WE ARE: AT THE CENTRE OF CARE

2019
DEPARTMENT OF INTERNAL MEDICINE
ANNUAL REPORT
UNIVERSITY OF MANITOBA
We currently find ourselves in the midst of a transformative period in the history of Manitoba’s health care system and service delivery. Consolidation of most of acute care, including emergency departments and intensive care units, streamlining of structures and services, and sustainability are all being addressed to enhance primary care.

Changes in a complex system at a relatively fast pace can come with some frictions and consequences, some of which may, admittedly, not have been fully anticipated. The fact that the changes we are experiencing are not only to service delivery, but are also happening to our academic mission in education and training, and research and development can add to the pressure. On the education front, the University of Manitoba is rapidly moving forward with implementation of ‘Competence by Design’ into our residency programs. On the research side, the ever fiercer competition for limited research support from our national agencies have created financial gaps and the need to seek other avenues of sources to fill those gaps. All these changes occurring at the same time can, at times, push us out of our comfort zone and add to our challenges.

Over the last academic year – many of you have served as key advisors on provincial wide committees, reviewed and launched new approaches to patient care services, re-examined procedures and protocols – all in an effort to seek efficiencies and eliminate redundancies. My sincere appreciation for all of your incredible hard work!

Let’s embrace this opportunity for a once in a lifetime chance to be at the forefront of these changes, and actively help to shape our future. Together we can play an important leadership role in creating a more sustainable healthcare system, and positively impact the quality of care that we provide. We know that there will be challenges ahead, but we also know that together as a team we can meet the challenge.

In the upcoming year, we will continue to strive and focus on finding ways to work more effectively and efficiently for the patients we serve, and continue our mission to provide excellent clinical care, superior education programs and cutting edge research.

My heartfelt thanks to you all for your unwavering dedication and ongoing support during this time of transition. Your hard work does not go unnoticed.

Eberhard Renner MD, FRCPC, FAASLD  Department Head, Internal Medicine
Mission
WHO WE ARE, HOW WE WORK TOWARD OUR VISION, WHAT MAKES US UNIQUE
We deliver state-of-the-art (tertiary) medical care in a patient centred, effective and efficient manner
We train the next generation of academic internists and subspecialists who innovate and excel in life-long learning
We are leaders in key areas of biomedical research and innovation at a national and international level

Vision
LOOKING AHEAD
To be a national leader in (tertiary) patient care, medical education, and biomedical research with international recognition in priority areas

Core Values
GUIDING PRINCIPLES OF OUR WORK AND HOW WE OPERATE
Patients always come first
We treat each other with respect
We do what we say we do
We hold each other accountable for what we do
We innovate and commit to continuous learning
We embrace change as an opportunity
We welcome competition as a driver of quality and innovation
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We are clinicians, administrators, researchers and educators — the essence of the department. Each individual is an integral part of our current success and catalyst toward an unprecedented future, and we recognize their dedication to the department. It is because of our passion, dedication and resiliency that our vision is becoming reality. This truly makes us the centre of care.
RESEARCH (clockwise from top left):
Dr. Harminder Singh, Section of Gastroenterology
Dr. Julie Ho, Section of Nephrology
Dr. Oleg Krokhin, Section of Biomedical Proteomics
Dr. Colette Seifer, Section of Cardiology
Dr. Liam O’Neil, Section of Rheumatology

EDUCATION (clockwise from top left):
Dr. Roopesh Kansara, Section of Hematology/Oncology
Dr. Sean Udow, Section of Neurology
Dr. Isanne Schacter, Section of Endocrinology

UNIVERSITY OF MANITOBA DEPARTMENT OF INTERNAL MEDICINE
A Word From Our Associate Head of Diversity and Professionalism:

Under the leadership of Dr. Renner, our department has made a commitment to examining and reimagining our culture. For 2019, this vision included initiatives to understand the barriers women have faced within our sections, increasing and championing civility, diversity and inclusion, and building better mentorship opportunities from groups that are underrepresented in our sections. We are also seeking to better understand how physician burnout is affecting our members so that we can begin to address issues that are within our control in ways that are likely to have tangible and lasting impact.

As part of the 2019 initiative, and under the direction of Dr. Renner, a preliminary Department of Internal Medicine (DIM) Civility and Interpersonal Environment Survey was created and distributed to 437 members across the DIM. This included support staff as well as physicians (328 physicians, 11 UMFAs, and 98 administration staff). The results of the survey were presented at DIM Grand Rounds on May 7, 2019.

Reflecting on civility in our environment, the question we have to confront is: what is at stake here? We all agree that the purpose of our professional efforts is to put patients first. The literature tells us that when our interpersonal relationships weaken, we can’t provide the best care to our patients. There are a number of evidence-based steps we can take to foster an environment of collegiality and respect - one that helps us to deepen our sense of connection and community. The literature also tells us that it takes only one disruptive or negative individual to bring an entire team down. This is another prompt for self-reflection in terms of how we avoid being that person.

It isn’t a stretch to look at our own well-being and capacity to perform through the same lens. We work together to provide superb, patient-centred medical care to the population of Manitoba. Our ability to do this job together is interdependent on the skill, attitude, behaviour and health of the colleagues we need and value.

Our teaching, learning and clinical environments are aggregates of our interactions as individuals, and the smallest interactions are impactful. Let’s all consider this as we interact with one another and everyone around us. Let’s ask more of ourselves and each other, and build the environment we aspire to.

CONGRATULATIONS & THANK YOU
This year our department joins in celebrating the retirement of three valuable team members:

**Dr. Sache Sinha**
47 Years of Service, Section of Cardiology

**Dr. Amarjit Arneja**
39 Years of Service, Section of Physical Medicine and Rehabilitation

**Dr. Dhalji H. Dhalwal**
16 Years of Service, Section of Hematology/Oncology
DEPARTMENT OVERVIEW

The Department of Internal Medicine at the University of Manitoba’s Rady Faculty of Health Sciences is the largest academic department of the Max Rady College of Medicine.

In support of the academic mission the department has over 60 faculty members with protected research time, 11 full-time PhD scientists, and 9 endowed research chairs. We train over 120 residents in our program and have 2 Area Focused Competency Programs in hepatology and interventional cardiology.

The department supports tertiary care and quaternary care medicine for the Province of Manitoba, and parts of Nunavut and Northwestern Ontario – a catchment area consisting of over 1.5 million people.

The Department of Internal Medicine has 6 clinical teaching units (CTUs) and is affiliated with 2 academic health centres: Health Sciences Centre and St. Boniface Hospital, as well as the Grace Hospital. The CTUs are the focal point of the in-patient training programs for medical residents and medical students rotating through medicine.

The Max Rady College of Medicine partners with both Shared Health and the Winnipeg Regional Health Authority (WRHA). Shared Health is responsible for the provincial planning and integration of health services and provides coordinated support to the regional health authorities. The WRHA oversees the health operations of Winnipeg urban hospitals (excluding Health Sciences Centre) this includes Churchill Health Centre, community health agencies, home care, public health, mental health services and long term care facilities. There are 16 clinical programs in the WRHA, each responsible for the provision of services to their population base within this system. The Department of Internal Medicine is affiliated with 7 of these programs.

DIM BLOG

NEW! Watch for executive and guest articles, along with the latest news and updates
Blog: n.umintmed.ca
Our standing committees play an essential role in our strategic planning, fiscal management, policy development and implementation.

EXECUTIVE COMMITTEE

The Executive Committee is the leadership forum of the department. The Executive Committee is chaired by Dr. Eberhard Renner and is comprised of 36 members. As the major advisory body to the department head, the committee plays an essential role in strategic planning, policy development and implementation, and fiscal management. The committee serves as an important communication channel within the department and ensures the bi-directional flow of accurate and timely information between leadership of the department and sections, and the individual departmental members.

FINANCIAL OVERSIGHT AND ADVISORY COMMITTEE

The Financial Oversight and Advisory Committee, chaired by Dr. Martin Karpinski, exists to represent the best interests of the university, college, department and its individual Geographical Full-Time (GFT) members, and is served by invested GFTs who are engaged and active in financial planning of the department.

The mission of the committee is to foster an atmosphere of engagement, to provide a forum for discussion of any issue of importance to the GFT members, to ensure there is transparency, accountability and a feedback mechanisms for GFTs, particularly with regard to departmental finances and its planning, while always ensuring that the academic mission moves forward.
POSTGRADUATE MEDICAL EDUCATION COMMITTEE

Chaired by Dr. Pamela Orr, the Postgraduate Medical Education Committee is made up of the program directors from each of the 15 accredited resident training programs within the Department of Internal Medicine (DIM).

The role of the Postgraduate Medical Education Committee within DIM is to provide direction and support for 15 program directors and resident training committees, to help promote the highest standards for postgraduate medical education within the resident training programs, and to help ensure the limited resources for postgraduate education within the department are used effectively.

The committee is an advisory body to the department head and the Executive Committee. The committee is also an advisory to the Associate Dean, Postgraduate Medical Education through the Faculty Postgraduate Medical Education Committee.

In compliance with the accreditation guidelines of the Royal College of Physicians and Surgeons of Canada, the day-to-day operation of each program is supervised by a designated program director and a resident training committee.

PROMOTION AND TENURE COMMITTEE

The Promotion and Tenure Committee is an advisory body to which reports through the Chair, Dr. John Wilkins, to the department head of internal medicine. The committee accepts applications from academic staff within the DIM (full-time and part-time) requesting consideration for promotion. Committee members review, evaluate, and appraise the following categories: research and scholarly activities, teaching activities, service/administration performance, and the potential of each departmental member under consideration for promotion.

RESEARCH AND FACULTY DEVELOPMENT COMMITTEE

The Research and Faculty Development Committee, Chaired by Dr. Hani El-Gabalawy, and Co-Chaired by Dr. Ruth Ann Marrie, has had a longstanding mandate to evaluate the research performance of all faculty members who have a commitment of 25% or greater in their academic role that is focused on research and scholarly activity. As such, the faculty’s members are asked to summarize their accomplishments, provide a vision for their future research and scholarly activities, and discuss potential assets and impediments to achieving their goals. The review not only emphasizes the faculty member’s role, but also the role of their respective section, the department, and the faculty as a whole, in supporting the member in pursuit of their academic goals. Such reviews are particularly important for early career faculty members, for whom they are undertaken with more frequency.

In addition to the individual member reviews, over the past two-years the committee has undertaken and completed a strengths, weaknesses, opportunities, and threats analysis for each of the sections within the department. This was done in order to get a better understanding of the context in which individual members’ research programs are embedded, and as a guide to future academic recruitment for the sections and the department as a whole.

SENIOR ADVISORY COMMITTEE

The Senior Advisory Committee exists as a forum for discussions between the Department Head, Dr. Eberhard Renner (Chair), the Managing Director, Dale Gustafson, and the Associate Heads, Dr. Hani El-Gabalawy, Dr. Nick Hajidiacos, Dr. Jillian Horton, and Dr. Pamela Orr.

The mission is to foster an atmosphere of engagement; ensuring senior department leadership is aligned in moving forward with the academic mission and the department’s strategic vision.
SECTION OVERVIEWS:

ALLERGY & CLINICAL IMMUNOLOGY

The Section of Allergy and Clinical Immunology focuses on the diagnosis and management of allergic disorders, asthma, chronic urticaria, angioedema, drug allergy, stinging insect allergy and immunodeficiency diseases.

CLINICAL

The section is predominantly an outpatient ambulatory care specialty, but also provides inpatient consultations at all hospitals in Winnipeg, plus provides care for patients from the Nunavut and Northwestern Ontario areas. Clinics are currently located at the Health Sciences Centre and Grace Hospital.

The section has added a new Geographical Full-Time (GFT) physician, Dr. Colin Barber, and is planning specialty clinics to address the growing need for urgent penicillin allergy testing as well as combined clinics with other disciplines in order to facilitate coordinated patient care.

EDUCATION

Trainees at all levels see a wide spectrum of clinical disease, and are encouraged to participate in a variety of research projects with the opportunity to present their findings at local, national and international meetings.

GFT
Dr. C. Barber  
Dr. C. Kalicinsky  
Dr. R. Warrington

FACULTY
Dr. P. Ho  
Dr. L. Rosenfield  
Dr. T. Rubin

Acting Section Head
Christine Peschken, MD, MSc, FRCP

Dr. Peschken received her medical degree (with distinction) from the College of Medicine, University of Saskatchewan. She completed her internal medicine specialty training at the University of Manitoba, became Chief Medical Resident in 1992-1993, and completed her Rheumatology sub-specialty training at the University of Manitoba in 1995. Following her clinical training, she completed an Arthritis Society Research Fellowship including a Master’s Degree in Epidemiology and Biostatistics at McGill University (Dean’s Honour List), with course work both at McGill University and the University of British Columbia, and completed a thesis on Systemic Lupus Erythematosus (SLE) in Manitoba’s Aboriginal population. Dr. Peschken is the Chair of the Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus. In addition to being the Acting Section Head of Allergy and Clinical Immunology, Dr. Peschken is also the Section Head of Rheumatology.

http://allergy.wiki.umintmed.ca
Although DNA carries the information necessary for the synthesis of proteins, the proteins themselves are the molecules responsible for the activities necessary for all life processes.

The incorporation of results from many high content “-omics” approaches (i.e. genomics, transcriptomics, metabolomics) is essential to the goal of systems biology which is to develop dynamic models to describe living systems in health and disease. Proteomics is an approach that attempts to simultaneously characterize all of the proteins in a biological sample with the goal of developing an understanding of how proteins function in health and disease. This is no small feat as there are ~20,000 human genes coding for proteins and any given cell type may express >12,000 different types of proteins at one time. The use of advanced mass spectrometry now permits us to identify >8,000 types of molecules in a single analysis, and our colleagues are pushing hard to extend that capability. The presence of a protein does not always indicate whether it is active so approaches are now being advanced to detect active molecules such as enzymes. Collectively these approaches can provide critical information about the process and progress of disease, as well as identify possible targets for new therapeutic interventions.

The Manitoba Centre for Proteomics and Systems Biology was established with the intent of developing the expertise and resources base for the application of proteomics to biological and clinical materials. This has been highly successful locally, nationally and internationally. Local collaborations are ongoing in diverse areas including but not limited to rheumatology, transplant nephrology, cardiology, and oncology. These projects have often involved small feasibility studies as proof of principle which has facilitated subsequent funding from local and national agencies. There are still many unexplored opportunities for the application of systems biology in medicine and the centre welcomes the opportunity to discuss these with interested members of internal medicine and other clinical departments.

CLINICAL

Several members have clinics in rheumatology and nephrology through the corresponding sections in internal medicine.

RESEARCH

Research areas include cell biology, immunology, rheumatology, nephrology/transplantation, virology and separation sciences.

EDUCATION

Members teach basic and clinical science in the Departments of Immunology, Chemistry, Biochemistry and Medical Genetics, Internal Medicine, and graduate students and undergraduate co-op students in the laboratory.

http://proteomics.wiki.umintmed.ca
There are a total of 1.5 million individuals in the catchment area of Manitoba, Northwestern Ontario, and Nunavut who require cardiac care. The faculty members within the section deliver cardiac care centred at St. Boniface Hospital, one of the busiest tertiary cardiac facilities in Canada.

CLINICAL SERVICES, SPECIALIZED CLINICS & PROGRAMS

With respect to patient volumes, there are a total of 12,500 outpatient clinic visits, 1,200 Coronary Care Unit admissions, and over 2,000 ward admissions to cardiology on an annual basis. Annually, in terms of non-invasive diagnostic testing, there are a total of: i) 75,000 electrocardiograms; ii) 2,700 Holter monitors; iii) 7,100 stress tests; iv) 18,500 echocardiographic studies; v) 3,600 nuclear studies; and vi) 750 cardiac Magnetic Resonance Imaging (MRIs) performed. In the cardiac catheterization laboratories a total of 5,500 procedures are performed annually, of which 2,600 percutaneous interventions are performed; the second largest in the country. In the electrophysiology department a total of 650 pacemaker implants, 300 implantable cardiovascular-defibrillator/cardiac resynchronization therapy implants, 12,000 device interrogations, and 350 electrophysiology ablations are performed annually.
CLINICAL INNOVATION

The 2019 Canadian Institute for Health Information report on Cardiac Care Quality Indicators ranks St. Boniface Hospital (SBH) as one of the top hospitals in the country for provision of cardiac care. The “Inherited Arrhythmia Clinic” at SBH was awarded the 2019 Health Innovation Award for Patient-Centred Care by the Winnipeg Regional Health Authority (WRHA). The first MRI scans in Manitoba for MRI conditional pacemakers at SBH started in the fall/winter of 2019. The first rotational atherectomy course in Canada was led by the interventional cardiology group at SBH in May of 2019 with physicians and nurses participating from across Canada. The expansion of the cardiology inpatient wards from 32 to 48 beds with a total of 3 clinical teaching unit services at SBH was successful. Portage la Prairie has started a cardiac rehabilitation program.

RESEARCH

In collaboration with the Institute of Cardiovascular Sciences (ICS) at St. Boniface Albrechtsen Research Centre (SBRC) and the WRHA Cardiac Sciences program major areas of research in the Section of Cardiology include translational research and metabolic studies in heart failure, cardiovascular bioinformatics, population health, outcomes research, and prevention policy.

Amongst the 30 full-time Geographical Full-Time (GFTs), there are a total of 4 clinician investigators: Dr. Amir Ravandi, Dr. Ashish Shah, Dr. Shelley Zieroth and Dr. Davinder S. Jassal.

All 4 researchers within the Section of Cardiology are currently cross-appointed with the Department of Physiology and Pathophysiology as members of the ICS at SBRC. Our translational research benefits from having a state-of-the-art small animal imaging facility at SBRC. The centre also houses the Cardiovascular Lipidomics Laboratory, the only facility of its kind in Canada dedicated to targeted and non-targeted lipidomic analysis of cardiovascular disease. The SBRC also houses the animal endovascular angiography facility allowing for large animal studies to develop pre-clinical therapies. Our members also participate and lead investigator-initiated studies, registry design and analysis, and multicentre investigations including both Canadian Institutes of Health Research (CIHR) and sponsored research studies. The faculty members in the Section of Cardiology are involved in over 70 separate clinical trials at SBH.

Between 2018 and 2019, the Section of Cardiology was successful in obtaining close to 3 million dollars in competitive funding from local, provincial, and national funding agencies including the Heart and Stroke Foundation of Canada (HSFC), Canadian Cancer Society (CCS), and Canadian Institutes of Health Research (CIHR). Dr. Shah was awarded an operating grant from the Manitoba Medical Services Foundation (MMSF) in 2019. Dr. Jassal was awarded 3 national grants from HSFC, CCS/CIHR, and the Canadian Agricultural Program in 2019.

Over the past decade, all 4 clinician investigators have published over 200 peer reviewed scientific articles with a number of publications in high impact journals. The current infrastructure has provided a unique learning opportunity for training highly qualified personnel for both basic science and clinical trainees over the past decade. A total of 15 undergraduate students, 23 Bachelor of Science Medical students, 20 graduate students (Master’s/PhD/Postdoctoral), and 65 clinical trainees (residents/fellows) have presented at over 200 national/international conferences with funding support from SBRC, MMSF, Research Manitoba, CAN-USA grant, CancerCare Manitoba, Heart and Stroke Foundation (HSF), Canada Foundation for Innovation, and CIHR.

EDUCATION

The section has displayed their commitment to teaching by completing cardiovascular (CV)1 and CV2 modular courses and CV clinical skills comprising of approximately 300 direct teaching hours by faculty in the Med I level alone. The section was nominated and received both teaching recognition and Manitoba Medical Students’ Association (MMSA) Awards in February 2019. Furthermore, they won the Undergraduate Medical Education (UGME) Award for best course (Cardiovascular I), Dr. Clarence Khoo won a Med I Award for Innovation, and Dr. Anita Soni won a Med I Award for Mentorship.

As the UGME Program Director, Dr. Anita Soni was nominated by the MMSA for the role of Honourary Senior Stick. This role is based on mentorship, and advocacy as an honorary member of the executive council by assisting the MMSA executive by providing advice and guidance. There was a “Passing of the Sticks” ceremony which took place in May 2019 at the Medical School Convocation for the Class of 2019, where the outgoing Senior Stick, Dr. Marcia Anderson, passed the “stick” to Dr. Anita Soni. Dr. Malek Kass is the Postgraduate Medical Education (PGME) Program Director of Adult Cardiology Residency training program and Dr. Basem Elbarouni is the PGME Program Director of the Area of Focus Competence (AFC) Interventional Cardiology training program. Currently, there are 9 PGME trainees in the core adult cardiology residency training program and 2 in the AFC interventional cardiology training program. Dr. Chris Lee (PGY6) was the recipient of the HSF of Manitoba/Sanoﬁ award in Cardiology for 2019.
The Section of Critical Care Medicine at the University of Manitoba is a busy enterprise, both clinically and academically.

The section originated as part of the Department of Internal Medicine and remains so today, though the more than 40 intensivists on our faculty come from a variety of departments including anesthesia, emergency medicine, internal medicine, and surgery.

CLINICAL SERVICES

We provide critical services for adults in Manitoba, Northwestern Ontario, and Nunavut. Because of the distances, critical care transport including specially equipped aircraft is integral to our clinical work. We have five Intensive Care Units (ICUs) in two academic/tertiary hospitals (Health Sciences Centre and St. Boniface Hospital) and one at Grace Hospital and each hospital has distinct medical and surgical/trauma ICUs. Health Sciences Centre has a separate medical and surgical/trauma ICUs; St. Boniface Hospital has a mixed medical-surgical ICU, plus a cardiovascular surgery ICU; Grace Hospital has a mixed medical-surgical ICU. ICUs within the city possess advanced support capability including, invasive mechanical ventilation, continuous renal replacement therapy and Extra-Corporeal Membrane Oxygenation (ECMO). Approximately 5,000 patients are admitted to our ICUs annually.

SPECIALIZED CLINICS & PROGRAMS

The Critical Care Outcomes Improvement Team

The mission of the Critical Care Outcomes Improvement Team (OIT) is to establish a process and systems-based approach for continuously improving safety, quality, and outcomes of care provided in Intensive Care Units. The OIT has a two-tiered structure. Each ICU has a quality circle organized on the established principles of total quality management, including multidisciplinary bedside staff and unit leadership; they are charged with implementing regionally-directed priorities as well as locally-developed projects within each unit. A regional steering committee sets overall system priorities and provides data and analytical support to the quality circles; membership is comprised of representatives from all Winnipeg ICUs, and all disciplines which make up the ICU teams. Dr. Kendiss Olafson and Dr. Carmen Hrymak chair this committee.

Quality Indicator Monitoring

The OIT has focused on improving care across multiple quality indicators; Safe, Timely, Effective, Efficient, Patient/Family centred care, and healthy Staff work-life (STEEPS). Utilizing the clinical Winnipeg ICU database, which includes all adult ICU admissions from 1999 onwards, we have developed a quality improvement report around these indicators using statistical process control methodology to evaluate changes in performance between units and over time. This has assisted in identifying priorities and evaluating the impact of our interventions. In addition, family satisfaction survey collection has provided valuable patient and family feedback that have also directed many of our interventions.

CLINICAL INNOVATION

Interventions

The ABCDEF approach to care emphasizes targeted pain management, sedation minimization, delirium prevention, spontaneous breathing trials, early mobilization, and family engagement. This paradigm is shifting our patient population from comatose patients to awake, engaged patients and families that participate in rounds and their recovery. We continue to use multiple strategies to help with this paradigm shift in care including quarterly audits, standardized order sheets, and ongoing educational opportunities. This year we implemented our revised early mobilization protocol to have greater bedside staff empowerment for mobilization of appropriate ICU patients. We continue to monitor hospital-acquired infections of Ventilator-Associated Pneumonia and Central Line-Associ-
ated Bloodstream Infections, and review most cases in order to identify areas that require improvement. Last year we completed a large audit of the care we provided to over 300 patients with the Acute Respiratory Distress Syndrome, identifying areas for improvement. Working groups are currently tasked to address these issues. Our OIT organized its 8th Annual WRHA Critical Care Quality Improvement Symposium in May 2019 with multidisciplinary staff in attendance. It featured two esteemed guest speakers and an interactive workshop format. The symposium provides an opportunity for all ICU quality circles to present a QI project with multiple poster presentations.

In 2020, we look forward to another productive year improving care in our Winnipeg ICU’s.

RESEARCH

From 2015-2019, members of the Section of Critical Care have authored 369 published manuscripts, including 70 in 2019. Of the total, 258 (70%) were original scientific studies and 104 were original studies on critical care topics. During that same time, section members have been investigators on 26 extramural grants, being principal or co-principal investigators on 13 with total direct funding of 6.1 million dollars. Major areas of research effort in the section are: (a) sepsis and septic shock, (b) the epidemiology of critical illness, (c) data management in clinical research, (d) hematology and critical illness, and (e) advance care planning and end-of-life care.

EDUCATION

Our faculty provides critical care education for medical students, residents, subspecialty residents and fellows. Formal Undergraduate Medical Education (UGME) and Post Graduate Medical Education (PGME) rotations are hosted at Health Sciences Centre, St. Boniface Hospital, and Grace Hospital ICUs. Critical care section faculty members deliver a monthly series of lectures covering a curriculum of 12 core ICU topics. The lectures are presented in an interactive format across the teaching sites to allow for participation of all trainees across the city.

The major training focus of the PGME critical care program is the group of critical care subspecialty residents. Critical care trainees complete Royal College of Physicians and Surgeons of Canada (RCPSC) training in a base specialty prior to commencing their subspecialty residency – with most trainees certifying in internal medicine, anesthesia, general surgery, cardiac surgery, or emergency medicine. Currently, there are six trainees in the critical care program. The critical care subspecialty residents complete two-years of additional training specific to the critical care environment. During this time they spend the bulk of their time working as team leaders within the ICUs, but also develop non-clinical areas of medical expertise, complete coursework and a project relevant to quality improvement, complete a scholarly project, and write thrice-annual in-training exams to prepare for certification, as all University of Manitoba critical care medicine subspecialty residents are expected to write the RCPSC examination in critical care medicine.

New applications for subspecialty training in critical care medicine are accepted every summer during the Canadian Resident Matching Service Medicine Subspecialty Match. We welcome applications from physicians who desire to become experts in the delivery of exemplary care to critically ill patients.

Co-Section Head
Bojan Paunovic, MD, FRCPc
Dr. Bojan Paunovic, Co-Section Head, received a BSc (1991), MD (1995), and completed his residency in internal medicine (1999) and critical care (2001) at the University of Manitoba. Dr. Paunovic is now entering his 20th year as a clinician–administrator with significant involvement in postgraduate education and support for research within the Section of Critical Care. More recently, Dr. Paunovic has been actively involved nationally as a member of the executive and current President of the Canadian Critical Care Society.

Co-Section Head
Allan Garland, MD, MA
Dr. Allan Garland, Co-Section Head, received a BSc from the University of Michigan and a MA from Harvard University. He completed his MD, internal medicine residency, and research/clinical fellowship in pulmonary & critical care medicine at the University of Chicago. In faculty positions at the Robert Wood Johnson Medical School in New Jersey, and Case Western Reserve University School of Medicine in Ohio, he was the director of their medical ICU’s. He came to the University of Manitoba in 2007, where he is currently a Professor of Medicine and Community Health Sciences, and an adjunct scientist at the Manitoba Centre for Health Policy; since 2012 he has been co-Head, Section of Critical Care.
The Section of Dermatology provides medical and surgical intervention in the prevention, recognition and treatment of diseases of the skin, hair, and nails; offering comprehensive and specialized care to Manitobans.

CLINICAL SERVICES

The fourteen members in the Section of Dermatology continue to deliver dynamic clinical care mainly in a private practice setting, with an active clinic at the Health Sciences Centre for both adults and children. The section continues to meet on a monthly basis via Journal Club to present interesting and challenging cases and various clinical works to encourage ongoing teaching and learning.

EDUCATION

We have successfully engaged a trainee from the University of Toronto as part of a long term plan to help address a shortage in dermatology services. We are excited to work with this individual and their interest in our multidisciplinary expertise. Our section provides a comprehensive didactic clinical skills teaching unit to Med II students. Our members are involved in training residents from a variety of specialties who come to learn clinical and procedural dermatology skills.

In November, the section had their annual Arthur Bert Lectureship that was a tremendous success!

FACULTY

Dr. T. Afifi
Dr. A. Botkin
Dr. B. Collin
Dr. J. Fudge
Dr. R. Haydey

Dr. L. Hurst
Dr. J. Keddy-Grant
Dr. R. Mouton
Dr. S. Silver
Dr. J. Sneath

Dr. V. Taraska
Dr. J. Toole
Dr. R. Van De Velde
Dr. M. Wiseman

Section Head
Marni Wiseman, MD, FRCPc

Dr. Marni Wiseman began her dermatology practice in Winnipeg, Manitoba in 2001. In addition to her responsibilities as an Associate Professor and Section Head of Dermatology at the Rady Faculty of Health Sciences at the University of Manitoba, Dr. Wiseman spends most of her days at her Private Medical Practice as Medical Director of SKINWISE DERMATOLOGY. Her areas of interest include psoriasis, atopic dermatitis and aesthetic dermatology. She actively participates in clinical trials through Wiseman Dermatology Research, where she has participated in dozens of clinical trials. Dr. Wiseman is a frequent supervisor and mentor for medical students and residents. She has extensively published in areas of photodermatosis, infectious dermatology, melanoma, and skin cancer epidemiology. Dr. Wiseman’s community commitments are broad and include involvement with the Canadian Dermatology Association Sun Awareness Program and was a the former Regional Director of the Prairie Provinces. She is an editor of the Journal of Cutaneous Medicine and Surgery, and was the chair of the Skin Cancer Disease Site Group at CancerCare Manitoba for 15 years.

Dr. Wiseman holds regular outreach skin cancer screening clinics in rural locations in Manitoba, has been featured in many news stories, and regularly presents at provincial, national and international meetings and congresses.
The Section of Endocrinology maintains a strong commitment to the provision of clinical services, undergraduate and postgraduate teaching and basic and clinical research. The section consists of 13 full-time and part-time faculty members, and 2 PhD scientists.

CLINICAL

The Section of Endocrinology provides care to patients with diabetes (types 1, 2 and gestational), as well as those with thyroid disorders, adrenal diseases, pituitary dysfunction, reproductive problems, osteoporosis, parathyroid disease and other issues of bone metabolism. This includes diagnostic evaluation, education, treatment recommendations and appropriate follow-up.

Our endocrinologists provide out-patient ambulatory care clinical services in Winnipeg’s two largest tertiary care sites, St. Boniface Hospital and Health Sciences Centre. On call consultation coverage is provided to the emergency room, medical and surgical services and intensive care not only provincially but also expansively to the larger geographic regions including Saskatchewan, Northwestern Ontario, and Nunavut. Several members also actively collaborate with community resources such as the Youville Centre.

The Diabetes in Pregnancy Clinic located at the Health Sciences Centre provides educational classes for patients with gestational diabetes mellitus under the care of 5 Certified Diabetes Educators (CDEs) (nurses/dieticians). The trained CDE nurses provide the valuable service of endocrinology & metabolism clinical investigative unit testing specializing in adrenocorticotropic hormone stimulation and gonadotropin releasing hormone testing, as well as L-thyroxine absorption, oral glucose tolerance, saline suppression and water deprivation tests.

RESEARCH

Our research portfolio involves two PhD scientists collaborating and actively participating with other section members in areas involving the crosstalk between adipose (and by extension, metabolic) and immune functions in metabolic health and diseases, including obesity-linked diabetes and cancer. Both scientists have been consistently supported by Tri-Council and other funding agencies, including an infrastructure support from Canada Foundation for Innovation for “Signal Transduction Laboratory in Diabetes Research”.

EDUCATION

Postgraduate training in endocrinology and metabolism is a two-year Royal College accredited program in adult endocrinology designed to provide a trainee with sufficient exposure to endocrine and metabolic disorders along with the necessary clinical and basic science knowledge base to function capably in a consultative capacity either in a community or an academic setting. Dr. Veena Agrawal is the section’s undergraduate lead and Dr. Isanne Schacter fulfills the postgraduate lead and residency program director roles. Together they work to ensure high standards of education for the residents and students during rotations.
The Section of Gastroenterology provides research, education and expert specialized gastrointestinal care for a wide spectrum of gastrointestinal disorders. Endoscopy plays an integral role in the investigation and management of gastrointestinal disorders and the section provides leadership in the delivery of these services. Currently there are 8 full-time members of the Section of Gastroenterology with 3 at the Health Sciences Centre and 4 at St. Boniface Hospital, and 1 scientist performing basic biology research in digestive disorders.

Acting Section Head
Donald Duerksen, MD, FRCP

Dr. Duerksen is an Associate Professor of Internal Medicine at the University of Manitoba in the Section of Gastroenterology. He is the Medical Director of the Manitoba Home Nutrition Program and Medical Advisor for the Winnipeg Regional Health Authority (WRHA) Department of Nutrition.
CLINICAL

The Section of Gastroenterology (GI) provides advanced gastrointestinal care and specialized gastrointestinal services to Manitobans. These include, gastrointestinal motility disorders and testing, management of inflammatory bowel disease, advanced therapeutic endoscopy for gastrointestinal malignancies including endoscopic mucosal resection, radiofrequency ablation, and endoluminal stenting, pancreatic and biliary disease and advanced biliary endoscopy, endoscopic ultrasound, specialized nutrition support including home total parenteral nutrition (TPN), small bowel capsule endoscopy and single balloon enteroscopy, and emergency endoscopic services.

CLINICAL INNOVATION & SPECIALIZED PROGRAMS

Under the direction of Dr. Moffatt, a WRHA central intake process for endoscopic procedures has been developed. This allows all consultations for endoscopic procedures to be triaged, prioritized and distributed to the appropriate endoscopist. With the development of a new ambulatory clinic, plans are underway to develop a multidisciplinary clinic to manage patients with complex inflammatory bowel disease. Radiofrequency ablation of superficial tumors is an endoscopic technique that is now available at Health Sciences Centre. Ultrasound of the small bowel is an emerging non-invasive technique to evaluate Crohn’s disease. Equipment has been procured and a program is being developed.

The members of the GI section have areas of special interest which allows for expertise in a wide spectrum of gastrointestinal disorders. Dr. Bernstein - Inflammatory Bowel Disease (IBD); Dr. Ilnyckyj - gastrointestinal motility disorders and functional gastrointestinal disorders; Dr. Duerksen - celiac disease and Manitoba Home Nutrition Program; Dr. Cantor - endoscopic ultrasound; Drs. Moffatt and Coneys - biliopancreatic disorders and therapeutic endoscopy; and Dr. Singh - GI malignancies and IBD. Dr. Krongold is a gastroenterologist at the Grace Hospital leading the development of small bowel ultrasound.

EDUCATION

Currently there are 6 GI residents in the GI fellowship training program. Dr. Cantor is the program director of the GI fellowship program and Dr. Ilnyckyj is the director of undergraduate medical education for gastroenterology/hepatology and nutrition.

RESEARCH

The section’s research portfolio is broad with many members contributing in various areas. Dr. Bernstein leads the University of Manitoba Inflammatory Bowel Disease Clinical and Research Centre and collaborates with researchers from other sections and departments at the University of Manitoba as well as with centres around the world. Dr. Duerksen leads nutrition and celiac disease research. Dr. Singh leads GI cancer, endoscopy quality improvement and C. difficile research. Dr. Coneys has just joined the faculty and will be leading pancreaticobiliary research. Dr. Ghia leads basic biology research in GI disorders.
The Section of General Internal Medicine (GIM) includes a diverse group of over 50 full and part-time faculty members who provide in-patient and out-patient clinical services at the three teaching hospitals in Winnipeg.

**CLINICAL SERVICES**

Our physicians provide in-patient consult services in 6 Clinical Teaching Units (CTUs) in addition to out-patient consult services. Our ambulatory care clinics offer post-admission follow-ups for patients who were admitted to internal medicine wards, in addition to referrals received from primary care providers for GIM, and referrals from the emergency departments. Furthermore, we provide specialty services to the Addictions Unit, and the Maternal Fetal Medicine Unit at HSC Women’s Hospital.

**EDUCATION**

Our faculty members actively participate in both undergraduate and postgraduate education. The GIM residency program is designed to provide our residents with the broadest clinical experience that will afford them the best opportunity to attain the knowledge, skills and attitudes to become strong clinical physicians and to practice internal medicine in the most exemplary manner.

**Acting Co-Section Head**

**Ken Van Ameyde, MD, FRCP**

Dr. Ken Van Ameyde earned his medical degree from the University of Alberta in 1979 before completing his residency programs at Memorial University and the University of Manitoba. Dr. Van Ameyde has been a full-time member of the Department of Internal Medicine at the University of Manitoba for over 30 years. During this time he has won countless teaching awards and held numerous leadership and administrative positions including: Service Chief of the Clinical Teaching Unit, Associate Site Director for the WRHA Medicine Program at the Health Sciences Centre, Program Director for the Internal Medicine Core Training Program, Head, Section of General Internal Medicine and a member of the internal medicine examination board for the Royal College of Physicians and Surgeons of Canada from 1994 to 2008.

**Acting Co-Section Head**

**Patrick Griffin, MB, MRCPI, FRCP**

Dr. Patrick Griffin, having completed the Membership of the Royal College of Physicians of Ireland exam came to Canada in 1982 to start a fellowship in cardiology at the University of Manitoba. Dr. Griffin and his partner married and spent 18 months working for the Northern Medical Unit in Churchill, Manitoba. Upon returning to Winnipeg, he completed two years further internal medicine training and took the Royal College exam in 1988. Since that time his practice has involved general internal medicine, cardiology and critical care. In recent years, Dr. Griffin’s focus has been in leadership roles as part of general internal medicine. He was the Site Director, Medicine Program at Victoria General Hospital from 2009-2017, and Service Chief of the Clinical Teaching Unit (CTU) during that time. Dr. Griffin returned to St. Boniface Hospital in January 2019.
GERIATRIC MEDICINE

The Section of Geriatric Medicine is the oldest academic section of geriatric medicine in Canada. There are currently six full-time geriatricians in the section, and all have established relationships with geriatric psychiatry, the care of the elderly program (family medicine) and the Centre on Aging. Section members attend on inpatient units, inpatient consult services, day hospitals, clinics, as well as support outreach teams. There are strong links with geriatricians and care of the elderly physicians working in rural regions.

CLINICAL

We have an extensive, well-integrated clinical program. Geriatricians attend on geriatric assessment units at Deer Lodge Centre, and the Victoria Hospital; there are five geriatric day hospitals, longitudinal teaching clinics, and active consult services at all acute and low acuity sites in the Winnipeg Regional Health Authority.

RESEARCH

Section members are actively engaged in epidemiological studies of aging, with a particular interest in the complex interplay of cognition, mental health and physical health, as well as the health of aging rural populations. Section members have ongoing Canadian Institutes of Health Research supported research projects. Section members also participate in ongoing quality improvement programs. Previous trainees have received research awards.

EDUCATION

We have a long history of training geriatricians, care of the elderly physicians, and trainees at various stages of training. Dr. Van Ineveld is well-recognized for her outstanding service as the Program Director and is acting Undergraduate Medical Education Director. Dr. Dixon is the Medical Director of the geriatric subprogram of the Winnipeg Regional Health Authority.

Our faculty actively participates in educational activities of medical trainees at multiple stages of training, as well as teaching allied health professional trainees, and providing educational outreach to the general public.

Section Head

Phil St. John, MD, MPH, CCFP, FRCPC

Dr. Phil St. John is a Professor and Head, Section of Geriatric Medicine. He completed his MD at the University of Manitoba, a rotating Internship at Memorial University of Newfoundland, internal medicine training at the University of Manitoba and his subspecialty training at the University of Ottawa. He obtained a Master’s in Public Health (Epidemiology) from Johns Hopkins University. Dr. St. John is an affiliate of the Centre on Aging at the University of Manitoba. His clinical practice is as a consultant geriatrician sited at Health Sciences Centre and as an attending geriatrician at Deer Lodge Centre in Winnipeg.

GFT

Dr. L. Peitsch
Dr. P. St. John
Dr. D. Strang
Dr. S. Thille
Dr. L. Torbiak
Dr. K. Van Ineveld

FACULTY

Dr. L. Blom
Dr. M. Gawryluk
Dr. G. Hasdan
Dr. S. Henry
Dr. E. Smith Rhynold

Left to right: Drs. L. Torbiak, S. Thille, P. St. John, D. Strang, C. Van Ineveld, and L. Peitsch
Dr. Minuk graduated from the University of Manitoba Medical School in 2004 and obtained residency training in internal medicine and subspecialty training in hematology at the University of Western Ontario. He worked as a hematologist at the London Regional Cancer Program from 2009 to 2016, served as the Chair of the Lymphoproliferative Disease Site Group, Medical Director of the Malignant Hematology Clinical Trials Unit and Medical Director of the Bleeding Disorder Program. Dr. Minuk returned to Winnipeg and started at CancerCare Manitoba and the University of Manitoba in 2016. He is the Director of the Clinical Trials Unit at CancerCare Manitoba and the acting Section Head of Hematology/Oncology.

HEMATOLOGY/ONCOLOGY

The Section of Hematology/Oncology, in affiliation with CancerCare Manitoba (CCMB), is a research-oriented group that offers comprehensive care to adults in Manitoba with cancer and serious blood disorders. The section consists of 36 Geographical Full-Time (GFTs) and 7 additional faculty members; included are 1 lecturer, 28 assistant professors, 8 associate professors, 3 professors, and 2 distinguished professors emeriti.
CLINICAL

Our ambulatory care clinical services are based at 3 CCMB sites in Winnipeg (Health Sciences Centre, St. Boniface Hospital and Victoria Hospital), while in-patient services are at St. Boniface Hospital and Health Sciences Centre, the latter including the province’s only unit dedicated to complex hematological malignancy and Blood and Marrow Transplantation (BMT).

RESEARCH

The section’s research portfolio is broad. In 2019, together they’ve published more than 80 peer-reviewed articles and received over $1.7m in research funding from organizations like Research Manitoba, CancerCare Manitoba Foundation, the University of Manitoba, and Canadian Institutes of Health Research, with a total of 6 physician full-time equivalent dedicated to research. We participate in clinical trials and lead translational research, cancer epidemiology and health outcomes programs through our partnerships with CCMB’s research institute in Hematology/Oncology and the internationally renowned provincial cancer registry. High profile research interests include: chronic lymphocytic leukemia (CLL), for which there is an active tumour bank and patient registry; acute care hematology, in which there is close collaboration with critical care partners; studies of the pathogenesis, treatment and prevention of infections in vulnerable cancer patient populations; BMT registry outcomes, based on the Canadian National BMT registry that is housed at CCMB.

EDUCATION

We offer two distinct undergraduate courses at the Max Rady College of Medicine: blood/immunology and medical oncology. We also provide Royal College of Physicians and Surgeons of Canada accredited residency training programs in both hematology and medical oncology, and we offer advanced post-residency training in sub-specialties such as BMT, lymphoma, and thoracic malignancies. In conjunction with CCMB’s community cancer program, our section members lead annual Continuing Professional Development sessions for primary care practitioners and specialists such as the community cancer program annual meeting, blood disorders day and the geriatric oncology day.

LEADERSHIP

Section members hold major leadership positions in national and international organizations; such as the Canadian Partnership Against Cancer, Canadian Clinical Trial Group, Pan-Canadian Oncology Drug Review, Canadian Blood and Marrow Transplant Group, the Royal College of Physicians and Surgeons of Canada, the Infectious Diseases Society of America, and the American Society of Hematology.
HEPATOLOGY

The Section of Hepatology at the University of Manitoba is Canada’s first Section of Hepatology that is separate from the Section of Gastroenterology.

Our mission is to provide excellence in all three academic pillars: Clinical Care, Research and Education. The physicians of the section work closely with other specialists to ensure that our patients benefit from the latest diagnostic techniques and treatments.

CLINICAL

The section provides clinical services for outpatients and a city-wide consult service for inpatients covering all aspects of hepatology including pre- and post- transplantation care; it serves as the tertiary hepatology referral centre for Manitoba, Nunavut and Northwestern Ontario.

Apart from general hepatology clinics, the section operates specialized tertiary care clinics for viral hepatitis (Viral Hepatitis Investigative Unit), and for liver transplantation (pre- and post-transplant). The section’s home base is Health Sciences Centre, but satellite clinics are currently located at Grace Hospital and the Bairdmore Clinic.

RESEARCH

Several of our section’s faculty members and research nurses are actively involved in hepatobiliary clinical research that is conducted through our Liver Diseases Clinical Trials Unit. Two of our section members obtained large Canadian Institutes of Health Research (CIHR) funding for clinical research focussing on non-alcoholic fatty liver disease in our First Nations population. One of our faculty members is a CIHR funded clinician-scientist with an active lab-based research program on the role of cancer stem cells in the pathogenesis of hepatocellular and cholangio carcinoma.

EDUCATION

All our section members are involved in undergraduate and postgraduate medical education, as well as training of postdoctoral fellows, graduate students and research associates. The section offers a Royal College of Physician and Surgeons of Canada Area Focused Competency program in adult hepatology and, apart from hepatology fellows, trains rotating fellows and residents from general internal medicine and gastroenterology.

Acting Section Head

Eberhard L. Renner, MD, FRCPC, FAASLD

Dr. Eberhard Renner graduated from medical school at the University of Basel, Switzerland. Following completion of his post-graduate training in internal medicine and gastroenterology/hepatology at the Universities of Basel and Bern, and a gastroenterology/hepatology research fellowship at the University of California, San Francisco, he joined the faculty at the University of Bern in 1994. Dr. Renner served as the head of hepatology, medical director of the liver transplant program, and vice-chair of the Division of Gastroenterology and Hepatology at the University Hospital in Zurich, Switzerland from 1997 to 2003.

In 2004, Dr. Renner was recruited to the Department of Internal Medicine at the University of Manitoba as a clinician-scientist, director of the liver transplant program, and Professor of Medicine and Pharmacology. He relocated to the University of Toronto in 2007 as the director GI transplantation and Professor of Medicine at the University Health Network. He returned to the University of Manitoba in 2016 as head, Department of Internal Medicine, Max Rady College of Medicine, and medical director, internal medicine program, Winnipeg Regional Health Authority. With the establishment of Shared Health Services Manitoba, Dr. Renner transitioned to the role of provincial specialty lead – internal medicine. Dr. Renner has published in excess of 200 peer reviewed papers, reviews and book chapters, and held multiple national grants. His research interests include immunological and clinical aspects of liver transplantation.

GFT

Dr. N. Faisal
Dr. K. Kaita
Dr. G. Minuk
Dr. E. Renner
Dr. S. Wong

FACULTY

Dr. S. Cuvelier
Dr. Y. Gong
Dr. C. Osiowy
Dr. D. Peretz
Dr. J. Uhanova

http://hepatology.wiki.umintmed.ca
The Section of Infectious Diseases in the Department of Internal Medicine is comprised of 8 Geographical Full Time (GFT) members, 1 UMFA, 2 professors emeriti and 7 non-GFT's. Our mission is to provide excellence in patient care, outstanding education, and be leaders in basic and clinical research activities.

**CLINICAL SERVICES**
Adult infectious diseases specialists provide inpatient and outpatient care consultation primarily at Health Sciences Centre and St. Boniface Hospital, and also at the Grace Hospital.

**SPECIALIZED CLINICS AND SERVICES**
ID specialists oversee the Community IV Antibiotic Clinics and provide consultation services throughout Manitoba, Northwestern Ontario and Nunavut.

**EDUCATION**
The Royal College of Physicians and Surgeons of Canada accredited subspecialty training program in infectious diseases at the University of Manitoba offers a two-year training program. The fellowship program usually accepts 1 to 2 fellows per year who train closely with pediatric infectious diseases fellows and medical microbiology residents. Opportunities for joint training in infectious diseases and medical microbiology are available as a 3 year combined program.

**RESEARCH**
Research areas of active interest in the Section of Infectious Diseases include: Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) vaccine design, epidemiology and pathogenesis with a global health focus; infections in immune compromised hosts and antimicrobial resistance; urinary tract infections; tuberculosis and Indigenous health and community-based HIV prevention and infectious diseases knowledge translation.

**Section Head**
Kelly MacDonald, MD, FRCP

Dr. Kelly MacDonald is a Professor and Head of the Section of Infectious Diseases and the H.E. Sellers Research Chair in the Department of Internal Medicine at the University of Manitoba. She came to Manitoba in 2015 after 20 years in Toronto where she was the director of the HIV Research Program at the University of Toronto. She is presently a practicing infectious diseases specialist, clinician-scientist and supervisor of the research lab at the JC Wilt Infectious Diseases Research Centre as a joint collaboration between the HIV program of the Canadian Public Health Agency and the University of Manitoba. Dr. MacDonald received her medical degree from the University of Manitoba and trained in internal medicine at the University of Washington in Seattle. She is certified in microbiology and infectious diseases. She did post-doctoral research training at the Universities of Manitoba, Nairobi and Toronto. She was the inaugural holder of the University of Toronto - OHTN Endowed Chair in HIV research and received the Ontario Premier’s Research Excellence Award. Dr. MacDonald has served nationally on the Federal Ministerial Council on HIV/AIDS, the CIHR HIV/AIDS Advisory Committee and as a member of the Basic Science Advisory Committee for the International AIDS Vaccine Initiative (IAVI).

**GFT**
- Dr. J. Embil
- Dr. Y. Keynan
- Dr. B. Light
- Dr. E. Lo
- Dr. K. MacDonald
- Dr. P. Orr
- Dr. C. Smith
- Dr. A. Walkty

**FACULTY**
- Dr. F. Aoki
- Dr. M. Becker
- Dr. G. Hammond
- Dr. A. Henndeniya
- Dr. L. Larcombe
- Dr. L. Nicolle
- Dr. A. Ronald
- Dr. Y. Schreiber
- Dr. T. Wuerz

[http://infectiousdiseases.wiki.umintmed.ca](http://infectiousdiseases.wiki.umintmed.ca)
NEPHROLOGY

The Section of Nephrology is a team comprised of 31 academic faculty members and over 700 interdisciplinary research, administrative and clinical personnel dedicated to providing outstanding patient-centred care, research, and education in the areas of kidney disease, dialysis and transplantation.

Dr. Claudio Rigatto is a nephrologist and an Associate Professor of Medicine and Section Head of Nephrology at the University of Manitoba, as well as the Associate Medical Director of the Manitoba Renal Program. Dr. Rigatto is a recognized expert in biomarkers and risk prediction in AKI and CKD. He has published over 180 peer reviewed articles, has presented at numerous national and international meetings, and is currently Co-Chair and Scientific Officer of the Kidney Foundation of Canada Biomedical Research Committee. As Section Head of Nephrology and Associate Medical Director, Manitoba Renal Program, he co-leads a team of 26 academic nephrologists tasked with organizing renal care for Manitoba, and is experienced in translating novel research into clinical systems and practice.
CLINICAL

The section is fully aligned with the Manitoba Renal Program and Transplant Manitoba and collectively manages over 2,000 advanced stage chronic kidney disease (CKD) patients; over 1,600 kidney failure patients on dialysis (380 on home dialysis, and over 290 in satellite hemodialysis units dispersed across the Province of Manitoba); and over 700 prevalent transplant patients across its three main sites of operation (Health Sciences Centre, St Boniface Hospital, and Seven Oaks Hospital). The section also runs general nephrology clinics (25 half-day clinics per week) and provides on-site nephrology consultation to its three main hospital sites as well as remote telehealth support to all hospitals in the Province of Manitoba, Northwestern Ontario and Nunavut.

RESEARCH

The section provides a productive and highly collaborative research environment, with internationally recognized expertise in the areas of translational, clinical, epidemiologic, health economic and implementation science in both native and transplant kidney disease. This activity is anchored by two research clusters in renal transplant and systems biology (Health Sciences Centre) and at the Chronic Disease Innovation Centre (Seven Oaks Hospital). The ten core researchers in the section collectively hold over $8M in peer reviewed research support, and publish between 40–50 peer reviewed articles per year. Current research is broadly (but not exclusively) structured along the following themes: optimal detection and prevention of CKD (CanSolve-CKD Strategy for Patient-Oriented Research (SPOR)); optimizing outcomes and quality of life in CKD and in kidney failure; optimizing kidney transplant rates; and outcomes and optimizing acute kidney injury diagnosis and treatment.

EDUCATION

The nephrology fellowship training program is a two-year Royal College of Physicians and Surgeons of Canada accredited training program. Clinical fellows accepted into the training program are exposed to a wide spectrum of clinical and academic nephrology. Education consists of instruction at all levels of clinical care including clinics, inpatient services, CKD and end stage renal disease care. The section hosts one of the world’s premier interventional nephrology programs in peritoneal dialysis catheter insertion and tunneled hemodialysis catheter insertion, with and without fluoroscopic support. Fellows are encouraged, supported and mentored in developing their academic interests, and are exposed to a wide range of research opportunities.
The Section of Neurology currently encompasses 12 Geographical Full-Time (GFT) and 20 faculty members. With opportunity for growth, we are pleased to welcome two additional full-time members joining us in 2020; additionally, the section is in the process of actively recruiting faculty with expertise in multiple sclerosis and seizure disorders.

CLINICAL SERVICES

Neurology deals with the diagnosis and treatment of all categories of conditions and disease involving the central and peripheral nervous systems. Our outpatient General Neurology Clinic is concentrated primarily at Health Sciences Centre, which also includes the Multiple Sclerosis (MS) Clinic and Seizure Clinic. The Stroke Prevention Clinic and electromyography services are distributed between Health Sciences Centre and St. Boniface Hospital, where the Neurology and Movement Disorder Clinic is located and dedicated to the treatment of Parkinson’s disease and other movement disorders. Amyotrophic Lateral Sclerosis clinics are located at the Deer Lodge Centre and neurology also has general clinics at all three acute care hospitals as well as the Bairdmore Clinic.

Specialized Clinics and Programs

A new 27-bed multi-disciplinary inpatient stroke unit is scheduled to be constructed in the old Women’s Hospital, opening in 2021. It is anticipated that we will be able to achieve considerable improvements in the quality of care of stroke victims. The ability to perform medical research will be greatly enhanced.

RESEARCH

Research funding over the past year, acquired from competitive national grants awarded to four primary investigators, amounted to approximately 2.6 million dollars with a further 2 million awarded to projects where members were co-investigators. Eighty percent of this funding was acquired by two MS researchers and the balance for stroke and epilepsy researchers; two areas where we anticipate future growth.

EDUCATION

There are currently 13 residents in our training program led by Dr. Udow as Program Director and Dr. Jones as Associate Program Director and Competence By Design (CBD) lead. Both have made exceptional strides in the adoption of CBD methodology. Two of our residency program graduates that have committed to further sub-specialty training will join us in 2022.
Acting Co–Section Head
Brian Schmidt, MD, FRCP

Dr. Brian Schmidt, acting Co–Section Head, Neurology, is a clinician–scientist who holds appointments in the Department of Internal Medicine and the Department of Physiology & Pathophysiology. He received his MD from the University of Manitoba in 1980 and completed a neurology residency at McGill University / Montreal Neurological Institute in 1984. Between 1984 and 1988 he was supported by a Medical Research Council fellowship at the Laboratory of Neural Control, National Institutes of Health, Bethesda, and Systems Neurobiology Laboratory, University of California, Los Angeles. He has been a member of the Spinal Cord Research Centre (SCRC) since returning to Manitoba in 1988. Dr. Schmidt has contributed to the neurology training committee for 31 years in various capacities including program director and research advisor.

Acting Co–Section Head
Dan Roberts, MD, FRCP

Dr. Dan Roberts, Co–Section Head, Neurology, graduated from medical school at the University of Toronto in 1978. He completed an internal medicine residency at Dalhousie University in 1982 and a fellowship in critical care medicine in Winnipeg in 1983. Dr. Roberts joined the Department of Internal Medicine in 1985, serving as Co–Section Head of Critical Care up until 2001. He also served as Regional Head of Critical Care Services from 1998 to 2001. Dr. Roberts was appointed Head of the Department of Internal Medicine and the Regional Medicine Program in 2001 for three terms ending in 2016. His significant contributions to the department include creation of the Critical Care and Medicine Database, six Endowed Research Chairs and the Medical Services Redesign Unit. He has initiated and led several medical services redesigns including the regional adult critical care services model, the regional endoscopy services model and the establishment of the Accuro Electronic Medical Records in ambulatory care at Health Sciences Centre. Other contributions include the reorganization of the provincial sleep disorder service, the home ventilation program and the ambulatory care clinics at Bairdmore and the Grace Hospital. Dr. Roberts currently attends in the Medical Intensive Care Unit at Health Sciences Centre.
PHYSICAL MEDICINE AND REHABILITATION

The Section of Physical Medicine and Rehabilitation (PM&R) specializes in the treatment of a wide variety of conditions affecting muscles, bones, nerves, function and mobility.
Section Head
Ryan Skrabek, MD, FRCPc

Dr. Ryan Skrabek graduated from medical school at the University of Manitoba in 2003. He completed his specialty training in physical medicine and rehabilitation at the University of Manitoba and joined the Section of Physical Medicine and Rehabilitation in 2008. Dr. Skrabek is the amputee rehabilitation Service Chief, and has a cross appointment in the Department of Anesthesia where he is an attending in the Pain Clinic. He has been Section Head of Physical Medicine and Rehabilitation at the University of Manitoba and the Medical Director of Rehabilitation for the WRHA Rehab/Geriatrics Program since 2011. In September 2017, Dr. Skrabek completed a one-year term as Chief Medical Officer of the Riverview Health Centre. Dr. Skrabek served as Vice-Chair for the Amputee Rehabilitation Special Interest Group at the Canadian Association of Physical Medicine and Rehabilitation from 2011-2013 and later as chair of the group from 2014-16. He was a Royal College Examiner in Physical Medicine and Rehabilitation from 2015-2018.

CLINICAL

Our inpatient rehabilitation units are located at the Rehabilitation Hospital, Health Sciences Centre (HSC) and the Riverview Health Centre. Outpatient clinics are located at the Rehabilitation Hospital, HSC, Riverview Health Centre and Pan Am Clinic. Our eight physiatrists cover a seventy-one-bed inpatient rehabilitation service, divided amongst five key rehabilitation populations; amputee, acquired brain injury, neuromusculoskeletal, spinal cord injury and stroke. Each service covers inpatient consultations, associated inpatient beds and outpatient clinics. In addition, we provide outpatient consultation services in the areas of neurodiagnostic services, which includes electromyography and nerve conduction studies at the Riverview Neurodiagnostic Clinic and participate in the Health Sciences Centre Pain Management Centre and the Pan Am Pain Clinic.

RESEARCH

Dr. Ethans’ research on spinal cord injury, bladder spasticity and the use of Botox is recognized nationally and internationally. As the section’s research director, she supports our resident’s research. Under her supervision since 2007, six of our residents have won national research awards through the Canadian Association of Physical Medicine and Rehabilitation. Dr. Pooyania is part of the physician group that is writing the Canadian Consensus Stroke Rehabilitation Guidelines, and has received a $200,000 Heart and Stroke Foundation and Canadian Institutes of Health Research grant for participation in the Phase I Dose Study.

EDUCATION

Currently, our section has nine trainees in our residency program. Dr. Salter is the Postgraduate Medical Education Program Director and Dr. Hooper is the Undergraduate Medical Education Program Director for PM&R. Together they work to ensure high standards of education for the residents and students during rehabilitation rotations. We provide support to the University of Manitoba Medical School during the musculoskeletal block, including teaching clinical examination skills and running small group tutorials.
RESPIRATORY MEDICINE

The Section of Respiratory Medicine at the University of Manitoba is a dedicated group of clinicians, educators and researchers who are committed to bringing state-of-the-art care to all patients with respiratory illnesses. We have an active research group and are committed educators who serve on several national committees.

CLINICAL

Our section currently has 23 members who provide consultation services to the 3 main hospitals in Winnipeg. We have a 14 bed inpatient unit at Health Sciences Centre and provide care on the long-term ventilatory ward at Riverview Health Centre. We provide a variety of general and specialized outpatient clinics including: sleep disorders (at Misericordia Health Centre), neuromuscular respiratory disease, respiratory symptoms in patients with amyotrophic lateral sclerosis, tuberculosis, pulmonary hypertension, severe asthma, lung nodules, pleural disease, cystic fibrosis and lung transplantation. We run a weekly urgent outpatient referral clinic in addition to many general respiratory medicine clinics.

CLINICAL INNOVATIONS

Dr. Christiansen is pleased to conduct interdisciplinary clinics with the Manitoba Adult Congenital Heart Program at St. Boniface Hospital with the goal of providing timely and integrated care to patients with congenital heart disease associated with pulmonary arterial hypertension. Dr. DeGussem is the Medical Director for the Hereditary Hemorrhagic Telangiectasia Clinic at the Grace Hospital which has been recognized as a centre of excellence. We have developed multidisciplinary interstitial lung disease (ILD) rounds which bring respirologists, pathologists, rheumatologists and radiologists together to discuss challenging ILD cases on a regular basis. Dr. Bras’ expertise in radial endobronchial ultrasound facilitates the timely diagnosis of peripheral lung nodules. This technique compliments linear endobronchial ultrasound and computerized tomography guided biopsies in the management of lung nodules.
RESEARCH

Dr. Halayko is a basic science researcher with a cross appointment to our section. His laboratory’s long term research goal is to elucidate mechanisms that control airway smooth muscle phenotype and function and their role in the pathogenesis of asthma. Dr. Ramsey is a clinical epidemiologist in addition to being a busy respirologist and intensivist. Her area of research is airway diseases. Dr. Desautels is a clinical epidemiologist, a sleep physician and respirologist who is using databases to look at outcomes in patients with sleep disordered breathing. Dr. Mink is a basic scientist, respirologist and intensivist who is studying the mechanisms of lactic acidosis in septic shock. Our clinical researchers participate in Canadian Institutes of Health Research trials and pharmaceutical-sponsored clinical trials. Our work has been published in several high impact journals.

EDUCATION

We are heavily involved in teaching both at the undergraduate and postgraduate levels. Dr. Porhownik is the Postgraduate Program Director; we currently have one Post Graduate Year (PGY4) and two (PGYS) trainees. Dr. Dirks is the Undergraduate Respiratory Course Director. Dr. Eschun is the Chair of the Royal College of Physicians and Surgeons of Canada (RCPSC) Respiratory Sub-specialty Committee. Dr. Ainslie is the Co-Chair of the Internal Medicine Exam and the Director of the written component of the Internal Medicine Multiple Choice Questions Exam at the RCPSC. Dr. Ramsey is a member of the Adult Respiratory Medicine Exam Committee. Dr. Blouw is the Postgraduate Program Director – Critical Care training program. We have redesigned the service model at the Health Sciences Centre to now have two respirologists on service during weekdays. This two physician model has allowed us to increase direct observation of our trainees as part of Competence By Design.

Awards: The Nick Anthonisen Award recognizes an outstanding faculty member who has contributed to the care of respiratory patients in Manitoba and has contributed to the academic mission of the Section of Respiratory Medicine. Dr. Desautels was the 2019 recipient.

Section Head

Martha Ainslie, MD, MSc, FRCP

Dr. Martha Ainslie is the Section Head of Respiratory Medicine in the Department of Internal Medicine and attends at HSC and St. Boniface Hospital. She received her MD from Queen’s University. She did a rotating internship at St. Paul’s Hospital in Vancouver before starting her training in Calgary. After completing her subspecialty training in respirology, Dr. Ainslie worked at the Peterborough Hospital in Calgary for several years before moving to Winnipeg. She has a general pulmonary outpatient practice. She has a special interest in tuberculosis and medical education.

GFT

Dr. M. Ahmed
Dr. M. Ainslie
Dr. Z. Bshouty
Dr. D. Christiansen
Dr. S. Corne
Dr. A. Desautels
Dr. G. Eschun
Dr. E. Giannouli
Dr. W. Kepron
Dr. S. Mink
Dr. K. Mulchey
Dr. N. Porhownik
Dr. C. Ramsey
Dr. M. Shepertycky

FACULTY

Dr. J. Bras
Dr. T. Colbourne
Dr. E. deGussem
Dr. J. Dirks
Dr. R. Dwilow
Dr. A. Halayko
Dr. C. Lee
Dr. L. Madi
Dr. E. Orlikow
Dr. M. Younes

http://respiratory.wiki.umintmed.ca
The mission of the Section of Rheumatology is to provide outstanding clinical care for the most complex patients and vulnerable populations; to deliver high quality medical education for trainees at all levels; and to perform cutting-edge research to improve the health, treatments, outcomes, and quality-of-life of our patients.

CLINICAL

The section is based at the Health Sciences Centre (HSC) in Winnipeg with seven full-time faculty members who provide ambulatory care services as well as clinical consultation and inpatient care to patients with all types of musculoskeletal and autoimmune diseases. We also have eight enthusiastic community rheumatologists, including our Program Director Dr. Singh, who are not only active participants in our teaching program, but also supervise and initiate trainee research projects and collaborate on research projects done at HSC. Several section members provide outreach clinics to patients living in remote areas of the province.

RESEARCH

Our researchers are at the forefront of research ranging from basic science and translational research to epidemiology and clinical trials, and reflect the varied interests and activities of our faculty members. We participate in and lead national and international collaborative studies of lupus and rheumatoid arthritis, as well as inflammatory myopathies, vasculitis and scleroderma. Dr. El-Gabalawy holds the Endowed Rheumatology Research Chair, and is internationally recognized for his work on the pathogenesis of rheumatoid synovitis and the mechanisms involved in the initiation of synovial inflammation. Dr. Hitchon is on the Scientific Advisory Committee for the Canadian Early Arthritis Cohort, and also runs the local early synovitis cohort; her research looks at the pathogenesis and prognostic indicators in rheumatic diseases. Dr. Peschken is the Chair of the Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus and is a member of the Systemic Lupus International Cooperating Clinics. Her research focuses on the social determinants of health in lupus, and lupus outcomes in vulnerable populations. Dr. Man and Dr. Robinson are recognized experts in vasculitis and scleroderma, are active in scleroderma clinical trials and outcome research. Dr. Tisseverasinghe is active in lupus and myositis research and has a particular interest in the impact of mental health on systemic autoimmune disease. Our newest section member, Dr. O’Neil, recently returned from the National Institutes of Health, and studies the role of innate immunity in autoimmunity, specifically the contribution of neutrophil extracellular traps in the pathogenesis of rheumatoid arthritis. The section has strong collaborations with sections and departments at the University of Manitoba, and with other leading universities, institutions and organizations in Canada and abroad.

EDUCATION

Faculty members are actively engaged in undergraduate and postgraduate education. The rheumatology training program is a two-year program undertaken by candidates who have completed training in internal medicine. The section has 2-3 rheumatology fellows in the program, and rotating residents from internal medicine, neurology, physical medicine and ophthalmology, as well as increasing medical students choosing to complete rheumatology rotations. Trainees are exposed to a wide variety of systemic autoimmune diseases, vasculitides, inflammatory arthropathies, osteoarthritis, soft tissue problems, and regional pains syndromes, with ample opportunity to see rare and complex disease, along with ‘bread and butter’ rheumatology. The program offers flexibility to allow tailoring to the individual trainees interests and future plans. Trainees are encouraged to participate in research projects with faculty members, and have the opportunity to attend national and international meetings to present their work.

Section Head
Christine Peschken, MD, MSc, FRCP(C)
See page 12 for Dr. Peschken's biography.

GFTS
Dr. H. El-Gabalawy
Dr. C. Hitchon
Dr. K. Jilkine
Dr. L. O’Neil
Dr. C. Peschken
Dr. D. Robinson
Dr. A. Tisseverasinghe

FACULTY
Dr. C. Baillie
Dr. A. Brar
Dr. A. Cogar
Dr. A. Man
Dr. T. McCarthy
Dr. M. Nguyen
Dr. C. Richards
Dr. R. Singh
WE ARE: CARE

Our support staff represent the talent and expertise that keeps our department functioning to the highest standards. Each name listed here deserves utmost recognition for their continued contribution and dedication to serving our department.
Change is Inevitable

Some is forced on us and some is driven from within. As we gain knowledge and experience, we change in the hopes of making things better. It can be uncomfortable and difficult – but it can also be rewarding and worthwhile.

Changes driven by external forces include Competency-Based Medical Education (CBME); a massive change to how residents are evaluated and given feedback. In 2019 CBME came to several sub-specialty programs and most notably to Core Internal Medicine.

Manitoba’s medical system finished one of the biggest restructurings ever in 2019, with the conversion of emergency rooms to urgent care and consolidation and movements of services. This has been a challenging time for faculty, residents, students and staff. We all work together through this process, ensuring that we can provide the best education and patient care possible.

Internally we made many changes too. We finished a major implementation of the Accuro Electronic...
Medical Record in three more subspecialty clinics. And now we look at other implementation opportunities not only at Health Sciences Centre, but also in our clinics at the Grace and Victoria Hospitals.

We were proud to welcome over twenty new faculty members. Some of our University of Manitoba-trained residents are staying here, we welcomed back residents who had gone away for further training, and our faculty is enriched by physicians and researchers who are new to Winnipeg and to Canada.

Change is ever present. We must continually improve. We must continually look for opportunities to use our resources in the most efficient manner and determine which opportunity provides the most value. This year we introduced our Methods, Standards and Innovation team (MSI), a group of individuals with the mandate to help us do just that. The team members are LEAN methodology leaders. They coach, mentor, teach and lead the department through continuous improvement.

Our new ambulatory care clinic made it through all the civic and legal hurdles, and while it took longer than planned, we are excited that our project went for tender in October. We anticipate construction to begin in spring 2020, with an opening in late 2021. The MSI team has been engaging with the staff and physicians in all our clinics, learning about their processes and challenges. I would suggest it is best to know where you are first, before deciding how you are going to get to where you want to go.

The 140 plus staff members on the support teams play such a vital role in our success and evolution as a department. Our people are the best sources of knowledge – those who do the work are the best to explain the work. Our wiki is a manifestation of this philosophy. This publicly available tool allows our staff to edit and write and share their knowledge and know-how. In the last year, the wiki surpassed 1,500 pages, had 33,000 visitors with 137,000 page views. The wiki symbolizes our faith and our reliance on the abilities of our people to know their job and to perform it well. It’s simply a tool for all to share their know-how and wisdom, and to make sure we can operate as lean and efficient as possible.

Our four year plan to transition our financial reporting methods continues. This year we completed our changeover in accounting methodology, began more detailed reporting, and using this information, identified areas of opportunity for the department.

Lean methodologies and continuous improvement is an acknowledgement of the constant nature of change. Problem solving is difficult work. We must not jump to solutions without truly understanding the problem. Do we really understand the problem? What is our reason for action? What is the current state? What is our target state? And the best question – How do you know? I commit each day to giving everyone on our team the tools, resources and trust to do their job, to run their business.

While full of challenges and changes, 2019 was a successful year on many fronts. For those who have left the department this year for retirement or new opportunities, I thank you for sharing your time with us and for the contributions you have made. For those who have joined this year, welcome to our team and I hope you will find fulfillment in the work that is presented to us. For those of you with us now – thank you for all you have done and thank you for continuing to be a part of this department.

Dale Gustafson, CPA, CMA
Managing Director, November 2019

“We all work together through this process, ensuring that we can provide the best education and patient care possible.”
ENDOWED RESEARCH CHAIRS

The Department of Internal Medicine at the University of Manitoba is home to nine endowed research chairs created through contributions from individuals, foundations, corporations and/or faculty members. A chair is established with a sizeable gift to an academic area designated by the donor; the gift is invested in an interest-bearing fund for which the principal remains intact and the interest provides a perpetual source of annual income. This income provides valuable financial support to our chair holders.

BINGHAM CHAIR IN GASTROENTEROLOGY (Dr. Charles Bernstein)

The Bingham Chair in Gastroenterology, established in 2008, was created to advance research in the field of gastro-intestinal disorders and Inflammatory Bowel Disease, named for Dr. John Bingham. Dr. Bingham contributed $1,000,000 towards this endowment. Dr. Bingham is a graduate of the University of Manitoba, Faculty of Medicine, Class of 1940. From 1940 to 1945, Dr. Bingham served as a naval surgeon, first in a Canadian destroyer attached to the British Navy in the Battle of the Atlantic and later stationed in Halifax, Nova Scotia. The generous contributions of the donors who made this chair possible include: Dr. John R. Bingham, Dr. Alfred E. Deacon Medical Research Foundation, Axcan Pharma Inc., Cathy & Bob Tallman, Leonard & Susan Asper, Marty & Michelle Weinberg & Family, Mr. Gerry Gray, Mr. James R. Morden, Mr. Thomas G. Frohlinger & Ms. Heather R. Pullman, Mr. Ulysses S. Wagner (estate), Ms. Gail S. Asper & Dr. Michael J. Peterson, Richard & Sheree Walder Morantz & Family, The Shenkarow Family and the Department of Internal Medicine Physician Faculty.

CHAIR IN RHEUMATOLOGY (Dr. Hani El-Gabalawy)

The Chair in Rheumatology was established in 2003 and is named for the Section of Rheumatology. Created to promote excellence in research, teaching and the care of those suffering from arthritis and other rheumatic diseases, with dedication to the goal of eliminating the burden of rheumatic diseases for all. Generous contributions of the donors who made this chair possible include: Curtis & Heather Gray, Harrison H. McCain, Heidi & Diether Peschken, Merck Frosst Canada Ltd., Pfizer Canada Inc., The Arthritis Society (Manitoba Division), The Murphy Foundation and an anonymous donor.

EVELYN WYRZYKOWSKI RESEARCH CHAIR IN CARDIOLOGY (Vacant)

The Evelyn Wyrzykowski Research Chair in Cardiology was established in 2011 with generous support of a $1,000,000 donation from Mr. Conrad Wyrzykowski and his family. Created to promote heart research and dedicated to improving healthcare for patients with cardiovascular disorders, the fund supports education and research opportunities at the University of Manitoba and St. Boniface Hospital. Generous contributions of the donors also include the St. Boniface Hospital Foundation and the Department of Internal Medicine Physician Faculty.

FLYNN FAMILY CHAIR IN RENAL TRANSPLANT (Dr. Peter W. Nickerson)

The Flynn Family Chair in Renal Transplant, established in 2009, was created to advance research and succession rates of kidney transplants. Funding allows the University of Manitoba to attract and retain outstanding researchers who specialize in renal transplantation, with dedication to improving access and quality of outcomes. The Department of Internal Medicine gratefully recognizes the generous contributions of the donors who made this chair possible: Astellas Pharma Canada, Doug & Allyson Flynn, Dr. Alfred E. Deacon Medical Research Foundation, Flynn Canada Ltd., Hoffmann-La Roche Limited, Inge Gaspard, Manitoba Branch of the Kidney Foundation of Canada, Renal Transplant Research Fund and The Department of Internal Medicine Physician Faculty.
**DR. LYONEL G. ISRAELS CHAIR IN HEMATOLOGY (Vacant)**

The Dr. Lyonel G. Israels Chair in Hematology was established in 2019 to provide leadership, scholarship and mentorship in the areas of benign and malignant hematology and immunology. Dr. Israels (1926-2003) was a renowned and beloved physician, researcher and mentor throughout his career at the University of Manitoba (MD/49; MSc/50; DSc (Honoris Causa)/99 serving as the Head of Hematology/Oncology for 27 years). For two decades he was the Executive Director of the Manitoba Cancer Treatment and Research Foundation and in 1994 was named a member of the Order of Canada. The Lyonel G. Israels Professorship in his honour has been made possible by generous donations from: Bayer Inc., the Israels Family, the Department of Internal Medicine Physician Faculty and numerous private individual donations.

**H.E. SELLERS RESEARCH CHAIR IN INTERNAL MEDICINE (Dr. Kelly MacDonald)**

The H.E. Sellers Research Chair in Internal Medicine was established in 2001 and made possible by a generous donation from the Sellers Foundation. It was created to provide leadership and vision for the creation of new areas of strength in clinical and translational research. Mr. Henry Eugene Sellers (1886-1970) established the Sellers Foundation to “further medical research, religious education, and other charitable activities”. Mr. Sellers was a member of the Board of Trustees and President of the Winnipeg General Hospital (1937-1939), Chairman of the Manitoba Canadian Red Cross Campaign (1940), and was given an honorary doctorate of laws by the University of Manitoba (1944).

**MORBERG FAMILY CHAIR IN HEPATOLOGY (Dr. Gerald Y. Minuk)**

The Morberg Family Chair in Hepatology at the Health Sciences Centre was established in 2010 to advance research in the field of liver diseases and is dedicated to improving health care for patients with hepatobiliary disorders. Funding enhances the competitiveness of the faculty to recruit top researchers to improve the quality of life for liver patients not only in Manitoba but around the world. The Department of Internal Medicine gratefully recognizes the generous contribution of the donors who made this chair possible: Arnold and Gail Morberg & Family, Health Sciences Centre Foundation Donors to the 2000 and Beyond Campaign and the Department of Internal Medicine Physician Faculty.

**QUALITY IMPROVEMENT IN HEALTH SERVICES DESIGN RESEARCH CHAIR (Vacant)**

The Quality Improvement in Health Services Design Research Chair was established in 2007 and created to advance innovation in the function and design of medical services, aimed at improving the effectiveness and safety of patient care, and dedicated to the development of leadership and management skills for physicians. The Department of Internal Medicine gratefully recognizes the generous donor contributions who made this chair possible: The Department of Internal Medicine Physician Faculty, the Health Sciences Centre and Winnipeg Regional Health Authority Medicine Program.

**WAUGH FAMILY CHAIR IN MULTIPLE SCLEROSIS (Dr. Ruth Ann Marrie)**

The Waugh Family Chair in Multiple Sclerosis, established in 2014, was created to advance research in the field of multiple sclerosis (MS) and is dedicated to improving health care for patients living with MS. MS is a chronic, often disabling disease of the central nervous system compromising the brain, spinal cord and optic nerve. It is estimated to affect more than 3,400 Manitobans and 100,000 Canadians. Funding assists Manitoba researchers, partnered with the MS Society to make new discoveries that enhance understanding of the causes of MS and have a positive impact on its treatment. The generous contributions of the donors who made this chair possible include: College of Medicine (Faculty of Health Sciences, University of Manitoba), Dr. Alfred E. Deacon Medical Research Foundation Inc., Research Manitoba, The Waugh Family Foundation and the Department of Internal Medicine Physician Faculty.
Awards

2019 ACADEMIC AWARDS

At the November 28, 2019 Department of Internal Medicine Annual Faculty Dinner, two clinician-educators were recognized for excellence in teaching and honoured for their significant roles and exceptional dedication in the education of the next generation of physicians.

The Morley Lertzman and the Barry J. Kaufman teaching awards were established to recognize a clinician-educator amongst the subspecialty attending faculty, and a clinician-educator amongst the Clinical Teaching Units (CTUs) attendee faculty. Drs. Hilary Bews, Allison Love and Evan Wiens, our chief residents presented the 2019 teaching awards to the following faculty members:

- **Dr. Jonathon Bellas**, received the **Barry J. Kaufman Award** for exceptional performance in the role of CTU attending physician, teacher and mentor.
- **Dr. Marcus Blouw**, received the **Morley Lertzman Award** for exceptional performance in the role of specialist consultant, teacher, and mentor.

In addition, the **Faculty Award for Career Excellence - Long Term Achievement Pin**, which was established by Dr. Renner in 2017 to honour an outstanding Internal Medicine Faculty member for their extraordinary long-term achievements in academic medicine, was announced. The terms of reference stipulate that the awardee of the inaugural award, Dr. Ken Van Ameyde, had to select his successor. As noted by Dr. Renner at the dinner - he could not think of a more worthy winner of the second Long-Term Achievement Pin than the one selected by Dr. Van Ameyde - **Dr. Don Duerksen**. Dr. Duerksen is a role model of an academic physician. A highly experienced gastroenterologist, exceptionally well-versed in all areas of gastroenterology, he has and continues to serve our patients for over more than two decades. Dr. Duerksen directs our Total Parenteral Nutrition Program and serves as the resource person for questions on nutrition. He is essential to our Endoscopic Retrograde Cholangiopancreatography, advanced interventional endoscopic service, and a widely recognized celiac disease expert. Despite having no protected research time, Dr. Duerksen runs a nationally and internationally recognized celiac disease research program, has published multiple papers and continues to attract Canadian Institutes of Health Research grants. In addition, Dr. Duerksen is a wonderful teacher who has served for many years as an educational director of the GI block in our medical school, and mentored numerous students and residents. Recently, Dr. Duerksen has taken on the role as Acting Head of the Section of Gastroenterology.

**Dr. Eberhard Renner**, received the **2019 CASL (Canadian Association for the Study of the Liver) Distinguished Service and Meritorious Achievement Award**. This annual award is presented to a member who has made significant contributions to CASL and the Canadian liver community.

**Dr. Hani El-Gabalawy**, was recognized with the **ACR Master Designation Award** by the American College of Rheumatology in November 2019. Recognition as a Master of the American College of Rheumatology (ACR) is one of the highest honours the college bestows to members who have made outstanding contributions to the ACR and to the field of rheumatology through scholarly achievements and service to their patients, students and profession.

**Dr. Jean-Eric Ghia**, was awarded the **Canadian Association of Gastroenterology’s (CAG) 2019 Young Investigator Award**. The award recognizes outstanding contributions to gastroenterology through basic or clinical research by a young investigator.

**Dr. Ryan Zarychanski**, was the recipient of the **Royal College’s 2019 Mentor of the Year Award for Region 2**. The award is given in recognition of significant impact on the career development of students, residents and fellows.

**Dr. Clara Bohm**, was the recipient of the Manitoba Medical Service Foundation’s **Dr. F. W. Du Val Clinical Research Professorship Award**. The award promotes clinical research at the University of Manitoba for the general benefit of health research in Manitoba by supporting clinical scientists in the early stages of a successful research career as a healthcare professional.
Awards

2019 RESIDENT RESEARCH DAY
AWARD RECIPIENTS

PODIUM PRESENTATION - ORIGINAL INVESTIGATION BY CORE RESIDENTS

1st Prize, Original Investigation – Simon Christie, PGY1 – Internal Medicine
Cardiac Implantable Electronic Device Pulse Generator-Lead Mismatch & Complication Rates
Supervisor: Dr. Clarence Khoo

2nd Prize, Original Investigation – Jeffrey Venner, PGY1 – Internal Medicine
Molecular Landscape Of Ulcerative Colitis Reveals A Cognate T Cell-Mediated Process And Inflammatory Stimulus
Supervisor: Dr. Brendan Halloran

3rd Prize, Original Investigation – Graham Walter, PGY2 – Internal Medicine
Delivery Of Subcutaneous Immunoglobulin By Rapid “Push” Infusion For Primary Immunodeficiency Patients
Supervisor: Dr. Tamar Rubin

PODIUM PRESENTATION - ORIGINAL INVESTIGATION BY SUBSPECIALTY RESIDENTS

1st Prize, Original Investigation – Janine Reid, PGY4 – Physical Medicine & Rehabilitation
An Economic Evaluation Of Physiatry Outreach Clinics In Manitoba
Supervisor: Dr. Karen Ethans

POSTER PRESENTATION - ORIGINAL INVESTIGATION BY CORE RESIDENTS OR SUBSPECIALTY RESIDENT

1st Prize, Original Investigation – Christie Rampersad, PGY3 – Internal Medicine
The Association Of Physical Activity With Poor Health Outcomes In Patients With Advanced Chronic Kidney Disease
Supervisor: Dr. Navdeep Tangri

POSTER PRESENTATION - CASE REPORT BY CORE OR SUBSPECIALTY RESIDENTS

1st Prize, Case Report – Uliana Kovaltchouk, PGY2 – Internal Medicine
Proposal: Winnipeg Regional Health Authority Beta Lactam Allergy Assessment Service
Supervisor: Dr. Colin Barber

POSTER PRESENTATION - RESEARCH PROPOSAL BY CORE RESIDENTS OR SUBSPECIALTY RESIDENT

1st Prize, Research Proposal – Aaron Trachtenberg, PGY4 – Nephrology
The Effect Of Prescription Opioids On The Risk Of Motor Vehicle Collisions
Supervisor: Dr. Paul Komenda

EMY OZAMOTO AWARD

Evan Wiens, PGY3 – Internal Medicine
Original Investigation Decreasing The Use Of Creatine Kinase In The Workup Of Chest Pain On Acute Medicine Wards
Supervisor: Dr. Colette Seifer
COMMUNITY-FOCUSED CARDIAC CARE IN MANITOBA

John Ducas, MD, FRCPC, Section of Cardiology, University of Manitoba

First Nations people in Canada have a higher prevalence of heart disease compared with non-First Nations people and are more likely to be admitted to hospital for a heart attack at an earlier age. “After hospital discharge these patients are likely not to fare as well as others”, says Dr. John Ducas, a Cardiologist at St. Boniface Hospital and Medical Director of the Manitoba Acute Coronary Syndrome (ACS) Network.

A first of its kind program developed in the early 1980’s, Dr. Ducas has recently extended his clinical work to a number of First Nations and Inuit communities in Manitoba and Nunavut. In addition to running regular cardiology clinics in rural and remote communities such as Norway House, Garden Hill, Hodgson, and more recently Rankin Inlet, Dr. Ducas often has a cardiology or cardiac surgery resident with him to broaden their understanding of health care challenges unique to these populations. These clinics have further brought awareness to advance the state of knowledge in teaching and development to physicians and nurses working at these sites, and also to cardiologists working in Winnipeg.

In May 2019, Dr. Ducas presented lectures on First Nations health care to the Section of Cardiology and to the Canadian Council of Cardiovascular Nurses (CCCN) National Conference. “The primary goal is to take affirmative action in bringing better healthcare to First Nations people”, says Dr. John Ducas. For Dr. Ducas this has turned into a personal journey as he continues his work on a proposal to develop a primary prevention initiative to help these communities.

Over the years Dr. Ducas has made many site visits to hospitals outside of Winnipeg, worked with STARS, Lifeflight Air Ambulance, and the Manitoba Medical Transportation Coordination Centre, and developed Provincial Recommended Standards of Care and Algorithms all to address the need to improve outcomes of patients with heart attacks. As Medical Director of the ACS Network, Dr. John Ducas continues to work on another initiative to improve patient care. The ACS Network is a Cardiac Sciences Program initiative to optimize and harmonize treatment of more than 3,000 patients who suffer heart attacks each year in our province. In October 2019, Dr. Ducas co-hosted, with his ACS Network co-chair Lorraine Avery, RN, PhD, the third annual “Heart Attack Day”. The program was in cooperation with the University of Manitoba’s “Health Talks” series to include an open-to-the-public session at the Reh-Fit Centre and all-day lectures and workshops for health care providers at St. Boniface Hospital.

“The primary goal is to take affirmative action in bringing better healthcare to First Nations people”
Recognizing and overcoming barriers that patients in the community face when trying to access this diverse area of medicine.

Karen Ethans, MD, Section of Physical Medicine & Rehabilitation, Janine Reid, PGY4 Resident

Physiatry is a diverse area of medicine focused on maximizing function of patients with primarily chronic conditions limiting mobility and cognition. Because of the small number of practitioners, most inpatient and outpatient rehabilitation in Canada is centralized in hospital-based urban centres, such as Winnipeg. With one third of Manitobans living in a small population centre more than 3 hours’ drive from Winnipeg, barriers to travel may be immense, or insurmountable. This limits access to specific and significant physiatry services for common conditions such as strokes, spinal cord injuries, brain injuries, and amputations. Notably, many physiatry consultations and treatments, for example spasticity management, require in-person assessment and are not amenable to telehealth.

As a result of requests by local health care practitioners, the Four Arrows Health Authority, and the support of funding and logistics by Ongomiizwin Health Services, a new set of visiting outpatient clinics (twice-yearly since January 2018), have been developed to provide access for patients in the remote communities of Churchill and Saint Theresa Point.

Referrals are received by our own physiatry outpatient services in Winnipeg, community family physicians, nursing and physiotherapy staff. There have been several self-referrals from community members who identified their own needs but were unable to access referral through more conventional means. At this time, 31 patients (41 visits) have been seen over the course of 6 clinics. Many of these patients were able to attend with multiple family members and supports, which would not have been possible if required to travel to Winnipeg. Approximately half would be unlikely or unable to travel to Winnipeg for access to physiatry. Four patients would have been unable to access a commercial flight, needing air ambulance transport.

While most rehabilitation professionals acknowledge access as a major factor of who receives care in Manitoba, these clinics underscore the need for more consideration of outpatient access to care in rural and remote communities.

Aside from access, cost reduction, community relationship building, and resident education were important secondary goals of these clinics. An economic cost minimization analysis done on the first 6 clinics estimated the societal cost savings per patient visit in the communities to be $2,382.30 for St. Theresa Point and $2,416.13 for Churchill, compared to a conventional outpatient visit in Winnipeg. This represents an 84% and 72% cost savings, respectively. This analysis did not include the costs of potential air ambulance trips, which run in the tens of thousands of dollars. Given that 27/31 patients are non-insured health benefit funded, these do largely represent direct cost savings to the healthcare system. If not otherwise funded, patients in these communities face extreme costs, primarily from travel to access essential specialist services for their chronic conditions.

One of the major difficulties facing physiatry is a lack of familiarity with the discipline among health care practitioners. This was demonstrated by the source and caliber of referrals to these outpatient clinics, as well as referrals for outpatient consultation in general. These direct face-to-face clinics build relationships and understanding with local staff and communities. This has proven fruitful, with increasing ease of referral patterns and fostering of local knowledge amongst family physicians and nurses of the scope and skills that physiatry has to offer their patients. In addition, through the Ongomiizwin specialized clinic model, both an attending physician and senior resident participate in these ongoing clinics. This provides vital exposure during training to the context of rural and remote patients, their community resiliencies and limitations, and the needs and rewards of engaging in this work. One such resident exposure has already translated into taking on the Churchill clinics as a new attending.

Moving forward, these remote outreach physiatry clinics represent an opportunity for equity and access for patients who face multiple barriers of travel, mobility, cognition, and funding. They provide a platform to increase efficiency of physiatry services in the province by building relationships and local knowledge. These clinics are already creating opportunities for physiatrists to include outreach services in their career plans.

Drs. Ethans and Reid in front of the helicopter that will take them to the community of St. Theresa Point for their Physiatry Outreach Clinic.
There is a critical need to understand the journey that First Nations people who are living with Human Immunodeficiency Virus (HIV), are navigating. Understanding the broad context (social, biologic, economic) of how First Nations people from northern Manitoba come to be tested for HIV and how they negotiate treatment and care is essential knowledge for planning and implementing interventions that are culturally appropriate, and have the potential for safely engaging northern marginalized populations in HIV care. The research team includes co-Principal Investigators Dr. Gayle Restall (Occupational Therapy) and Dr. Albert McLeod (Two-Spirited Peoples of Manitoba), and co-investigators and collaborators Ms. Agnes Denechezhe (Keewatin Tribal Council), Manitoba Keewatinowi Okimakanak, Drs. Pamela Orr, Kelly MacDonald and Yoav Keynan (Section of Infectious Diseases), Dr. Rusty Souleymanov (Social Work), Mr. Mike Payne, Ms. Stephanie Van Haute, Ms. Laurie Ringaert (Nine Circles Community Health Centre), Dr. Adrienne Meyers (Public Health Agency of Canada), the Northern Regional Health Authority and First Nations and Inuit Health Branch.

Hearing and sharing the stories about the barriers, facilitators and resilient ways that northern communities approach HIV testing, treatment and care is a critical health priority for a number of reasons: (1) the increasing rates of HIV infection and disease in Indigenous (First Nations, Inuit and Métis) peoples of Manitoba; (2) the complex nature of HIV testing and care; (3) the remoteness of these communities and lack of access to health services and social supports; (4) the limited understanding of the barriers and enablers to implement current best practices of HIV testing and care for northern Manitoban First Nations people; and (5) the lack of integration of First Nations cultural ways of knowing and healing practices with Western medicine practices.

Our team will use “two-eyed seeing” methods to bring together First Nations and Western ways of knowing to listen and learn how northern First Nations people negotiate the HIV care cascade as they look after their own health. Our plan is to use innovative culturally-appropriate methodologies (storytelling, sharing circles, journey mapping and arts-based methods) to document the personal journeys and experiences of these individuals living with HIV. The goal of this research is to hear and understand the lived experiences of northern First Nations people.
currently living with HIV, and to build capacity in the communities to develop culturally safe actions and interventions that will engage northern First Nations people in HIV testing, treatment and care.

There are currently no studies that address the barriers and enablers for engaging and retaining northern First Nations people into the HIV cascade of care. We know that some barriers to HIV testing, treatment and care are experienced by many people with HIV, but for First Nations there are additional barriers that derive from historical racism, colonialism, religiosity, poverty and circumstances that can relegate HIV to the bottom of many personal and community crises. Various barriers for First Nations people have been described in literature. However, there has been very little study of the intersections of historical, personal, community, cultural, organizational, health system and policy barriers and enablers that exist for remote northern First Nations people who may be at increased risk of acquiring HIV.

Our study will focus on the experiences of northern First Nations people after they are engaged in the HIV care cascade. We recognize that there could potentially be differences in the experiences at each of the milestones (testing, treatment and care) and individuals and/or communities may choose to focus on one or more of these milestones. We know for example, from previous work, that HIV prevention is a topic of concern for some northern First Nations — this was the focus of much of the HIV Community Readiness Assessment work conducted in partnership with Northlands Denesuline First Nation. Our work will not specifically focus on HIV prevention except as it relates to early HIV treatment as a strategy for prevention in the HIV care cascade. However, HIV prevention might be raised as an issue by research participants or partners, and could potentially be the focus of culturally-appropriate HIV intervention strategies. The Canadian Institutes of Health Research is providing $450,000 in funding for this project for three years.

“...The goal of this research is to hear and understand the lived experiences of northern First Nations people currently living with HIV, and to build capacity in the communities to develop culturally safe actions and interventions that will engage northern First Nations people in HIV testing, treatment and care.”
The Department of Internal Medicine has more faculty members in educator positions within Undergraduate Medical Education than any other College of Medicine department. In addition to the development and teaching of curriculum, we play a major role in mentoring medical students. One such example is the Internal Medicine Interest Group run by Dr. Thomas Jacob. In its tenth year of operation, the group meets 10–12 times per year in the Simulation Lab, to learn clinical skills, discuss career paths and develop professional relationships.

The Core Internal Medicine (IM) Program is the pillar and foundation of our postgraduate educational activities. Our department members support learners in hospitals, clinics, classrooms, homes, nursing stations, care facilities, and medevac planes—wherever patients need us. This year, Dr. Carmen Hurd has stepped down from her position as Core IM Postgraduate Program Director, while Dr. Michael Semus stays on in this position. We welcomed several educators who will work with Dr. Semus: Drs. Ben Fultz, Jacquelyn Dirks, Joel Nkosi and Lindsay Torbiak will assist in testing, remediation, mentoring and wellness activities. Dr. Hurd will continue as leader in the implementation of Competence by Design (CBD) education in the core program.

The department provides training in a full range of Royal College accredited subspecialties. Suzanne Doyle has provided critical support for the running of our programs. For 2019, thanks to the efforts of Drs. Steve Wong, David Peretz and colleagues, the department also welcomed Royal College accreditation of an Area of Focused Competence (AFC) training program in Hepatology, one of only two such programs in Canada. Our Program Directors and assistants have successfully implemented CBD in five subspecialties to date (General Internal Medicine, Critical Care, Gastroenterology, Geriatrics and Rheumatology).

Medical education encompasses abilities in the analysis and performance of medical research. These skills are actively promoted through the Undergraduate Bachelor of Science (BSc) Medicine Program and a postgraduate program led by Drs. Don Houston, Versha Banerji, Allen Kraut, Allan Garland, Claudio Rigatto, Jay Hingwala, Phil St. John, Rachel Fainstein, John Wilkins and Neeloffer Mookherjee. Through their BSc Medicine and Resident Research Day presentations, our learners demonstrate their commitment to asking questions and looking for answers in order to better care for our patients.

“**The Core IM Program is the pillar and foundation of our postgraduate educational activities.**”

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WE ARE: EDUCATORS

A Word From Our Associate Head of Education:

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Dr. Pamela Orr
**RESIDENT’S PERSPECTIVE**

Dr. Paramvir Virdi began his medical career at the University of Alberta where he completed medical school. Attracted by the strength of the internal medicine program, his journey led him to the University of Manitoba to pursue residency in internal medicine. Having successfully completed his residency, he is now pursuing a fellowship in the Section of Hepatology. Our fairly large catchment area means that residents are exposed to a rich variety of challenging and interesting pathologies. The size of our program allows for ample opportunities to learn one-on-one from attending staff, providing a rich and supportive learning experience. In addition to the strong clinical experience that the residents receive, every section within the Department of Internal Medicine contains world-renowned clinician-scientists, who serve as research mentors and role models.

Dr. Virdi states, the medical and non-medical staff within the department are heavily invested in the career development of learners and this experience has inspired him to become a community hepatologist.

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**CORE INTERNAL MEDICINE RESIDENCY PROGRAM**

**WHAT’S NEW IN CORE MEDICAL EDUCATION**

**Program Director and Program Administrators**

In July 2019, Dr. Michael Semus took over the role of Program Director for the Core Internal Medicine (IM) Residency Program.

**Dr. Semus has recruited help in the following areas:**

- Dr. Carmen Hurd will continue to work with the program as the Competence By Design (CBD) lead
- Dr. Jacquelyn Dirks has taken on the task of the remediation lead for the program
- Dr. Joel Nkosi is working to help oversee and mentor the R4 year in the core training program
- Dr. Ben Fultz will be working as the examinations lead, helping with organization of in-training exams

**There are three Program Administrators who support the program:**

- Wendy Bencharski: Scheduling, Canadian Resident Matching Service, Professional Association of Residents and Interns of Manitoba
- Cherie Marynowski: Faculty and resident support for CBD
- Janet Labarre: Educational events, travel and budgets

Together this team will continue to build on previous strengths and strive to provide an optimal educational experience for our residents.

**Implementation of Competence By Design**

On July 1st, after many months of preparation, the Core IM Residency Program implemented CBD. Currently our program is working with a dual system – a CBD stream (PGY1) and traditional-based learning stream (PGY2 & PGY3).

We have four academic advisors who monitor the performance of 4–5 residents in the CBD stream. Advisors meet with residents on a regular basis to discuss performance and help provide longitudinal coaching. A Competency Committee has been established where the members meet quarterly to discuss resident progress.

**More Objective Structured Clinical Examination (OSCE)**

In response to resident demand and more focus on exam preparation due to movement of the Royal College Exam to the third year of training, OSCEs have been added to the curriculum. In addition to the formal yearly Royal College–like OSCE, two more mini OSCEs have been added, giving residents more opportunities in a testing environment to practice their physical exam skills and tackle scenarios with on-the-spot feedback. OSCEs are held in the Clinical Learning and Simulation Facility, a state of the art facility right here on our campus.

**Implementation of Wellness Program**

Wellness representatives have been elected to represent each PGY level. A Wellness Mentorship Group has been formed that meets 2–3 times a year to discuss wellness-related topics. Dr. Lindsay Tschak is our Faculty Wellness lead, and will work closely with the Wellness Committee. Our Academic Half Day (AHD) curriculum has been revised to accommodate wellness content which has been proudly spearheaded by one of our own PGY3 residents, Dr. Michael Onotera. Residents have protected time to participate in an all-day Resident Wellness Retreat organized by the PGME Student Affairs and Wellness Office.

**Research Curriculum Overhaul**

Dr. Allan Garland has helped revamp the research curriculum, including a more intensive Journal Club to help residents acquire the skills to participate and use medical research in clinical practice. All residents are required to engage in research in the Core IM Residency Program. For the first time this year, starting at the PGY1 level, residents are assigned to a research navigator who meets with the resident early in training to discuss research interests and helps secure a research mentor/supervisor. Prior to embarking on a research project, the resident must fill out a research proposal and obtain approval from the newly formed Vetting and Oversight Group.

The role of the research supervisor is to guide the resident’s project from its infantile stages (the research proposal) to a robust original investigation that is presented at Resident Research Day in the resident’s 2nd and 3rd year and perhaps eventual publication(s).
WE ARE: WORLD CLASS

A Word From Our Associate Head of Research:

The Department of Internal Medicine has a vibrant and steadily growing research portfolio and “footprint”. This portfolio encompasses the full spectrum of the department’s sections and disciplines, and in many cases, is spearheaded by the research chairs that have been established within the department. Collectively, the department’s membership brought in $7,382,020 in competitive research funding from the Canadian Institutes of Health Research and other funding agencies last year, and published 452 peer reviewed papers.

As we look to the future, the department clearly recognizes the importance of training and recruiting clinician-scientists whose primary role is to perform innovative and competitive research, ensuring that they are integrated in an environment where they can thrive and succeed. The department also recognizes the key role played by its clinicians and educators, not only in performing their respective roles, but also in helping advance the research programs. As such, over the past two-years the leadership of each section has developed a thoughtful strengths, weaknesses, opportunities, and threats (SWOT) analysis for their respective sections. Particular focus of the SWOT analysis is on how the sections research programs are integrated and impacted by service, education activities and expectations. Over the upcoming months, a synthesis of this information will be performed with a view to identifying priorities for research training and recruitment within each discipline.

In parallel, the department has focused on enhancing research training in its postgraduate residency programs. After five years, we are now beginning to see the impact of the Royal College of Physicians and Surgeons Clinician Investigator Program in the training of emerging clinician scientists. For the majority of residents who are not destined to become career investigators, a proactive and structured approach to resident research projects is now in place in order to ensure that all of our trainees can contribute to their rapidly advancing fields. As a final element in this strategy, we have begun to explore the possibility of establishing a graduate degree program within the department, with a particular focus on translation research training. Since establishment of such a program involves several administrative steps within the university, a stepwise approach is needed to achieve this goal.

Academic departments such as ours have a complex mandate requiring thoughtful and meaningful integration of clinical, educational, research, and administrative activities. Successful research programs can only thrive and be sustained in an environment where these elements are all appropriately addressed.

“As we look to the future, the Department of Internal Medicine clearly recognizes the importance of training and recruiting clinician-scientists whose primary role is to perform innovative and competitive research, ensuring that they are integrated in an environment where they can thrive and succeed.”

Dr. Hani El-Gabalawy

Three innovative examples of research happening in the Department of Internal Medicine and the faces behind the work: Dr. Ashish Shah, Dr. Clara Bohm, and Dr. Paul Komenda.

**ISCHEMIC HEART DISEASE – OUTCOME RESEARCH**

Dr. Ashish Shah is an Assistant Professor of Medicine, in the Section of Cardiology at the University of Manitoba and obtained a Doctorate of Medicine (Research) from the School of Cardiovascular Medicine and Sciences at the King’s College London. He specializes in interventional cardiology with interest in adult congenital and structural heart disease interventions. His current research focus includes invasive & non-invasive hemodynamic evaluation and outcomes in patients with cardiovascular diseases.

Hemodynamic evaluation is complex, and carefully and timely performed hemodynamic evaluation can help identifying various conditions in the earlier stages. Dr. Shah notes that identifying these conditions in a timely manner leads to better treatment options and outcomes for patients. His innovative development in this area of research includes the validation of a non-invasive hemodynamic system that uses total-body impedance cardiography with that obtained from cardiac magnetic resonance imaging. Moreover, Dr. Shah’s research team has completed a research project evaluating non-invasive hemodynamics in patients with Fontan circulation (complex congenital heart disease; univentricular physiology) and its correlation with cardiopulmonary exercise testing. This may open the avenue for the novel means of evaluating patients in outpatient/clinical settings. Dr. Shah’s research from both of these studies was presented at the American Heart Association Annual Scientific Meeting and manuscript writing is ongoing.

Dr. Shah continues further research on three new studies; two have received Research Ethics Board (REB) approval and one REB application is under review. 1) The study titled “SHOCK-NICaS”, will evaluate non-invasive obtained hemodynamics in patients presenting with ST-Elevation Myocardial Infarction (STEMI). Dr. Shah intends to recruit 250 patients presenting with STEMI to identify outcomes (in-hospital stay duration, heart failure, arrhythmia and death during in-hospital stay, 30 days and 1 year) and such outcome associated hemodynamic markers. 2) Dr. Shah’s REB application has been approved to conduct a study evaluating non-in-
FACES OF RESEARCH

Dr. Bohm is an Assistant Professor in the Section of Nephrology, and clinical researcher with the Department of Internal Medicine at the University of Manitoba. Since completing her research training in 2014, Dr. Bohm’s primary research focus has been on improving the care and quality of life for people living with Chronic Kidney Disease (CKD).

One area of her research focuses on characterizing the effect of exercise in individuals with chronic kidney disease and patient relevant outcomes. Patients on hemodialysis frequently have burdensome symptoms such as fatigue, cramping and restless legs that affect their quality of life. Treatment of such symptoms have been identified as a research priority by those individuals. Dr. Bohm’s 2-year project entitled: “Effect of an Exercise Rehabilitation Program on Symptom Burden and Quality of Life in Hemodialysis: a Randomized Controlled Study” is funded by the Kidney Foundation of Canada. This study explores the effect exercise has on symptom number and severity of individuals on hemodialysis. As part of this project, Dr. Bohm and her research team also plan to study the effect of exercise during dialysis on frailty status and cardiac stunning during hemodialysis. These results will subsequently be used to design a larger clinical trial looking at the effect of exercise programming on longer term outcomes such as hospitalization, disability and institutionalization in individuals on hemodialysis.

Dr. Bohm is also the co-Lead on the Can-SOLVE CKD Triple I Project, a Canadian Institutes of Health Research 5-year, multi-centre Canadian grant. The project will determine how best to improve the hemodialysis experience for patients and their caregivers, by improving the information patients

IMPROVING CARE & QUALITY OF LIFE

Clara Bohm, MD, MPH, FRCPC, Section of Nephrology

vasively-obtained hemodynamics in patients undergoing transcatheter aortic valve implantation and surgical aortic valve replacement. Dr. Shah was awarded a $30,000 grant from the Manitoba Medical Service Foundation to conduct a study defining hemodynamics in patients undergoing aortic valve replacement, both percutaneously or surgically, to identify hemodynamic change pre- and post-valve replacement and their association with outcomes, and 3) REB application is under review for the study entitled “HF-HOPE” that will evaluate non-invasively-obtained hemodynamics in patients with heart failure, irrespective of heart failure type (heart failure with reduced / preserved ejection fraction) and etiology (ischemic, non-ischemic, hypertrophic, post-partum, and others). The aim is to recruit 200 patients over the next 2 years to identify outcomes (repeat hospital admission, arrhythmia, listing for heart transplantation, ventricular assist implantation and death during 1 year follow-up).

In addition to his own active research studies, Dr. Shah as the local PI is collaborating with an international registry evaluating outcomes among patients with Tetralogy of Fallot, Canadian Outcomes Registry Late After Tetralogy of Fallot Repair (CORRELATE). So far, 25 patients have been recruited and the study will continue evaluating these patients longitudinally.

Dr. Shah has a strong interest in the outcome evaluation for various cardiovascular conditions. As part of this objective, he has obtained approval to access ischemic heart disease data over the last 40 years from the province of Manitoba. Phase-one of the study is to start analyzing data over the next 12 months with the aim to answer some of the main queries in early papers: 1. What are the overall outcomes among patients with Ischemic Heart Disease (IHD) in Manitoba over the last 40 years, and have we improved mortality?

2. Has improved survival from IHD resulted in increased incidence of new onset heart failure in this cohort of patients?

3. How are the outcome differences for patients residing within the Winnipeg Regional Health Authority and those living outside?

4. Major cardiovascular outcome differences with use of ticagrelor as the second anti-platelet therapy with that from clopidogrel?

Dr. Shah will subsequently use these results to move forward and compare with other provinces to see if there is a correlation.

Dr. Shah’s research has notably gained interest and subsequently he has been invited as faculty to the Trans-catheter Cardiovascular Therapeutics 2018, Cardiovascular Revascularization Therapies 2018, and CSI – UCSF 2018/2019. In an ever-evolving field, Dr. Shah’s research strives to improve and advance the quality of life for patients with cardiovascular disease.
Dr. Paul Komenda is an Associate Professor of Medicine in the Section of Nephrology at the University of Manitoba and Research Director at the Chronic Disease Innovation Centre at Seven Oaks General Hospital. Dr. Komenda’s research focus is chronic kidney disease, from prevention and surveillance to the transition of kidney failure care. He is currently seeking ways to optimize CKD management in Manitoba and within the international community. His research team consists of a group of dedicated clinicians and research scientists within Seven Oaks General Hospital and the Section of Nephrology at the University of Manitoba.

Dr. Komenda has been working for several years with his Indigenous partners to find solutions to early diagnosis, better treatment and innovative care for people living with diabetes, hypertension and CKD. Indigenous people have a higher risk of CKD and kidney failure compared to non-Indigenous people. Diabetes is also being diagnosed at a higher rate in the Indigenous child population, which is concerning because early onset diabetes can lead to CKD in early adulthood.

Further challenges are faced, as many Indigenous people live in rural communities and have limited access to physicians and health services. In order to seek treatment they must leave their home and family behind. Dr. Komenda’s team, along with Indigenous partners performed a study that involved screening teams within 11 First Nations communities in Manitoba. The purpose was to test anyone >10 years old for CKD, diabetes and hypertension using point-of-care testing equipment and iPad applications. The applications were developed in-house to perform instant risk stratification, education and referral for specialty or primary care follow-up. Dr. Komenda and his team provided evidence for continued support from this study and as a result was awarded $2.1 million dollars for the Kidney Check Project, which is part of the CanSOLVE CKD Network funded by the Canadian Institutes of Health Research (CIHR). The Kidney Check Project’s goal is to create a sustainable, nationally-focused platform to assist with rural and remote screening, triage and treatment of patients across Canada; including Saskatchewan, Alberta, British Columbia and Ontario’s Indigenous communities. This new enhanced program utilizes updated equipment, applications, teaching tools and most importantly, Indigenous and patient partners every step of the way.

Dr. Komenda has also recently received funding for an innovative clinical trial as part of CIHR’s Rewarding Success Program. Along with Drs. Zarychanski and Pitz within the Department of Internal Medicine, they plan to create a real-time integrated clinical data platform to be used to make better clinical decisions for patients and programs, monitor health system performance and improve efficiency in conducting clinical trials within Manitoba. The Home First Study will attempt to create better surveillance systems in Manitoba to those with early CKD. This will provide enhanced education to patients at risk of transitioning to dialysis, and encourage higher utilization of peritoneal dialysis and home hemodialysis through the use of province-wide assisted programs within patients homes. The hope of this program is to demonstrate the value of real-time clinical data platforms and to improve outcomes and quality-of-life to patients by dialyzing in their homes at lower costs to the system.
<table>
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<tr>
<th>Principal Investigator</th>
<th>Granting Agency</th>
<th>Program</th>
<th>Project Title</th>
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<td>Canada Foundation for Innovation (CFI)</td>
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<td>Single-cell transcriptomics analysis of the immune system during infection and chronic inflammation</td>
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<td>El-Gabalawy, Hani</td>
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<td>Komenda, Paul</td>
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<td>URGP</td>
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<td>M-protein response trajectory and survival in newly diagnosed multiple myeloma: A retrospective cohort study</td>
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<td>ACTIVating and Engaging PAtients Through clinical Interaction redesign and Electronically-integrated Novel Technologies (ACTIVE PATIENT)</td>
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A Word From Our Associate Head of Clinical Services:

“In 2019, clinical services in Winnipeg and Manitoba have continued to evolve.”

Dr. Nick Hajidiacos

NEW INTERNAL MEDICINE CLINIC UPDATE

by David Robinson, MD, MSc, FRCP, Medical Director – Ambulatory Care Centre, DIM

In fall of 2017, the Department of Internal Medicine, in cooperation with Health Sciences Centre (HSC) and the Winnipeg Regional Health Authority (WRHA), agreed to a $8.9M project where 13 of our ambulatory care clinics, which see over 75,000 patients a year, would be consolidated into a brand-new ambulatory care clinic (ACC) in what was once a school located next to HSC.

The recent move of HSC from a WRHA resource to Shared Health recognizes the role that HSC plays as a resource for the entire province. The new ACC will not only have a new physical layout but an updated approach to outpatient medicine clinics, reflecting its unique role in the province.

Patient-centred care will be emphasized with better coordination between specialties, and the opportunity for patients to see multiple specialists on the same trip, and sometimes in the same clinic. Expanded hours will increase clinic capacity and allow appointments after regular working hours for some patients. Increased use of telemedicine will obviate the need for some patients to travel to appointments altogether. Most importantly, a new patient advisory group, representing the diversity of patients seen in the ACC will tell us when we are doing things right and where we need to improve.

In 2019, clinical services in Winnipeg and Manitoba have continued to evolve. Phase 2 of “Healing our Health System” entered its final stage in September with the conversion of Seven Oaks Hospital to a low acuity site.

This has resulted in an increase in volumes and activity, especially over the last several months of the year. We have mitigated these challenges by increasing physician resources at the tertiary sites. At times these changing volumes required additional bed openings at the tertiary hospitals and we are continuously evaluating what our resource needs will be moving forward.

At the same time, balancing the educational needs of our residents and medical students has required some innovative thinking in order to maintain balance in the work to education ratio.

In 2019 we brought on physician assistants to the general internal medicine services. This allows more flexibility for our non-teaching patient population, while at the same time providing support to the attending physicians.

My role continues to evolve and I work every day to ensure our clinical mission of the department excels while creating an environment where education and research flourish.
METHODS, STANDARDS AND INNOVATION TEAM (MSI)

This year, the Department of Internal Medicine has championed a new team – the Methods, Standards and Innovation (MSI) team. With LEAN experience in healthcare and industry, the MSI team members are the leaders in the department for process, continuous improvement activities and standards development. MSI uses proven methodologies of improvement that are based on the following principles:

- Gaining the voice of the patient/customer
- Going to where the work happens and grasping the actual conditions
- Validating data and using it to drive decisions
- Using scientific thinking and experimentation to rapidly learn to establish efficient processes
- Continuously improving – challenging status quo

The MSI Team believes in putting the power of change and improvement into the hands of those who do the work by enabling and equipping them with the tools and methodology to do so. MSI will champion and spread continuous improvement methodologies throughout the department through coaching, training, and rapid improvement events. Some examples of the tools and techniques used are, SS methodology, waste, variation and overburden identification, value stream mapping and analysis, and PDSA/A3 scientific problem-solving.

The MSI Team is involved in:

- Leading the planning and transition of the Ambulatory Care Centre, and work with the department’s partners at Health Sciences Centre and the Internal Medicine Program to ensure its success
- Delivering training sessions on the “Basics of Continuous Improvement” for the department and ambulatory clinic physicians and support staff
- Leading lean process improvement initiatives within the department and outpatient clinics
- Collaborating with HSC’s Quality, Patient Safety and Decision Support Department on improvement initiatives and implement management systems

ACCURRO CLINICAL SUPPORT TEAM

Submitted by Dan Roberts, MD, FRCPc

This story is remarkable in that it represents an unprecedented collaboration between four departments; medicine, pediatrics, otolaryngology and anesthesia. Without any formal agreement and little external funding, the four departments were able to share financial risk in order to partner in achieving a common vision.

This project could never have been realized without the dedication, expertise and leadership of Kym Morris or the enthusiasm of her team. Much remains to be done, but we are now in the process of assessing compliance with the many process changes that were introduced with Accuro in each clinic. These reviews are also intended to provide feedback from users to identify additional opportunities for process improvements and enhanced user friendliness. Reviews have already been completed for neurology and respirology.

We extend our appreciation to the ambulatory care nurse managers who have collaborated with us through many process changes. We would also thank Dr. Renner and Dale Gustafson for their unwavering support to see us through the completion of this project.

DEPARTMENT WIKI

What is ‘THE WIKI’?

The department uses a collaboratively edited wiki to document its processes and is the master list for department contact information. The information is stored in a searchable, hyperlinked and categorized way to allow quick access from your desk or mobile devices.

What is new to wiki this year?

We are now using the wiki as part of the onboarding processes for new staff and faculty. We use the wiki to maintain timely information on the tasks currently required in the hiring process for an individual. This allows the new hire to access the same information and guidelines that our administrative staff use to facilitate training and any other requirements to become fully set up in our department.

2019 WIKI STATS

+44% Registrations
1,502 Pages
+26K Visits
95 Registered Users
Talented people come to the department for a variety of reasons, including temporary placements, returning locals, or visitors from afar. No matter the reason for arriving, they all say their time with us is rewarding both personally and professionally.
The Centre of CARE

Amarjit Arneja
MD, MBBS, FRCP,
Section of Physical Medicine & Rehabilitation

On the occasion of his retirement from the University of Manitoba and the Health Sciences Centre, in the fall of 2019, Dr. Arneja established the Dr. Amarjit Arneja Visiting Professorship Fund with an initial contribution of $100,000. This Fund is intended to foster excellence and knowledge in medicine and will support the engagement of an annual visiting speaker, thus bringing the best minds from other centres to the University of Manitoba.

Dr. Amarjit Arneja was born in Punjab, India, came to Winnipeg in 1973 as an intern, and completed residency and fellowship in physical medicine and rehabilitation in 1979. He quickly began his career at the Health Sciences Centre and St. Boniface Hospital. Dr. Arneja, over a period of 39 years, is known as one of the most caring, compassionate and innovative physicians. His hard work and vision was evident in his roles as Director of the Amputee and Musculoskeletal Rehabilitation Programs in Winnipeg (1980), and the Founding Director of the Amputee Program Day Hospital. As a result of his dedication and contributions, he has been honoured with the War Amps of Canada Recognition of Excellence in the area of amputee rehabilitation. He has been instrumental in introducing new programs and treatments which have greatly improved the lives of many Manitobans.

Despite a busy practice, Dr. Arneja always made time for family and friends and was a fantastic role model for his two sons who are now physicians as well. With family responsibilities and his busy clinical workload, balancing academic interests would be difficult, and yet he received a total of $750,000 in grant funding, published 67 papers, 3 book chapters and an eMedicine chapter.

As a result, Dr. Arneja’s dedicated services were recognized by awards:

- Silver Pin from the College of Physicians and Surgeons of Manitoba (2006)
- Lifetime Achievement and Service of Excellence Award from the Manitoba Association of Asian Physicians (2012)
- Queen Elizabeth II Diamond Jubilee Medal (2013) for outstanding contribution to both the art and science of rehabilitation medicine
- Distinguished Service Award from Doctors Manitoba (2018)

Additionally, he has been a member of various boards over the years including: Manitoba Tennis Association, Manitoba Human Rights Commission, Manitoba Human Rights Museum (raising $400,000), Manitoba Health Appeal Board, India Association of Manitoba, Punjab Foundation of Manitoba, the Reh-Fit Centre, and India Canada Cultural and Heritage Association.
Versha Banerji  
MD, FRCPC, Section of Hematology & Oncology

Where and how did you begin your journey?
Born and raised in Winnipeg, I started my journey doing my undergrad at the University of Manitoba (UofM). During the summer months I worked in one of the research labs at the UofM. I had a significant interest in research and debated pursuing a Master’s degree. Ultimately, I decided to complete a pre-MSc in physiology and waited one year before applying to medical school.

Why choose to study internal medicine at the University of Manitoba?
At the time I entered into medical school at the UofM, a new block system curriculum had just been implemented and this is where I discovered my interest in hematology. I was attracted to hematology because it is lab-based and also integrates with patient care. My first elective was with Dr. James Johnston, who, with his mentorship, leadership and guidance, showed me what one can do with a basic science lab and how to transfer this knowledge back to patients. After graduating with an MD from the UofM, I completed my internal medicine and hematology training here. I then completed a postdoctoral at the BROAD Institute of Harvard and MIT and the Dana-Farber Cancer Institute, researching gene-expression based technologies to discover new targets and new drugs to tackle leukemia.

What advice would you give residents starting a career in internal medicine?
It is never too late to engage and find a good mentor and support team invested in your development. The more value added areas one links to their clinical practice, the better the outcome for patients.

Research initiatives and future impact?
As a clinician-scientist, my goal is to bring effective and tolerable treatment to patients with blood cancers. I am the Co-Lead of the Chronic Lymphocytic Leukemia (CLL) Clinic, where we currently follow 1,100 CLL patients in a population-based versus referral-based practice. As a result we see all patients, not just the sickest patients. I am the principal investi-

Veena Agrawal  
MD, FRCPC, Section of Endocrinology

Dr. Veena Agrawal is an active member in the Section of Endocrinology. She provides outpatient ambulatory care in general endocrinology and metabolism at the Health Sciences Centre (HSC), and thyroid cancer clinics at CancerCare Manitoba and St. Boniface Hospital. She attends on the clinical teaching unit at HSC, provides inpatient endocrinology consultation service at both HSC and St. Boniface Hospital, and is the Undergraduate Medical Education Endocrine Course Director.

Born and raised in Winnipeg, Dr. Agrawal knew early on her desire was to pursue a career in medicine. She completed her medical studies and Internal Medicine Residency Program at the University of Manitoba. She went on to do her subspecialty residency in endocrinology and metabolism at the University of Alberta, and ultimately completed a Thyroid Cancer Fellowship at the University of Colorado, the first fellow to do so. During this fellowship, graciously supported by the University of Manitoba, Department of Internal Medicine and Section of Endocrinology, she trained with Dr. Bryan Haugen and a multidisciplinary team of endocrinologists, oncologists, surgeons, pathologists, and radiologists to develop a holistic understanding and approach to thyroid cancer. She now collaborates with her mentor, Dr. William Leslie, in the management of patients with advanced thyroid cancer, and within general endocrine practice has a particular interest in patients with thyroid nodules and low-risk thyroid cancer.

Dr. Agrawal was excited to return to Winnipeg for practice. She missed the “large centre, small community atmosphere” Winnipeg can provide. She has felt incredibly welcomed by her supportive colleagues and loves working with the people who mentored her through training and inspired her to choose her career. She enjoys the diversity within her practice, seeing patients of all ages and backgrounds, with diseases ranging from common to rare and complex. Most recently, she has taken over the pre-clerkship endocrinology course, and looks forward to ensuring students have a solid foundation in endocrine principles as they enter the clinical setting.

Dr. Agrawal was excited to return to Winnipeg for practice. She missed the “large centre, small community atmosphere” Winnipeg can provide.
gator of multiple clinical trials. I follow cohorts of patients within my day-to-day practice to evaluate the impact of implementing novel medications, and reporting unknown toxicities in a real world setting. In addition, I am looking at the cost of implementing these novel treatments into current clinical practice and am an advocate for new drug approval by Health Canada and provincial funding. My lab studies metabolism in cancer and we are also looking at various combination strategies based on mitochondrial bioenergetics from untreated patients to understand the effects of drug combinations on mitochondrial function and metabolism in an effort to design new treatments that are less toxic for patients.

**Most important and/or surprising finds in your research?**

During my postdoctoral training at the Dana-Farber Cancer Institute with Dr. K. Stegmaier, I discovered a new target in Acute Myeloid Leukemia that led to the development of a small molecule, for which I have a patent. This new compound inhibits the target and leads to cancer cell death – the patent has been licensed to a third party to start early phase clinical trials.

**Challenges and benefits of being a clinician-scientist?**

As a clinician-scientist the challenge is balancing clinical workload and research demands. Patients are living longer and we are learning from our patients. The demand for continued knowledge-based care and treatment plus balancing research is exciting, but at the same time challenging. The search for funding and meeting all the deliverables while being a caring, compassionate and effective physician is the hardest challenge. This is because both aspects are competing for your time. It is this same push and pull that makes the job fulfilling as well.

**Outlook for the future?**

To see further growth and expansion of the CLL translational program, to understand CLL biology, its effect on the immune system and find new ways to treat patients. My specific interests are to understand how novel drugs or small molecules alter cancer cell metabolism. Medicine is changing rapidly as are new discoveries for cancer treatment. With these new discoveries comes personal learning and evolving ones practice on a daily basis so that we can implement new treatments into clinical practice and provide personalized care for better health outcomes for our patients.

**Why Winnipeg – what is keeping you here?**

Born and raised here, and in meeting my husband Dr. Shantanu Banerji in medical school, we had always planned to build Manitoba’s cancer research program, while providing clinical care to patients. Manitoba has always provided immense support to us both, and heavily invested in our training and supported our careers. Work life balance is a challenge for all families and Winnipeg allows us the time to spend and enjoy our three children, friends and family.

“Manitoba has always provided immense support to us both, and heavily invested in our training and supported our careers. Work life balance is a challenge for all families and Winnipeg allows us the time to spend and enjoy our three children, friends and family.”

Dr. Versha Banerji
As we head into the start of a new decade we take a look at some of the top highlights that Manitoba has to offer and attempt to get a glimpse of the future as we continue to strive forward in unity and acceptance of all.

Manitoba enjoys more than 2,300 hours of bright sun each year and is known for its prairie skyline. We are a diverse province located in the heart of Canada, and are proud of our collective cultural and intellectual achievements. Our advancements in architecture are innovative and unique. Everyone has their own favourite reason to love Manitoba, and here are our top 10 of the past decade:

1. ARCHITECTURE
The Canadian Museum for Human Rights (official opening September 2014) is shaped to mimic the wings of a dove. The soaring Tower of Hope rises 100m into the air providing a 360° view of the entire city. (Architecture TM. Photo courtesy of Travel Manitoba)

2. ANIMALS
Assiniboine Park Zoo’s award-winning attraction features 10 polar bears viewable by the underwater viewing tunnels, which allow the rare opportunity to see these amazing creatures below the water’s surface. (Assiniboine Park Zoo – Journey to Churchill Exhibit. Photo courtesy of Travel Manitoba)

3. SPORTS
Home to many professional and amateur sports teams including the Winnipeg Blue Bombers (Grey Cup Champs 2019), Winnipeg Jets, Manitoba Moose, Winnipeg Goldeyes, Valour Football Club, and Winnipeg Ice hockey team, there’s a team for every kind of fan. (Top: Gavin Napier/Shutterstock.com Bottom: Salvador Maniquiz/Shutterstock.com)
4. ARTS & CULTURE
Winnipeg is home to the Royal Winnipeg Ballet (who will celebrate their 80th anniversary in 2020, with a spotlight on the prairies), Winnipeg Symphony Orchestra, Manitoba Opera, and many theatre companies including Rainbow Stage and Manitoba Theatre Centre. (Photo courtesy of RWB Company – Photo by David Cooper)

5. LOCAL FOOD & NEW FLAVORS
Unique pop-ups like RAW:Almond (built on the frozen river) stand out and fit right in to our extensive food and drink scene. (Photo courtesy of Travel Manitoba)

6. CAMPING/PARKS/LAKE LIFE
Offering four days of music for everyone, unique workshops, family activities and community camping – the Winnipeg Folk Festival provides an outdoor venue for families to spend quality time together while making the most of our incredible summers. (Winnipeg Folk Festival. Photo courtesy of Travel Manitoba)

7. RECORD-BREAKING FUN
The winter Snow Maze at A Maze in Corn attained a Guinness World Record for the largest snow maze. Measuring 2,789.11 m² (30,021 ft² 110 in²) it was created in St. Adolphe, Manitoba, Canada, and measured on February 10, 2019. (Winter Maze. Photo courtesy of Angie Masse)

8. RELAXATION
Thermëa is only a few minutes from downtown. A relaxation and healing centre, its main focus is on thermotherapy and relaxation techniques from Scandinavian countries. Truly a unique multi-sensory experience. (Photo courtesy of NORDIK/PHOTOLUX)

9. CELEBRATIONS
Held at a sacred site in the Whiteshell Provincial Park, the Manito Ahbee celebrates Indigenous arts, culture and music, uniting residents and visitors. Their vision is to continue being recognized as a leader in transforming relationships, sharing Indigenous culture and heritage with the world. (Manito Ahbee Festival. Photo courtesy of Travel Manitoba)

10. INCREDIBLE PLACES
Known as the “crossroads of Canada”, the corner of Portage and Main is a gathering place for all types of local celebrations. (Photo of Portage & Main, Photo Courtesy of Travel Manitoba)
“I would like to acknowledge all department members for their hard work towards another successful year. Thank you to those individuals who have participated in sharing the achievements and accomplishments of the Department of Internal Medicine, as shown in this report.

We will strive to continue to highlight ongoing commitment and dedication towards the success of all staff.”

Eberhard Renner MD, FRCPC, FAASLD
Department Head, Internal Medicine