCO Ontario

Renal Network

Mission Statement

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 underserviced areas recognized to be at high risk for chronic kidney disease."

Number of Learners

Number of Publications

Number/Value of Grants

\$500K+



(left) Nephrologist and associate professor, Dr. Jocelyn Garland

Award Spotlight

Dr. Jocelyn Garland

Dr. Jocelyn Garland is a Nephrologist and an associate professor. In 2018 she was recognized with the Prix d'Excellence — Specialist of the Year Award from the Royal College of Physicians and Surgeons of Canada. This award recognized her outstanding care to her patients and the community!

This recognition came to Dr. Garland as a result of a case that she initially helped with over the phone while on vacation. As a result of the information shared, Dr. Garland was able to diagnose the patient with a rare condition that causes acute kidney failure. She then collaborated with experts around the world and lobbied on behalf of her patient to obtain access to an expensive specialty drug. Against the odds, the patient has had an almost complete recovery!

Research Spotlight

D-lite Study

Dr. Christine White, Division of Nephrology, Department of Medicine, has received funding via the SEAMO Innovation fund for her D-LITE pilot project.

STUDY SUMMARY: Three 4-hour dialysis treatments per week is the standard of care for hemodialysis (HD) patients. This strategy assumes that all patients require the same amount of dialysis and does not take into consideration important characteristics such as age, gender, size, co-morbidity or life expectancy. The elderly, who represent a rapidly expanding group of incident hemodialysis patients, might benefit the most from reconsideration of this 'one size fits all strategy'. Observational studies indicate that twice weekly HD regimens are associated with improved HD tolerance, better nutritional status, reduced hospitalization and infections and longer survival in the elderly. Reduced prescriptions may

also allow for substantial patient and societal cost savings, less caregiver burnout and better utilization of increasingly strained HD resources. We are conducting a single-center pilot study of 40 patients to determine the feasibility and safety of a large randomized controlled trial designed to determine the impact of HD frequency on the patient reported outcome of well-being, on safety and on cost in incident hemodialysis patients above the age of 75 years.

Live Kidney Donor Program

The program celebrated their second year in 2018. Launched in 2017 the Live Kidney Donor Program is the first of its kind for our region. In a live kidney donation, a kidney is surgically removed from a live donor and transplanted into a recipient. With careful planning, live kidney donors can sometimes help patients avoid the need for dialysis and go straight to transplant. Dr. Khaled Shamseddin, Director of the Kidney Transplant Program and associate Professor of Medicine and Nephrology says "We have patients on dialysis who at some point will benefit from kidney transplantation and we can now offer them this service without them having to worry about travelling a far distance or not being able to access care services for their donor."

Over the past two years over 15 individuals have donated a kidney through the live donor program!

The Live Renal Transplant Team was award with the KHSC Team Leadership Award.

(below) The Live Renal Transplant Team



Neurology



Division Chair DR. MICHEL MELANSON

Dr. Michel Melanson is a Neurologist and is currently the Director of the KHSC EMG laboratories. His research focus is in neuromuscular diseases and has collaborations with basic science researchers at the Queen's Center for Neurosciences. He studies clinical aspects of disorders such as ALS, Multiple Sclerosis and the Muscular Dystrophies. Additionally, he is lead investigator in several clinical trials in ALS and Inflammatory Neuropathies.

Faculty Members & Rank

Associate Professor Dr. Michel Melanson **Professor** Dr. Garima Shukla

AssociateProfessor Dr. J. Gordon Boyd Dr. Albert Jin

Assistant Professor Dr. Ramana Appireddy Dr. Moogeh Baharnoori

> Dr. Shirin Jalini Dr. Lysa Lomax Dr. Giovanna Pari Dr. Stuart Reid

Dr. Sean Taylor

Education/Training Program Update

The Division of Neurology residency program once again received full accreditation from the Royal College in 2018 due in no small part to their dedicated residency program director, Dr. Sean Taylor. In 2018 we welcomed two new residents filling all our CaRMS residency positions along with two Visa Trainees. On the flip side we had to say goodbye to 3 of our residents as they successfully completed their training.

Awards

Dr. Gord Boyd THRIVE Post ICU Clinic Collaborative Award

(below) Dr. Gord Boyd



Number of Learners

Number of Publications Peer Reviewed Articles/Book Chapter

19/1

Number/Value of Grants

\$660K+

The Division of Neurology launched its first epilepsy monitoring unit.



(above) Lisa Calder and Dr. Lysa Lomax examining an EEG scan

NOTABLE HIGHLIGHTS

- In 2018 the Division of Neurology began offering interventional treatments for patients with acute strokes. This extends the window of treatment to 12 hours in some cases and vastly improves outcome from an otherwise devastating and life changing event. The process involves evaluating the extent of brain injury with imaging and selecting patients best suited for intracranial interventions to remove blood clots which are obstructing flow to vital areas of the brain. Queen's has been recognized as a provincial and national leader in this approach and we have been awarded by Accreditation Canada as a stroke distinction center.
- The Division of Neurology launched our first epilepsy monitoring unit. This serves individuals with epilepsy throughout our region and offers state of the art monitoring of brain activity during and in between epileptic seizures. Carefully selected individuals can then be offered potentially curative brain surgery for their refractory epilepsy. Early this year, our first monitored patient underwent successful seizure surgery thanks to the information gathered in the epilepsy monitoring unit.
- In collaboration with the Division of Neurosurgery, we have been offering deep brain stimulation surgery for patients with Parkinson disease. This novel treatment offers improved quality of life in patients with a variety of movement disorders and already 4 patients with Parkinson disease have been implanted through our program.

The Stroke **Team**



Dr. Al Jin Stroke Team



Dr. Shirin Jalini Stroke Team



Dr. Ramana Appireddy Stroke Team

The Epilepsy Team



Dr. Lysa Lomax **Epilepsy Team**



Dr. Garima Shukla **Epilepsy Team**



Dr. Gavin Winston Epilepsy Team



Dr. Ramana Appireddy, leader of the pilot project

E-Visit Pilot Project

DR. RAMANA APPIREDDY

The Department of Medicine has begun phase one of a pilot project focused on providing home E-visits for patients in the South East Local Health Integration Network (SE LHIN) who have experienced a stroke or TIA. The E-Visit program allows the patient to stay in their home whilst securely connecting via video conference with their physician for a follow-up visit.

Dr. Ramana Appireddy is leading the pilot project, and is currently arranging visits with patients of the Stroke Prevention Clinic. Dr. Appireddy's goal is to provide patient centered care and simultaneously improve the efficiency of the physician and hospitals to be able to cope with the growing health care demands.

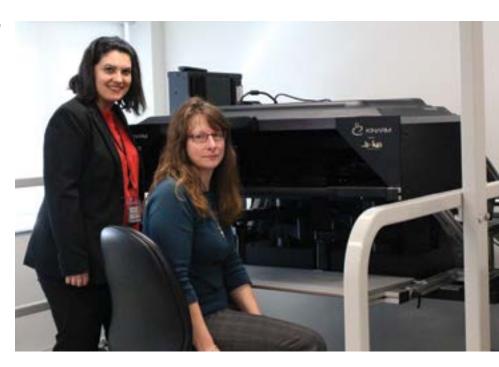
Dr. Appireddy noted, "These patients travel a significant distance for their follow up appointments, usually with a substantial cost to themselves and their family. This E-Visit project will help to reduce the amount of time, effort, and financial burden on patients travelling to see me for follow-up appointments." Dr. Appireddy recognized the growing need for this service as he spent hours on the telephone with his patients in hopes of avoiding travel burdens for their return visit to his clinic. In addition, the Stroke Prevention clinic sees a growing number of patients year over year, and by rerouting routine follow-ups away from clinical space, new and more urgent patients are seen with reduced wait times.

Dr. Appireddy has completed fifteen E-Visit consultations which have gone smoothly and have been well received by the patients. With the help of a small amount of administrative support, the patients are counselled on how to set up a secure OTN-based portal, and are waiting in a virtual waiting room in advance of their appointment time. Dr. Appireddy then connects to the room and performs his follow up visit with the patient in a confidential and secure video conference. Dr. Appireddy notes "Being able to see the patient and discuss their condition and test results with them is much more efficient than the telephone calls I had been performing. The patient receives a better-quality follow-up visit, and I am able to gather better information from this face to face encounter."

OTN is encouraging physicians to try the E-Visit portal which now has OHIP codes and premiums associated with it. It is acknowledged that this is work that is already being done by physicians in addition to their regular clinical time. This pilot project facilitates improved service for both the physician and the patient by allowing a visual connection and accompanied compensation for the work being done.

Phase one of this pilot project will last for approximately three to six months, and be focused solely within the Stroke Prevention Clinic. During that time Dr. Appireddy and his team will work through any logistical issues that occur with the E-Visit portal. Once the Phase 1 pilot is complete he will then bring information to the Department for Phase 2 of the project. The goal is to be able to roll out this service to other faculty within our divisions to further improve the service and quality of care for patients in the SELHIN.

(right) Dr. Moogeh Baharnoori and Kim Moore with the KINARM



KINARM MS STUDY

Dr. Moogeh Baharnoori with collaborators Dr. Sean Taylor and Dr. Al Jin, are using the KINARM to investigate MS. This study will provide the essential validation of the KINARM robotic platform to quantify sensory, motor and cognitive impairments associated with MS. It will provide the foundation for assessment of these functional domains in clinical trials particularly ones conducted in MS patients with progressive disease course.

Canada has the highest rate of Multiple Sclerosis (MS) in the world. Both MS prevalence and incidences continues to rise in Canada. Expanded Disability Status Scale (EDSS) is commonly used as the primary outcome measure in MS clinical trials and considered "Gold Standard." However, EDSS mainly relies on the patient's mobility status. It fails to capture changes in important domains such as upper extremity function and cognition, which are important contributors to the disability burden in MS. A major limiting factor is lack of objective measures to examine these systems. With recent promising developments in treatment of progressive MS, it is crucial to include reliable objective assessment of cognitive and upper extremity function in clinical trials for MS treatments. Interactive robotic technologies provide a highly objective approach to quantify brain function. The Kinesiological Instrument for Normal and Altered Reaching Movements (KINARM, BKIN Technologies Ltd, Kingston, Canada) is a robotic device with set of standard assessments of sensory, motor and neurocognitive systems. In collaboration with Dr. Stephen Scott professor in the Department of Biomedical and Molecular Sciences at Queen's University, we plan to quantify upper extremity sensory and motor and cognitive

The Kinesiological Instrument for Normal and Altered Reaching Movements (KINARM) is a robotic device with set of standard assessments of sensory, motor and neurocognitive systems.

impairments in 200 subjects with MS (ranging from early relapsing MS to progressive advanced MS) using both clinical and robot-based measures. The robotic tasks have automated scoring algorithms that quantify subject performance to standardized scores of neurologically intact subjects matched for age, sex and handedness. The large sample will allow us to reliably explore the correlations with existing clinical tools and to identify any common patterns of impairments in MS patients in various stages of the disease. We have recently completed a small pilot study in order to develop and refine our study protocol and to confirm feasibility of robotic technology in MS population. Interestingly we found considerable variation in the pattern and severity of impairments across tasks in MS patients. In addition, in some patients these deficits did not correlate with their mobility status or EDSS score (e.g. faster processing speed in patients with higher EDSS disability score and vice versa).

Palliative Medicine



Division Chair DR. LEONIE HERX

Dr. Leonie Herx is a Palliative Care specialist and Clinical Director of Palliative Care at Providence Care. She helped to co-found the new RCPSC Subspecialty in Palliative Medicine, serving on the Royal College (RC) Working Group in Palliative Medicine, developing the Pediatric stream of the Subspecialty, and is now the Vice-Chair of the RC Specialty Committee in Palliative Medicine and a member of the RC inaugural examination board for Palliative Medicine. Dr. Herx's areas of interest are medical education, professional development, and advocacy for building palliative care capacity across the health care system.

Faculty Members & Rank

Associate Professor Dr. Leonie Herx

Dr. Craig Goldie Assistant Professor Dr. Alison Flanagan

Dr. Ingrid Harle Dr. Danielle Kain

Dr. Natalie Kondor

Education/Training Program Update

The Palliative Medicine program supports 2 Royal College subspecialty residents and 2 Enhanced Skills residents. They will graduate one of the first two Palliative Medicine Subspecialist trainees across Canada in June 2019. Work continues on updating the Competency-Based curriculum for the Royal College subspecialty as well as the Enhanced Skills program including a complete transition to MedTech. A revamped academic half-day schedule, with shared educational sessions between Medical Oncology, Radiation Oncology and Palliative Medicine has been unveiled. The program continues to offer block rotations to all residents in Internal Medicine, Family Medicine, and Medical and Radiation Oncology.

We continue to have a strong presence in the UGME curriculum as well and a new UGME coordinator, Dr. Alison Flanagan. Our team redeveloped the "Breaking Bad News" clinical session this year for undergrads.

Awards

Dr. Leonie Herx RCPSC Founder in Palliative Medicine

NOTABLE HIGHLIGHTS

• The Division is working with stakeholders to help them understand our role as a specialist palliative care team in providing consultant-based care for patients with complex palliative care needs, and to focus on building capacity and access to high quality palliative care.

Mission Statement

The Division of Palliative Medicine is dedicated to:

The development and provision of high quality, accessible palliative care through a regional model of integrated specialist and primary palliative care

Building capacity for primary palliative care through advocacy, mentorship, and education for undergraduate and postgraduate medical trainees, practicing physicians, and interdisciplinary team members

Providing clinical excellence in specialist palliative care to patients and families with complex palliative care needs

Training palliative medicine specialist physicians through the Royal College Subspecialty in Palliative Medicine and the CFPC Enhanced Skills program in **Palliative Care**

Participating in research to improve the quality of care and therapies for patients and families with palliative care needs

Number of Learners

Number of Publications Peer Reviewed Articles

Number/Value of Grants

S2.2K+

Palliative Medicine (cont.)

- The Division has worked this year to develop new program referral guidelines and educational materials for referrers, patients and families to better understand the role of specialist palliative care.
- The Division is partnering with key palliative care stakeholders in the Kingston region through a new Kingston Palliative Care Collaborative aimed at working together to develop a regional, integrated model of palliative care to better serve our patients and families.
- Clinical innovations this year include successful advocacy for approval of a Quality Improvement Plan Indicator for palliative care across hospital and community sites focused on for early identification of patients with palliative care needs. At KHSC this ties in with our quality improvement initiative we have been
- developing this year which will automate the identification of patients admitted to KHSC at risk of death within the next 12 months and a program to provide admitting teams with tools and mentorship to provide a palliative approach to care for their patients, including advance care planning, deprescribing, basic symptom management and discharge care planning. This program will be part of a multi-site study in Ontario.
- We continue to host a sought after biannual 4 day CPD course for family physicians interested in palliative care, and are working to offer more options for shorter one and two days courses through Pallium Canada's LEAP (Learning Essential Approaches to Palliative care) program, including LEAP Hospital, LEAP Renal and LEAP Pediatrics this year. We also participate in regular nursing education courses through the South East LHIN.

From a young age Dr. Leonie Herx knew she wanted to be a doctor. She started volunteering in nursing homes and hospices when she was in grade 7 and continued to volunteer through University.

Faculty Spotlight

Dr. Leonie Herx

From a young age Dr. Leonie Herx knew she wanted to be a doctor. She started volunteering in nursing homes and hospices when she was in grade 7 and continued to volunteer through University. She had a true passion for caring for others, problemsolving and education and completed her MD-PhD program at the University of Calgary, followed by Family Medicine and Palliative Medicine Residency programs. Her areas of interest are medical education, professional development, and advocacy for building palliative care capacity across the health care system.

Prior to moving to Kingston, Dr. Herx worked for 10 years in Palliative Medicine at the University of Calgary, serving in numerous roles including Palliative Medicine Residency Director and Medical Director of the Intensive Palliative Care Unit at Foothill's Medical Centre. She has worked in both adult and pediatric palliative medicine, but now focuses her work on adults.

Dr. Herx helped to co-found the new RCPSC Subspecialty in Palliative Medicine, serving on the Royal College (RC) Working Group in Palliative Medicine, developing the Pediatric stream of the Subspecialty, and is now the Vice-Chair of the RC Specialty Committee in Palliative Medicine and a member of the RC inaugural examination board for Palliative Medicine.

She has been on the Board of the Canadian Society of Palliative Care Physicians (CSPCP) for 5 years, and is currently the President of the CSPCP (2018-2020 term). Through her work with CSPCP, Dr. Herx is co-leading the development of a set of shared palliative care competencies for all postgraduate training programs (in conjunction with CFPC and RCPSC) with the goal of ensuring all residents will be able to provide a palliative approach to care for their patients, and is involved in consultative work with Health Canada and other national palliative care partners in developing a national framework and standards for palliative care in Canada through Bill C277.

She has 6 children and enjoys spending time with her family outdoors kayaking and mountain biking!

Respirology



Division Chair DR. DIANE LOUGHEED

Dr. Diane Lougheed is a Respirologist and the Medical Director for the Asthma Research Unit. Dr. Lougheed is a clinician scientist whose primary clinical interests are asthma and cystic fibrosis in adults. Her research interests include asthma symptom perception, mechanisms of cough in asthma, work-related asthma, asthma health services and outcomes research, and guidelines implementation. She has received funding from CIHR, AllerGen NCE, the Ontario Thoracic Society and two Academic Health Sciences Centre AFP Innovation Fund grants. She has had a major role in many aspects of the provincial asthma strategy, including leading the development, evaluation, and implementation of a standardized care map for management of adults with acute asthma in emergency departments.

From the Chair

2018 was a year of building capacity and recognitions. The Division of Respirology welcomed Dr. Sophie Crinion on Faculty this fall and Dr. Christina Liak as a locum physician for the academic year, and hired Dr. Juan Pablo de Torres, who will be joining our Division in the spring of 2019. Dr. Crinion, Assistant Professor of Medicine, is originally from Ottawa, and completed medical school, subspecialty training in Respiratory Medicine and Sleep Medicine, and her PhD in Ireland. Dr. Liak completed her Respirology Fellowship at Queen's, followed by a sleep medicine fellowship at Western University. Dr. de Torres will be joining us from the University of Navarra, Pamplona, Spain

Faculty Members & Rank

Professor Dr. Diane Lougheed

Professor Dr. Michael Fitzpatrick Dr. Alberto Neder

Dr. Denis O'Donnell

Dr. Christine D'Arsigny Dr. Susan Moffat Associate Professor

> Dr. Onofre Moran-Mendoza Dr. Christopher Parker

Assistant Professor Dr. Sophie Crinion Dr. Geneviève Digby

Dr. Helen Driver (PhD) Dr. Paul Heffernan

Mission Statement

To provide excellence in the care of respiratory patients 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-ofthe-art clinical practice of respiratory medicine.

Number of Learners

Number of Publications Peer Reviewed Articles

Number/Value of Grants

880K+

This past year was a successful one for the Respirology **Training Program!**





(top) Dr. Denis O'Donnell receiving the CIHR Award from Brian Rowe, ICRH Scientific Director (left) and Catherine Lemiere CTS President (right) (above) The Respirology Team

Education/Training Program Update

This past year was a successful one for the Respirology Training Program. Under the leadership of Dr. Paul Heffernan, we successfully implemented the competency-based medical education evaluation framework. This has resulted in improved evaluation information and increased the value of the feedback for our residents.

We graduated 3 fellows this year. All of them were successful with their recent examinations. We had a successful CaRMS/VISA match and are welcoming 3 new residents into the program.

The program hosted a successful annual CanMEDS conference for the 5 Ontario Respiratory training programs again this year. This year, speakers included topics such as Physician Wellness, Talking with the Media, and Medical Assistance in Dying.

The Division and Program also welcomed two new faculty (Drs. Liak and **Crinion**) who have brought their expertise and energy to the Program. Additionally, the program welcomed a new administrative assistant, Ms. Laura Pascoal.

Awards

Dr. Susan Moffatt W. Ford Connell Award for Excellences

in Clinical Teaching

Dr. Alberto Neder Fellow of the ERS,

New Clinician Scientists Award: SEAMO

Dr. Denis O'Donnell 2018 CIHR-ICRH/CTS Distinguished Lecturer

Award in Resp. Sciences

NOTABLE HIGHLIGHTS

- Thanks to a \$1 million gift from the William J. Henderson Foundation, the Ruth Pattenden Fellowship in Interstitial Lung Disease was established.
- Dr. Onofre Moran, Director of the ILD Fellowship Program, performed the first cryobiopsy — a new method of performing lung biopsies via bronchoscopy, which avoids the need for a surgical lung biopsy.

Members of the division have also been recognized for their achievements and expertise:

- Notably, Dr. Susan Moffatt received Connell Awards for Mentorship and Teaching, and Aesculapian Lectureship Award for Term 3 by the class of 2019.
- Dr. Alberto Neder became a Fellow of the European Respiratory
- Dr. Denis O'Donnell received the 2018 CIHR-ICRH/Canadian Thoracic Society Distinguished Lecturer in Respiratory Sciences Award.
- The Division Chair, Dr. Diane Lougheed, became the Deputy Editorin-Chief of the Canadian Journal of Respiratory, Critical Care and Sleep Medicine.

Faculty Spotlight

Dr. Alberto Neder

Dr. Alberto Neder has been a member of the Department of Medicine since 2013. In the time that he has been with the Department of Medicine, Dr. Neder has been instrumental in propelling the productivity of research in the Division of Respirology here at Queen's University. Dr. Neder was recently elected as a Fellow with the European Respirology Society (FERS), a very prestigious recognition. He continues to teach an international course on Clinical Exercise Testing for the European Respirology Society as well as for the American College of Chest Physicians.

As he started his career in medicine it became clear to Dr. Neder that the only way to affect change was to pursue a career in research and advance the knowledge of these conditions. Dr. Neder had a strong interest in both Cardiology and Respirology, and the strong ties between these diseases (cardio pulmonary diseases).

Dr. Neder has built a world-renowned research portfolio and was awarded a CFI Leaders Opportunity Fund grant to establish the state-of-the-art Laboratory of Clinical Exercise Physiology (LACEP), located in Kingston General Hospital. In the past 5 years Dr. Neder and his team at LACEP have been extremely productive with the publication of over 80 research papers. He has been able to attract funding for his research and is the recipient of many international postdoctoral fellows and Master's students from Queen's who keep building his research momentum with motivation, enthusiasm and fresh ideas.

Most recently, as of this year, Dr. Neder had success as co-editor of the 2018 Monograph of Clinical Exercise Testing. This monograph is the most influential document on the specific type of cardiopulmonary testing done by Dr. Neder and his colleagues. Dr. Neder and Dr. O'Donnell (and colleagues) were heavily involved in 4/14 chapters of the monograph, putting Kingston even more prominently on the map when it comes to Clinical Physiology. Neder notes "When I travel to International Conferences, people from around the world (France, Italy etc.) are impressed when you say you are from Kingston and Queen's as they are leaders in this field." He also noted, that part of the success and innovation at Queen's in this field is due to the parallel career development of both he and Dr. O'Donnell. Their research interests and level of experience and expertise match so well that they both work together to elevate the research portfolio and research outcomes at Queen's Department of Medicine.

When looking to the future of Dr. Neder's research he provided a glimpse at the direction he is focused on. In addition to COPD and Heart Failure, he is beginning to research the world of Interstitial Lung Disease (ILD). This is a very disabling type of respiratory illness and causes pulmonary fibrosis. Dr. Neder and his team (in collaboraIn the time that he has been with the Department of Medicine, Dr. Neder has been instrumental in propelling the productivity of research in the Division of Respirology.

(below) **Dr. Alberto Neder** at Kingston General Hospital (KGH)



tion with Dr. Moran) are looking at new ways to help this patient population. This is something that would utilize current technologies in the labs to explore the reason why people with pulmonary fibrosis are impaired and how they can be helped. In the next few years Dr. Neder is hoping that they will have some solid research to show.

Rheumatology

Mission Statement

To Provide:

Care that is excellent and compassionate for patients with rheumatic diseases in our region

Education, at all levels of medical education including undergraduate, postgraduate and continuing education

Research that is cutting edge and translational in areas including:

- Conditions of bone and cartilage
- The epidemiology of osteoporosis
- The patient experience

Number of Learners

2 PGY4

4 PGY5

Number of Publications Peer Reviewed Articles

12

Number/Value of Grants

\$1.1K+



Division Chair DR. MALA JONEJA

Dr. Mala Joneja is an Associate Professor and the Division Chair for the Division of Rheumatology. Along with Dr. Stephen Archer, she coordinates Medical Grand Rounds for Queen's University Department of Medicine. Her interests in medical education include role modeling in postgraduate medical education, the hidden curriculum, professionalism and transformative learning.

Message from the Chair

For the Division of Rheumatology, our work in the year 2018 represented our ongoing commitment to the mission of Rheumatology in the academic health sciences setting. Working in an academic division such as ours, is rewarding as one sees the entire division contributing to providing excellent patient care, while each individual member also contributes to the academic mission. Individual contributions in our division are varied and include contributions to research, education, administration and community-building.

"If you want to go fast, go alone. If you want to go far, go together." - AFRICAN PROVERB

Faculty Members & Rank

Associate Professor Dr. Mala Joneja

Professor Emeritus Dr. Tassos Anastassiades

Professor Dr. Tanveer Towheed

Assistant Professor Dr. Marie Clements-Baker Dr. Tabitha Kung

Education/Training Program Update

The Rheumatology training program, led by Dr. Marie Clements-Baker, remains very active and popular among trainees across the country! We currently have 4 trainees and they have been diligently working towards achieving their royal college specialty. Each of them have or are contributing to scholarship through ongoing research projects and poster presentations and submissions of some of our most rare and interesting patients. We even have a new addition to the program working at KHSC in the form of a canine! Dr. Bailey Dyck one of our PGY4, has recently trained her dog Archimedes to come on staff as a visiting dog.

We will be formally converting to CBME implementation as July 1, 2019 is the Rheumatology National Subspecialty's implementation year. Faculty and trainees alike have already been working hard to move towards completing the multiple assessments required to truly become competency based. This has been challenging but we have a cohesive and supportive group all round.





Our trainees have had the opportunity to travel to Chicago for our main meeting of the American College of Rheumatology and have had the opportunity to participate in the Canadian Rheumatology meeting, the National Written Rheumatology Training Exam as well the Ontario Rheumatology Association's Resident Weekend and OSCE exam. We are also working on ultrasound training days for MSK ultrasound. We are very proud of the program and our trainees.

Awards

Dr. Mala Joneja 2018 Clinician of the Year Award

KHSC MSA,

2018 Exceptional Service Award

Queen's IM Training

NOTABLE HIGHLIGHTS

• Dr. Marie Clements-Baker has taken on the role of local Vasculitis expert, by connecting with Nephrology to start the Specialized Kidney Clinic for glomerulonephritis patients.

(left) Dr. Marie Clements-Baker (left below) The Rheumatology team

- Dr. Tabitha Kung continues to provide fast access to care for newly identified inflammatory arthritis patients in her Early Arthritis clinic. She also continues to use point-of-care ultrasound to complement her clinical assessments, and assist trainees in mastering this technology. She is also the lead for Rheumatology undergraduate teaching.
- Dr. Mala Joneja has continued her work in medical education in the areas of Diversity and Equity, and Postgraduate Medical Education. She has been busy chairing Medical Grand Rounds, the DOM Mentorship Program and the Women in Medicine program.
- A big thank you to **Dr. Tassos Anastassiades** (Professor Emeritus) who continues to support the division with his wisdom and ongoing passion for scientific inquiry!

Event Spotlight

Annual Walk for Arthritis

This event was organized by students from the School of Medicine, and was attended by patients, patients' friends and family and health care professionals. We look forward to many more walks in the future!

Clinic Spotlight

Dr. Tanveer Towheed continues to provide excellent care in the specific area of bone health with his successful osteoporosis specialty clinic.

The Queen's University osteoporosis clinic is run by Dr. Tanveer Towheed of the Division of Rheumatology. This once weekly specialized clinic at Hotel Dieu Hospital (HDH) sees patients of all ages with osteoporosis and other metabolic bone diseases. Evidence-based care is provided which includes the ordering of investigations to rule out secondary causes of osteoporosis and the initiation of treatment proven to reduce the risk of fragility fractures. 10 year fracture risk prediction models are used, including the CAROC system. This is an active teaching clinic that is attended by Rheumatology Fellows, Core Medicine Residents and Clinical Clerks. A separate OTN Telemedicine Osteoporosis clinic also runs once per month from HDH for patients that are unable to travel to Kingston. This clinic sees both new and follow up patients. The osteoporosis clinics complement our ongoing research efforts in osteoporosis as a part of the Canadian Multicentre Osteoporosis Study (CaMOS). The ultimate goal of the Osteoporosis clinic is to provide high quality evidence-based management which hopefully can improve upon the large osteoporosis care gap which exists across Canada.





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