We Are:
In This Together

2020
Department of Internal Medicine
Annual Report
UNIVERSITY OF MANITOBA
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 lifelong 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.
In 2020, the department continued to be challenged by the ongoing and profound provincial health services transformation. The COVID-19 pandemic added a totally new dimension to these tasks. Working together as a team has been instrumental in our ability to deal with this year’s exceptional challenges.

With cases of COVID-19 spreading throughout the province, our physicians, residents, nurses, allied health and support staff found themselves on the frontlines of caring for our critically ill patients that were rapidly filling our hospitals to near capacity.

I would like to specifically recognize the incredible contributions and unwavering commitment of our physicians, as well as staff, especially our critical care, general internal medicine and infectious diseases physicians, and also the many other subspecialists who stepped in to help out the department, the university and Shared Health during these unprecedented and challenging times. They have worked tirelessly over the last twelve months risking their own health and that of those closest to them in order to care for our patients.

Our faculty and staff have responded to the tremendous challenges that consolidation of services and the pandemic have presented and have worked collaboratively with their colleagues within the department and others at the University of Manitoba and universities across the country to find new ways of delivering better care, advancing our understanding of the novel virus and developing effective tools to combat it. The pandemic has forced many of us to become acquainted with virtual care and teaching technologies almost overnight – which we have embraced.

Many challenges lie ahead, but together as a team we will continue to strive forward focusing on ways to work more effectively and efficiently for the patients we serve, and continue our mission to provide excellent clinical care, outstanding education programs and cutting-edge research.

I give my sincere appreciation and thanks to the Internal Medicine faculty and staff members for their exemplary professionalism and leadership, incredible hard work, unwavering commitment and ongoing support during this exceptionally challenging and demanding year.

Eberhard Renner, MD, FRCP, FAASLD  Department Head, Internal Medicine
We Are:

**IN THIS TOGETHER**

Our experiences in 2020 have bonded us together as healthcare providers to create unity within unfamiliar territory. High standards of patient care, the unknown and our resilience to overcome change are what bring us together.

- DEPARTMENT OVERVIEW
- OUR LEADERSHIP
- OUR SUPPORT TEAMS
- STANDING COMMITTEES

**C.A.R.E.**

Our four pillars make up the foundation of our strengths that steer us toward our vision and help us achieve our goals. We share who we are and recognize our diverse contributions and accomplishments.

- SECTION PROFILES
- BLOG: ON LIMITS OF TOLERANCE

**RESILIENT**

Navigating change requires a pragmatic and positive attitude that is essential for growth. Together we will rise above the challenges we face.

- A WORD FROM OUR MANAGING DIRECTOR
- DEPARTMENT FACTS

**LEADERS**

With the landscape of medicine continuing to evolve, we adapt and lead with perseverance and determination; this is what sets us apart.

- 2020 ACADEMIC AWARDS
- 2020 RESIDENT RESEARCH DAY AWARDS
- ENDOWED RESEARCH CHAIRS
- PROFESSORSHIPS
HOME IS WHERE THE HEART IS

Learn more about our Manitoba roots which create our bond, and why we love working and living here.

- AT THE HEART OF MANITOBA
- CELEBRATING 150 YEARS

EDUCATORS

We celebrate our efforts to promote adapted learning and continue to nurture wisdom, in order to better care for those we serve.

- TEACHING PHILOSOPHY OF AN AWARD-Winning EDUCATOR
- A GLANCE INTO MEDICAL TRAINING – PERSPECTIVE OF A CHIEF RESIDENT

PAVING THE WAY

This year has set the stage for future research and has put Manitoba on the map in leading COVID-19 research.

- Q&A WITH DR. LINDSAY NICOLLE
- LEADING COVID-19 RESEARCH IN MANITOBA
- HOME GROWN RESEARCH IN AUTOIMMUNE DISEASE

EVLVING

As many familiar things evolved, we found new perspectives while keeping our focus on what matters most.

- AMBULATORY CARE CLINIC UPDATE
- CLINICAL SUPPORT TEAM UPDATES

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A Word From Our Associate Head of Diversity & Professionalism

Initially dubbed “the great equalizer”, it is much more realistic to conceive of the pandemic as having laid bare preexisting inequities around race and gender in society. In many respects, medicine itself has been a microcosm of many, much bigger pictures. Early this spring, a decrease in first-author publications by female academics was noted. This was generally explained as being due to the higher proportion of caregiving responsibilities that are expected of most women with families — and more broadly during the pandemic, women have born the lion’s share of caregiving duties as well as job and financial losses. Racialized healthcare workers, like patients, have accounted for a higher proportion of both cases and deaths worldwide. As broader acknowledgments about the reality of systemic racism in society and healthcare have spilled over into public consciousness, it would be naïve to think that we are in any way exempt from these crucial conversations. None of us are exempt, no matter our seniority, clinical service, research dollars or number of publications. There are precious few of us who can really say we have done all we can do to create a more just and inclusive culture where we work.

The double edge of all great hardship in life is an opportunity for transformation. Current trends should make it easier for us to identify and speak out against inequalities, subtle or overt signs of systemic racism and models of care that are based on dated societal and family norms. This is the imperative of the moment.

As we establish new programs, initiatives and routines in the face of current uncertainties, the Department of Internal Medicine will continue to further initiatives that support equity, diversity, inclusion and belonging, as well as individual well-being and reflection and the cultivation of stronger, more meaningful interpersonal relationships and pro-social behavior.

It is time for us to ensure that the environment we all want to work in is less about how things have always been done historically and more about the professional future we want to create - a just culture, an inclusive culture, and one we can be proud to call our own.

Jillian Horton, MD, MA, FRCPc
Assistant Professor & Associate Head of Diversity and Professionalism, Internal Medicine
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, 9 endowed research chairs and 2 professorships. We will have trained over 120 residents in the 2020–2021 academic year and have 2 Area of Focused Competence (AFC) 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 our 2 academic health centres, the Health Sciences Centre and St. Boniface Hospital. We also offer services at the Grace Hospital. The CTUs are the focal point of the in-patient training programs for medical residents and 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 including Churchill Health Centre, community health agencies, home care, public health, mental health services and long term care facilities.

Our Leadership

DEPARTMENT HEAD
Dr. Eberhard Renner

MANAGING DIRECTOR
Dale Gustafson

STANDING COMMITTEES
Executive
Financial Oversight and Advisory
Postgraduate Medical Education
Promotion and Tenure
Research and Faculty Development
Senior Advisory

ASSOCIATE HEADS
Dr. Nick Hajidiacos, Clinical Services
Dr. Jillian Horton, Diversity and Professionalism
Dr. Pamela Orr, Education
Dr. Hani El-Gabalawy, Research

SECTION HEADS
Dr. Christine Peschken*, Allergy & Clinical Immunology
Dr. John Wilkins, Biomedical Proteomics
Dr. Davinder Jassal, Cardiology
Dr. Allan Garland & Dr. Bojan Paunovic, Critical Care
Dr. Marni Wiseman, Dermatology
Dr. Pamela Katz, Endocrinology
Dr. Donald Duerksen, Gastroenterology
Dr. Patrick Griffin* & Dr. Ken Van Ameyde*, General Internal Medicine
Dr. Philip St. John, Geriatric Medicine
Dr. Eberhard Renner*, Hepatology
Dr. Yoav Keynan/Dr. Kelly MacDonald, Infectious Diseases
Dr. Joe Buetli, Nephrology
Dr. Brian Schmidt* & Dr. Dan Roberts*, Neurology
Dr. Ryan Skrabek, Physical Medicine & Rehabilitation
Dr. Martha Ainslie, Respiratory Medicine
Dr. Christine Peschken, Rheumatology

*Indicates acting

See page 33 for Dr. Renner’s blog, and visit: n.umintmed.ca for executive and guest articles, latest news and updates
Our Support Team

**PHYSICIAN SERVICES MANAGEMENT**
- Kim Armitt
- Tracey Burton
- Kaley Wusaty-Phillips

**ADMINISTRATIVE SUPPORT TEAM**
- Sheila Ang
- Donna Ansell
- Connie Arguelles
- Sylvia Barthelette
- Sarah Bernaldo
- Rem Binua
- Kristi Burke
- Wendy Cirillo
- Bonnie Coss
- Amy Cote
- Jennifer Coutu
- Elsa Critchlow
- Brenda Des Rosiers
- Paulette Devigne
- Laura Dolor
- Casandra Dolovich
- Maria Dungca
- Karen Ellison
- Jennifer Gamis-Matias
- Sharon Gordon
- Rita Greco
- Diane Gurney
- Janice Gushulak
- Angela Harper
- Sara Harms
- Sandra Klippenstein
- Karan Kraft
- Ashley LaRosa
- Melanie Loyola
- Rita Mann
- Judith McFarland

**EDUCATION PROGRAMS ADMINISTRATION TEAM**
- Colleen McRae
- Annette Nanowski
- Tiffiny Nelson
- Patricia Ostryzniuk
- Natasha Passante
- Thorunn Petursdottir
- Monica Preteau
- Bonny Provo
- Tiana Reid
- Ingrid Reuter
- Shauna Richter
- Justine Rudnicki-Smith
- Christine Sawatzky
- Leanne Schmidt
- Emma Shaw
- Jadianne Shore
- Adrienne Simpson
- Roberta Vizniak
- Michelle Wojnowski

**FINANCE MANAGEMENT**
- Tamara Cipriano

**IT SUPPORT TEAM**
- Tom Fraser
- Raymund Roque
- Tina Tenbergen

**DEPARTMENT ADMINISTRATION**
- Caroline Beaudoin
- Tonya Derksen
- Michelle Elands
- Karen Kiel

**EDUCATION PROGRAMS MANAGEMENT**
- Suzanne Doyle
- Melissa Franzmann

**MEDICAL TRANSCRIPTION TEAM**
- Kaeren Anderson
- Lisa Angelkovski
- Lisa Blackman
- Dianne Charney
- Susan Christanson
- Nelinda Chua
- Sherri Corrigan
- Laurice De Guzman
- May De Guzman
- Donna Donovan
- Ceridwen Farr
- Heather Klyne
- Marcella Piercy
- Colleen Sangster
- Stephanie Skinner
- Pamela Vokey
- Meridel Smith
- Cycelia Lazarovich
- Karl Cadorna
- Karen Quilloy
- Wendy King
- Darlene Mercredi
- Jessica Smith
- Margaret Worden

Our sincere congratulations to Suzanne Doyle on her retirement, and a warm welcome to Melissa Franzmann who will be taking over as Education Programs Manager in 2021.
Standing Committees

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 40 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, sections and the individual departmental members.

FINANCIAL OVERSIGHT AND ADVISORY COMMITTEE

The Financial Oversight and Advisory Committee, chaired by Dr. Harminder Singh, exists to represent the best interests of the university, college, department and its individual geographical full-time (GFT) members. It 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 members, to ensure there is transparency, accountability and a feedback mechanism 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 16 accredited resident training programs (13 subspecialty and 3 core 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 the 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 operations of each program are supervised by a designated Program Director and a Resident Training Committee.

PROMOTIONS AND TENURE COMMITTEE

The Promotions and Tenure Committee is an advisory body which reports through the Chair, Dr. Davinder Jassal, to the Department Head of Internal Medicine. The committee accepts applications from full- and part-time academic staff within the DIM, 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, co-chaired by Drs. Hani El-Gabalawy and Ruth Ann Marrie, has had a longstanding mandate to evaluate the research performance of all faculty members who have an academic commitment of 25% or greater that is focused on research and scholarly activity. As such, the faculty 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.

SENIOR ADVISORY COMMITTEE

The Senior Advisory Committee advises the Department Head on strategic directions and important issues relevant to patient care, research, education, finance, professionalism and diversity. Committee membership includes the Department Head, Associate Heads and Managing Director.

The mission is to foster an atmosphere of engagement; ensuring senior department leadership is aligned with moving forward in the academic mission and the department’s strategic vision.
We Are: C.A.R.E

We are clinicians, administrators, researchers and educators — the essence of the department.

Each individual is an integral part of our successes and are catalysts towards an unprecedented future, and we recognize collective dedication to the department. It is because of our passion, commitment and resilience that our vision is becoming a reality. We come together as one to overcome and accomplish what we set out to do.
The Section of Allergy and Clinical Immunology focuses on the diagnosis and management of allergic disorders, asthma, chronic urticaria, angioedema, drug and stinging insect allergies and immunodeficiency diseases.

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 the Grace Hospital.

The section has added a new geographical full-time (GFT) physician, Dr. Karver Zaborniak, who has an interest in medical education and is planning to develop specialized clinics in drug desensitization and immunotherapy.

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

Faculty: Acting Section Head, C. Peschken – C. Barber, P. Ho, C. Kalicinsky, L. Rosenfield, T. Rubin, R. Warrington, K. Zaborniak

http://allergy.wiki.umintmed.ca

IN PROFILE:

Richard Warrington, MBBS, PhD, FRCPC

See page 60 for Dr. Warrington's feature article.
The Section of Biomedical Proteomics encompasses the Manitoba Centre for Proteomics and Systems Biology (MCPSB), which was established to use high content approaches to study questions of biological and medical relevance.

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 gene codes 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.

IN PROFILE:

Neeloffer Mookherjee, PhD
Award Winning Faculty

Dr. Mookherjee was awarded the inaugural Canadian Institutes of Health Research Sex and Gender Science Chair – Circulatory and Respiratory Health to study the impact of biological sex on inflammatory respiratory disease such as asthma progression and response to therapy. The Chairs provide opportunities to support in-depth investigations in the field of sex and gender science by promoting a cadre of discipline-specific Sex and Gender Science Chairs to increase visibility and drive innovation in their respective fields.
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 MCPSB welcomes the opportunity to discuss these with interested members of internal medicine and other clinical departments.

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

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

Drs. Neeloffe Mookherjee and Janilyn Arsenio are the Chair and Vice-Chair respectively of Women In Science: Development, Outreach & Mentoring (WISDOM), a Rady Faculty of Health Sciences (RFHS)-instituted initiative. They lead educational activities to connect, mentor and advocate on behalf of academic women in science, and to inspire innovation and excellence through positive role models and outreach programs. They work closely with the RFHS Equity, Diversity and Inclusion Director, Jackie Gruber on these initiatives.

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

Faculty: Section Head, J. Wilkins – J. Arsenio, O. Krokhin, N. Mookherjee

http://proteomics.wiki.umintmed.ca

Janilyn Arsenio, PhD
New Investigator

Dr. Arsenio was inducted into the Global Young Academy (GYA) in June 2020. She is one of 4 Canadians who were selected for membership. As part of the GYA, her role will involve contributing to discussions on equity, diversity and inclusion in science, and science policy related to fundamental research. Her research program focuses on molecular understanding of T-cell differentiation processes that influence their regulatory activities in acute and chronic disease. Congratulations to Dr. Arsenio for being the recipient of the 2020 Liam J. Murphy Young Investigator Award!
There are currently 30 full-time academic cardiologists. This includes 2 new recruits who joined in the fall of 2020. The Section of Cardiology has major academic and clinical responsibilities in interventional cardiology, electrophysiology, echocardiography, cardiac computed tomography and magnetic resonance imaging (MRI), nuclear cardiology, cardiac rehabilitation, heart failure and cardiac transplantation.

There are a total of 1.3 million individuals in Manitoba, northwestern Ontario and Nunavut who may require cardiac care within our catchment area. The section faculty and the Winnipeg Regional Health Authority Cardiac Sciences Program deliver cardiac care centred at St. Boniface Hospital, which is one of the busiest tertiary cardiac facilities in Canada. With respect to patient volumes, there are approximately 12,500 outpatient clinic visits, 1,200 cardiac care unit admissions and over 2,000 ward admissions to cardiology on an annual basis. In terms of non-invasive diagnostic testing, on average there are a total of 75,000 electrocardiograms, 2,700 Holter monitor tests, 7,100 stress tests, 18,500 echocardiographic studies, 3,600 nuclear studies and 750 cardiac MRI scans performed annually. 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 cardioverter defibrillators/cardiac resynchronization therapy devices, 12,000 device interrogations and 350 electrophysiology ablations are performed annually. The Cardiac Care Quality Indicators Report from the Canadian Institute for Health Information (2019/2020) ranked St. Boniface Hospital as one of the top hospitals in the country for provision of cardiac care.

Dr. Anita Soni is currently the Undergraduate Medical Education (UGME) Program Director and is committed to teaching, as evident in her leadership with the CV1 and CV2 modular courses and CV clinical skills. These courses are comprised of approximately 300 direct teaching hours (Med I only) from our own faculty members. The section has received teaching recognition through Manitoba Medical Students’ Association awards (February 2020) and nominated by Med I and Med II Pre-Clerkship for best course (CV1 and 2). Dr. Clarence Khoo was the recipient of the UGME Med I Award for Innovation and Dr. Anita Soni received the UGME Med I Award for Mentorship, Med II Award for Mentorship, Med I Award for Inspiration and Med II Award for Innovation.

Dr. Malek Kass is currently the Postgraduate Medical Education (PGME) Director of the Adult Cardiology Residency Training Program and Dr. Basem Elbarouni is the PGME Director of Area of Focused Competence (AFC) Interventional Cardiology Training Program. We have 8 PGME trainees in the Core Adult Cardiology Residency Training Program and 2 trainees in the AFC Interventional Cardiology Training Program (2020-2021). Dr. Judi Luu (PGY6) was the recipient of the Heart and Stroke Foundation of Manitoba/ Sanofi Award in Cardiology for 2020. Additionally, Dr. Chris Parr (PGY5) was the recipient of the 2020 D&M Stevens Foundation Scholarship for research excellence in adult cardiology.

Amongst the 30 full-time academic GFT cardiologists, there are a total of 4 clinician-scientists; Drs. Amir Ravandi, Ashish Shah, Shelley Zieroth and Davinder Jassal.

All 4 clinician-scientists within the section have cross appointments in the Department of Physiology and Pathophysiology, as members of the Institute of Cardiovascular Sciences at the St. Boniface Research Centre (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 preclinical therapies. Our members participate and lead investigator-initiated studies, registry design and analysis, and multi-centre investigations, including both Canadian Institutes of Health Research and sponsored research studies. Our faculty members are involved in over 70 separate clinical trials at St. Boniface Hospital.
IN PROFILE:

Robin Ducas, MD, FRCPC
Clinical Mentor

Dr. Ducas completed medical school, internal medicine and cardiology training at the University of Manitoba, and obtained her FRCPC in cardiology in 2014. Dr. Ducas completed fellowships in adult congenital heart disease, maternal cardiology and echocardiography at the University of Toronto and Mount Sinai Hospital in Toronto (2014-2017). She joined the Section of Cardiology at the University of Manitoba in 2018 and is currently an Assistant Professor of Cardiology and Obstetrics, Gynecology & Reproductive Sciences. Dr. Ducas is the Medical Director of the Manitoba Adult Congenital Heart Program and is currently focused on developing three key program components, including a provincial database, securing nursing support to expand clinical services and provide a more comprehensive transition from pediatric to adult care, as well as increasing the congenital heart diagnostic and procedures available to Manitobans affected by congenital heart disease. In addition, Dr. Ducas runs the Maternal Cardiology Clinic through St. Boniface Hospital, caring for women with cardiac disease throughout their pregnancy.

Kiran Sidhu, MD, FRCPC
New Faculty

Dr. Sidhu joined the Section of Cardiology at St. Boniface Hospital in September 2019 as an Assistant Professor and an advanced heart failure and device specialist in the Department of Internal Medicine. She obtained her BSc Pharm as well as her MD at the University of British Columbia. She then completed her internal medicine residency in Vancouver followed by cardiology at the London Health Sciences Centre (LHSC), where she was the Chief Cardiology Fellow. Thereafter, she did a one-year device fellowship with the electrophysiology group at LHSC. She completed her Advanced Heart Failure and Transplantation Fellowship at Brigham and Women’s Hospital in Boston. She is currently in the midst of completing a Master of Public Health degree through the Harvard School of Public Health. Dr. Sidhu is working toward developing a combined heart failure/device clinic model to better serve the needs of complex patients.
The Section of Critical Care Medicine is a very active section, both clinically and academically. Though there are more than 40 intensivists on faculty at the university, originating from a variety of departments including anesthesia, emergency medicine and surgery, 22 are from the Section of Critical Care within the Department of Internal Medicine.

We provide critical services for adults in Manitoba, northwestern Ontario and Nunavut. Because of the geographical distances, critical care transport, including specially equipped aircraft, is integral to our clinical work. Regional hospital consolidation has been completed, which included closure of the Intensive Care Units (ICUs) at Seven Oaks and Concordia hospitals. We now have ICUs in two academic/tertiary hospitals: the Health Sciences Centre (HSC) and St. Boniface Hospital (SBH); and one community ICU at Grace Hospital (GH). There are separate medical and surgical/trauma ICUs at HSC; SBH has a mixed medical-surgical ICU and a cardiovascular surgery ICU. Units within the city possess advanced support capability including invasive mechanical ventilation, continuous renal replacement therapy and extra-corporeal membrane oxygenation. Approximately 5,000 patients are admitted to our city’s ICUs annually.

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 our ICUs. 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 made up of multidisciplinary representative from various Winnipeg ICUs. This committee is chaired by Dr. Kendiss Olafson along with emergency medicine colleague, Dr. Carmen Hrymak.

Our faculty also provides critical care education for medical students, residents, subspecialty residents and fellows. Formal undergraduate medical education and postgraduate medical education (PGME) rotations are hosted within the ICUs at the HSC, SBH and GH. Critical care faculty deliver monthly lecture series, covering a curriculum of 12 core topics in critical care. The lectures are presented via interactive video conferencing to all teaching sites to enable accessibility for all trainees from across the regions to participate.
The major training focus of the PGME Critical Care Program is the group of 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 the following specialties prior to enrollment: internal medicine, anesthesia, general surgery, cardiac surgery or emergency medicine. Currently, there are 6 trainees in the critical care program. The 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 projects relevant to quality improvement, complete scholarly projects and write thrice-annual in-training exams to prepare for certification. 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 interviews. We welcome qualified applicants who desire to become experts in the delivery of exemplary care to critically ill patients.

Over the past 5 years (2016–2020), section members have authored 232 publications, including 54 in 2020. Areas of current research in the section include: sepsis/septic shock, COVID-19, the epidemiology of critical illness, hematologic issues in critical illness, use of “big data”, influenza, outcomes of critical illness and systematic reviews.

Barret Rush, MD, MPH
New Faculty

Having recently joined the section, Dr. Rush attended medical school at the University of Washington in Seattle, followed by internal medicine and critical care subspecialty training at the University of British Columbia, and a Master’s of Public Health at Harvard University. Dr. Rush was hired with 50% protected research time. His research interests include: sepsis, end-stage liver disease, “big data” and artificial intelligence.
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.

The Section of Endocrinology maintains a strong commitment to the provision of clinical services, undergraduate and postgraduate teaching, as well as basic and clinical research. The section consists of 15 full-time and part-time faculty members, and 2 professor PhD scientists.

The Section of Endocrinology provides care to patients with diabetes (types 1, 2 and gestational), as well as individuals with thyroid disorders, pituitary dysfunction, adrenal diseases, parathyroid conditions, reproductive concerns, osteoporosis and other issues of bone metabolism. In 2020, our endocrinologists conducted over 14,000 visits in 32 weekly ambulatory care clinics at Winnipeg’s two largest tertiary and academic hospitals, St. Boniface Hospital and the Health Sciences Centre. In response to the COVID-19 pandemic, the section quickly adapted to a virtual format for outpatient appointments, to ensure patients continued to receive essential care. The physicians provide on-call services including inpatient consultation to medical and surgical patients, emergency departments, intensive care units, and consultation to practitioners throughout the province and parts of Saskatchewan, Ontario and Nunavut.

The Section of Endocrinology provides support to the UM Max Rady College of Medicine’s education programs, including small group tutorials, lectures and mentorship at the pre-clerkship and clerkship levels, as well as numerous specialty and subspecialty training programs, international medical graduates and the physician assistant program. Postgraduate training is a two-year Royal College of Physicians and Surgeons of Canada accredited program in adult endocrinology and metabolism and is designed to provide a trainee with sufficient exposure to associated disorders, along with the necessary clinical and basic science knowledge base to function capably as a consultant in either a community or academic setting. Dr. Isanne Schacter is the Postgraduate Program Director and Dr. Veena Agrawal is the Undergraduate Course Director.

Our research portfolio includes two professor PhD scientists, Drs. Suresh Mishra and Garry Shen. They collaborate and actively participate 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.
The 14 members in the Section of Dermatology continue to deliver dynamic clinical care, mainly in private practice settings, 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.

Electives for dermatology are typically offered up to four weeks and students are exposed to clinical dermatology in an outpatient setting. Students become familiar with conventional therapies and various clinical scenarios. They are responsible for seeing patient consultations with the assigned preceptor.


[http://dermatology.wiki.umintmed.ca](http://dermatology.wiki.umintmed.ca)

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Both scientists have been consistently supported by Tri-Council and other funding agencies such as Canadian Institutes for Health Research and Natural Sciences and Engineering Research Council of Canada; including infrastructure support from the Canada Foundation for Innovation.

The book “Immunometabolism: Methods and Protocols”, edited by Dr. Suresh Mishra, showcases the tremendous effort and progress that has been made in developing techniques and protocols for the study of immunometabolism. This book has been acknowledged as a vital guide for researchers working at the important interface of immunology and metabolism.

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**IN PROFILE**

**Jennifer Yamamoto, MD, FRCPC**

New Faculty

Dr. Yamamoto graduated from medical school and subsequently completed her internal medicine residency training at the University of Manitoba. She pursued her endocrinology and metabolism training at the University of Calgary (2016) followed by a research fellowship in diabetes in pregnancy at the University of East Anglia in the United Kingdom. Dr. Yamamoto returned to Canada to complete her Master of Science Program in clinical epidemiology (2019) at the University of Calgary where she worked as a clinician-researcher in the Departments of Medicine and Obstetrics and Gynecology.

Dr. Yamamoto’s main research and clinical interests include diabetes in pregnancy and thyroid disease in pregnancy. Her research program focuses on how we can leverage diabetes technology to improve outcomes in diabetes-complicated pregnancies. Dr. Yamamoto’s research work includes over 26 publications (2016-2020), 194 citations and 52.6% of publication in top journals. She published 3 book chapters published in the “Oxford Textbook of Endocrinology and Diabetes”, “Diabetes Technology: Science and Practice” and “Maternal-Fetal and Neonatal Endocrinology”.

Dr. Yamamoto is thrilled to join the Section of Endocrinology as a clinician-researcher and is grateful for the support of the section and the department for providing her a unique opportunity to contribute to women’s health in Manitoba.


[http://endocrinology.wiki.umintmed.ca](http://endocrinology.wiki.umintmed.ca)
The Section of Gastroenterology provides research, education and specialized care for a wide spectrum of gastrointestinal (GI) disorders. Endoscopy plays an integral role in the investigation and management of these disorders and the section provides leadership in the delivery of these services. The section has 8 full-time members, distributed amongst the Health Sciences Centre (HSC), St. Boniface Hospital and the Grace Hospital, and 1 scientist performing basic biology research in digestive disorders.

The section provides advanced care and specialized services to Manitobans with GI disorders and diseases. This includes testing and management of gastrointestinal motility disorders, management of complex functional gastrointestinal disorders and complex inflammatory bowel disease, advanced therapeutic endoscopy, including advanced interventional endoscopy for pancreatic and biliary disease, endoscopic ultrasound, emergency endoscopy services and specialized nutrition support for malnourished patients.

Under the direction of Dr. Dana Moffatt, a centralized intake process for endoscopic procedures has been developed. All consultations for endoscopic procedures are triaged, prioritized and distributed to the appropriate endoscopist. This process has resulted in increased efficiency for accessing and providing endoscopic services in hospitals within the Winnipeg Regional Health Authority and Shared Health. Plans are underway to develop a new multidisciplinary clinic to manage patients with complex inflammatory bowel disease (IBD). This clinic will be run out of the new outpatient clinic currently being constructed at HSC. Radiofrequency ablation of superficial tumors, particularly of the esophagus, is an endoscopic technique that is now offered at HSC. Ultrasound of the small bowel is an emerging non-invasive technique to evaluate disorders of the small bowel including Crohn’s disease. Equipment has been procured for this purpose and a program is being developed through the leadership of Dr. Penina Krongold. The section has areas of special interest which allow for clinical expertise in a wide spectrum of GI disorders such as IBD, GI motility and functional disorders, celiac disease, specialized nutrition support, therapeutic endoscopy and the development of small bowel ultrasound.

Dr. Michael Cantor is the Director of the GI Fellowship Program of which there are currently 5 residents. Graduates of the 2-year fellowship program have successfully transitioned to community gastrointestinal practice or pursued additional expertise in areas such as therapeutic endoscopy, inflammatory bowel disease and research of gastrointestinal disorders prior to embarking on
We are: Care | Section Overviews

Academic careers. Dr. Alexandra Ilnyckyj is the Program Director of Undergraduate Medical Education for gastroenterology/hepatology and nutrition. Medical students receive instruction in normal anatomy and physiology and of the gastrointestinal tracts, followed by the pathophysiology, investigation and management of gastrointestinal and hepatobiliary disorders. Students also receive basic instruction in normal human nutrition and approach to the malnourished patient. Members participate in the education of physician assistants, give educational sessions to primary care physicians and present research topics at various national and international conferences.

The section organizes an annual Gastroenterology Symposium, under the leadership of Dr. Charles Bernstein, featuring many world class international speakers. This full day symposium highlights many aspects surrounding the world of GI, including new and innovative research from around the world. The 25th anniversary symposium that was scheduled for June 2020 has been rescheduled for June 11, 2021.

The section’s research portfolio is broad with many members contributing in various areas. Dr. Bernstein leads the University of Manitoba’s Inflammatory Bowel Disease (IBD) Clinical and Research Centre, and collaborates with researchers from other sections and departments at the university and with centres around the world. Dr. Donald Duerksen leads nutrition and celiac disease research. Dr. Harminder Singh leads research in GI cancer, endoscopy quality improvement and Clostridium difficile. Dr. Gerard Coneys is completing his master’s degree in community health sciences and will be leading pancreatobiliary research. Dr. Jean-Eric Ghia leads basic biology research in GI disorders. Michael Sargent, an IBD Program senior technician, was awarded the 2020 Karol D. McNeill Technician Award. The annual award honours an outstanding technician in health sciences research at the University of Manitoba and selection is based on prolonged service, scientific excellence, leadership and mentorship.

In Profile:

Seth Shaffer, MD, FRCPC
New Faculty

Dr. Shaffer is originally from Winnipeg and graduated medical school at the University of Manitoba. He completed his internal medicine residency at Queen’s University and gastroenterology training at the University of Manitoba. He went on to complete an IBD fellowship with Dr. David Rubin and a master’s degree in public health sciences at the University of Chicago, before returning to Winnipeg to join the section as a faculty member. His clinical and research interests focus on IBD and cost effective strategies for the management of GI disorders.


http://gastroenterology.wiki.umintmed.ca
The Section of General Internal Medicine (GIM) includes a diverse group of over 50 full and part-time faculty members who provide inpatient and outpatient clinical services at the three teaching hospitals in Winnipeg.

Our physicians provide inpatient consultation services in six clinical teaching units in addition to outpatient consultation 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 specialized care 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. Like other health care providers, members have been challenged in providing care during the COVID-19 pandemic. Notable section members such as Drs. Nick Hajidiacos, Ken Van Ameyde, Kinny Lamba and others, have been engaged in planning, resource allocation and scheduling physician coverage for hospitalized patients during this time. The fact that the numbers of admitted patients to the medical wards was low in the early stages does not detract from the extensive work that went into planning for a worst-case scenario. The flexibility and willingness to take on extra clinical work during this period was key to the section’s preparedness. Dr. Aditya Sharma took it upon himself to initiate a project that provided a number of iPads for use to facilitate communication between admitted patients and their families during the restricted visitation period. As Associate Head of Clinical Services, Dr. Hajidiacos continues to play a vital role in structuring the physical and staffing resource allocation at St. Boniface Hospital during the COVID-19 preparations and planning.

Our faculty members actively participate in both undergraduate and postgraduate medical education. Leading postgraduate education are Dr. Michael Sochocki as Program Director and Dr. Tyler Friesen as Associate Program Director. The GIM residency program is designed to provide our trainees with the broadest clinical experience that will afford them the best opportunity to attain the knowledge, skills and aptitudes to become strong clinical physicians, and to practice internal medicine in the most exemplary manner.
The Section of Geriatric Medicine at the University of Manitoba was the first academic section of geriatric medicine in Canada. There are currently 6 full-time geriatricians, who have established relationships with geriatric psychiatry, the Care of the Elderly Program (family medicine) and the university’s Centre on Aging. Section members attend on inpatient units, inpatient consultation services, day hospitals, outpatient clinics as well as support outreach teams. There are strong links between the geriatricians and care of the elderly physicians working in rural regions.

We have an extensive, well-integrated clinical program. Geriatric assessment services are provided at Deer Lodge Centre and Victoria General Hospital. There are four geriatric day hospitals, longitudinal teaching clinics and active consult services at all low acuity sites in the Winnipeg Regional Health Authority (WRHA). There are outreach teams performing home visits as part of the Geriatric Program Assessment Team.

We have a long history of training geriatricians, care of the elderly family physicians and residents at various stages. Dr. Cornelia (Kristel) Van Ineveld is well-recognized for her outstanding service as the Postgraduate Program Director and is currently the acting Undergraduate Program Director. Dr. Suzanne Thille is the acting Medical Director of the Geriatric Subprogram of the WRHA. Our faculty actively participate in educational activities for medical trainees, teaching allied health professional trainees and providing educational outreach services to the general public.

Section members actively engage in epidemiological studies of aging, with a particular interest in the complex interplay of cognition, mental and physical health, as well as the health of aging rural populations. Section members have been active co-investigators with the Canadian Study of Health and Aging, the Manitoba Study of Health and Aging, the Manitoba Follow-up Study and the Canadian Longitudinal Study on Aging.

Section members have ongoing Canadian Institutes of Health Research (CIHR)-supported research projects and members also participate in ongoing quality improvement programs.


http://geriatrics.wiki.umanitoba.ca
Composed of 44 faculty members, 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.

Our ambulatory care clinical services are based at three CCMB sites in Winnipeg: the Health Sciences Centre (HSC), St. Boniface Hospital (SBH) and Victoria General Hospital. While inpatient services are at SBH and HSC, the latter includes the province’s only unit dedicated to complex hematological malignancy and blood and marrow transplantation (BMT). Section members hold major leadership positions in national and international organizations such as the Canadian Partnership Against Cancer, Canadian Clinical Trials Group, pan-Canadian Oncology Drug Review, Canadian Blood and Marrow Transplant Group, the Royal College of Physicians and Surgeons of Canada (RCPSC), the Infectious Diseases Society of America and the American Society of Hematology.

The COVID-19 pandemic has made 2020 a challenging year. Our section has maintained access to consultative and diagnostic services for hematology and oncology conditions through a combination of limited in-person visits and the rapid adoption of wide-scale virtual medicine. We have also maintained full access to our wide range of systemic therapy options at CCMB treatment room facilities throughout the province.

Distinguished Professor Emeritus, Dr. Brent Schacter, was elected into the 2020 Canadian Academy of Health Sciences as a reflection of his commitment, expertise and excellence throughout his career. This is one of the highest honours within Canada’s academic community.

We offer two distinct undergraduate courses at the Max Rady College of Medicine: blood/immunology and medical oncology. We also provide RCPSC-accredited residency training programs in both hematology and medical oncology, as well as advanced post-residency training in subspecialties such as BMT, lymphoma and thoracic malignancies. We thank Drs. Roopesh Kansara, Lin Yang, Vi Dao (hematology), Vallerie Gordon and James Paul (oncology) for their leadership to the undergraduate and postgraduate training programs. In conjunction with the CCMB 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.

The section’s research portfolio is broad. In 2020, together we’ve published more than 86 articles and received over $10 million in research funding from organizations such as Research Manitoba, CancerCare Manitoba Foundation, the University of Manitoba and the Canadian Institutes of Health Research. We have 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 the Research Institute in Oncology and Hematology and the internationally renowned Manitoba Cancer Registry. High profile research interests include: international clinical trials in severe acute respiratory syndrome-related coronavirus, chronic lymphocytic leukemia tumour banking and patient registry, collaboration with critical care on acute care hematology, infection prevention and treatment for vulnerable cancer patient populations, and BMT registry outcomes based on the locally housed National BMT Registry.
IN PROFILE

Kristjan Paulson, MD, FRCPC
Clinician-Scientist

Dr. Paulson is currently the co-principal investigator of an 11-centre Canadian/Australian phase III randomized trial, in the evaluation of cyclophosphamide as graft versus host disease prophylaxis in matched donors. He is the primary investigator for the Canadian Blood and Marrow Transplant Group Registry, a clinical outcomes database of over 10,000 Canadians who have undergone stem cell transplantation. He is leading the development of a Canadian acute leukemia registry and serves on the board of the Canadian Acute Leukemia Study Group. He was the inaugural registry Chair of the Canadian National Transplant Research Program, a CIHR-funded research network.

He is currently the president of Cell Therapy Transplant Canada (CTTC), the professional society of the Canadian stem cell transplant community (the first Manitoban to assume this role). A major initiative of his presidency has been the active role the CTTC has played in bringing novel cell therapies such as Chimeric Antigen Receptor T-Cells (CAR-T) to Canada. He chaired a Canadian workshop on the implementation of advanced cell therapies (such as CAR-T) in 2019.

http://hematologyoncology.wiki.umintmed.ca

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 four of our academic pillars: clinical care, administration, research and education. The members work closely with other specialists to ensure that our patients benefit from the latest diagnostic techniques and treatments.

The section provides clinical services for outpatients and a citywide inpatient consult service 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 the Health Sciences Centre, but satellite clinics are located at Grace and Victoria hospitals.

The 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 Physicians and Surgeons of Canada Area of Focused Competence program in adult hepatology and, apart from hepatology fellows, trains rotating fellows and residents from general internal medicine and gastroenterology.

Several of our 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 funding from the Canadian Institutes of Health Research (CIHR) for large clinical research projects focusing on non-alcoholic fatty liver disease in our First Nations population.

Faculty: Section Head, E. Renner — S. Cuvelier, N. Faisal, Y. Gong, K. Kaita, G. Minuk, C. Osiowy, D. Peretz, J. Uhanova, P. Virdi, S. Wong

Gerald Minuk, MD, FRCPC, FAASLD
Clinician-Scientist

Dr. Minuk spearheaded the Section of Hepatology as an independent, research-intense academic subspecialty in Canada and beyond. He actively participated in the evolution of hepatology taking a clinically and histology-based specialty with very limited therapeutic options to one that is today able to change lives through transplantation, diagnoses, cures and groundbreaking therapies. While Dr. Minuk stepped down as Section Head in 2018, he continues to be a prolific researcher and mentor. His research interests range from clinical aspects of liver diseases in Canadian First Nation populations, over-exploring novel therapeutic interventions for specific liver pathologies, to laboratory research on the role of cancer stem cells in the pathogenesis of hepatocellular and cholangiocarcinoma.

Dr. Minuk not only attracts uninterrupted CIHR funding for his research endeavors, but he inspires researchers and clinicians alike. He has published in excess of 300 manuscripts in peer-reviewed journals and has presented at national and international symposia. Dr. Minuk has received numerous awards and honours including the Morberg Family Chair in Hepatology, the Distinguished Service Award of the Canadian Association for the Study of the Liver and the Queen’s Golden Jubilee Medal. His major contributions will be lasting and invaluable.
Amila Heendeniya, MD, FRCP
New Faculty

Dr. Heendeniya studied medicine and completed his internal medicine training at the University of Saskatchewan, completing his infectious diseases training at the University of Toronto. There, he developed an interest in underserved populations and HIV prevention using pre-exposure and “pill in pocket post-exposure prophylaxis”. He has published 6 papers on this topic in the last two years. Dr. Heendeniya is based at the Grace Hospital and has a focus on infectious diseases affecting our marginalized populations, such as sexually transmitted and blood borne illnesses, tuberculosis and ectoparasitic infections.

Lauren MacKenzie, MD, FRCP
Clinician-Scientist

Dr. MacKenzie completed her medical degree at the University of Calgary and studied internal medicine and infectious disease in Winnipeg. She went on to complete a master’s degree in public health at the University of British Columbia and received a Banting and Best Award and a McLaughlin Award. Her research involved the examination of the determinants of HIV care outcomes in rural and remote settings. She was recruited back to the University of Manitoba as junior faculty to complete a PhD in community health sciences and became a clinician-scientist in infectious diseases in 2016. Since then, she has pursued her interest in innovative models of care delivery for HIV, Hepatitis C and other chronic infectious diseases. Most recently, she has played a leadership role in a clinical trial involving prophylaxis against SARS-CoV-2. She is the principal investigator on a new COVID-19 study grant for $448,500; employing serological methods to survey disease prevalence.
THE SECTION OF NEPHROLOGY

The Section of Nephrology is a team comprised of 33 faculty members who are dedicated to providing excellent clinical care to Manitobans with kidney disease, cutting edge research and academic contributions. The care provided spans the entire spectrum of renal disease from asymptomatic urinary abnormalities to chronic kidney disease (CKD) to end-stage renal disease (ESRD) that requires life-sustaining dialysis or transplantation.

The section, in full alignment with the Manitoba Renal Program (MRP) and Transplant Manitoba, collectively manages in excess of 2,000 advanced stage CKD patients a year, over 1,800 kidney failure patients on dialysis (including 400 on home dialysis and over 320 in 16 rural Manitoba satellite hemodialysis units), and more than 700 prevalent transplant patients across the 3 main sites; the Health Sciences Centre (HSC), St. Boniface Hospital and Seven Oaks General Hospital (SOGH). The section also manages over 30 half-day general nephrology clinics each week and provides on-site nephrology consultation services to its 3 main hospital sites. They provide remote nephrology support, via MBTelehealth, to all hospitals in Manitoba, northwestern Ontario and Nunavut.

The section has an interventional nephrology service (INS) providing timely placement and removal of hemodialysis-tunneled catheters and peritoneal dialysis catheters. This service was implemented and led by Dr. Sean Armstrong. We have 4 additional faculty actively involved in achieving and maintaining dialysis access: Drs. Krista Ryz, Alissa Lloyd, Sara Dunsmore and Justin Walters. In conjunction with the INS, a joint Winnipeg Regional Health Authority/MRP Vascular Access Surveillance Program was initiated in 2016, to track hemodialysis catheter-related bloodstream infections as a quality indicator. Other quality initiatives include the creation of the New Start Program, led by Dr. Jay Hingwala, for the transition and optimization of care in new ESRD patients starting hemodialysis.

The Manitoba Adult Kidney Transplant Program is a recognized innovative leader in transplant clinical care with expertise in pre-transplant risk assessment (e.g. human leukocyte antigen molecular mismatch score) and post-transplant immunologic monitoring (e.g. protocol biopsies, urine chemokine surveillance and serum donor specific antibody detection). The Kidney Check Program received two UNIVANTS of Healthcare Excellence Awards for 2020; Best of North America Award and was one of three teams to receive UNIVANTS’ highest honour, the Global Winner Award.

The Section of Nephrology has a well-established track record of commitment and excellence in teaching in both undergraduate medical education (UGME) and postgraduate medical education (PGME). The UGME Course Director, Dr. Chris Sathianathan, leads a team of nephrologists that commit more than 300 hours to Med 1 & 2 teaching each year; including participation in the urinary tract course, transition to clerkship, internal medicine academic half day sessions, transition to residency clinic electives and hemodialysis quality-of-life sessions. Many members receive annual nominations for their teaching excellence. In addition, the UGME urinary tract course is nominated annually for best course and in previous years won best Med 2 course.

The PGME Adult Nephrology Training Program, led by Dr. Leroy Storsley, is a 2-year Royal College of Physicians and Surgeons of Canada-accredited program. The training program provides residents with extensive


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exposure to all levels of clinical care including: outpatient clinics, inpatient services, CKD, and ESRD care including: dialysis, continuous renal replacement therapy (CRRT) and transplantation. Residents are encouraged, supported and mentored in developing their academic interests and are exposed to a wide range of opportunities including research, quality assurance and medical education. The section also has a recognized interventional nephrology program focused on proving training to fellows in the development of expertise in peritoneal dialysis and tunneled hemodialysis catheter insertion. Currently, there are 4 residents in the program.

The section’s major research areas span a spectrum from epidemiological sciences that include: translational biology to clinical care with quality, prevention and surveillance initiatives to administrative policy and health economics in both native and transplant kidney disease patient populations. Research is broadly structured along the following themes: improving detection and prevention of CKD, advancing quality-of-life and outcomes in CKD and in kidney failure, optimizing kidney transplantation outcomes and rates, as well as improving acute kidney injury diagnosis and treatment. These activities are anchored by two research groups, the HSC Renal Transplant and Systems Biology and the Chronic Disease Innovation Centre at SOGH. Currently, the section has 2 clinician-scientists, Drs. Julie Ho and Navdeep Tangri. On staff are 4 clinician-investigators, Drs. Clara Bohm, Paul Komenda, Claudio Rigatto and Chris Wiebe. These researchers collectively hold over $17 million in research support, nearly 50 publications in 2020 and collectively 170 publications between 2016-2020.

**IN PROFILE:**

**David Rush,**
**MD, FASN, FACP, FRCPC**
**Award Winning Faculty**

Recognized through numerous teaching awards, Dr. Rush has also received the Canadian Society of Transplantation Lifetime Achievement Award, Founders Award (Kidney Foundation of Canada, Manitoba Branch), Medal of Research Excellence (Kidney Foundation of Canada) and the Distinguished Service Award by Doctors Manitoba. He has authored nearly 200 publications, 8 textbook chapters and over 220 abstracts. He is currently a Professor of Medicine and the Director of the Transplant Manitoba Adult Kidney Program.

**Keevin Bernstein,**
**MD, FRCPC**
**Clinical & Academic Trailblazer**

For over 30 years, clinical program and medical curriculum development have been the focus for Dr. Bernstein. Instrumental in pioneering telenephrology, he also led the Renal Health Outreach Initiative providing disease prevention and intervention across Manitoba. An annual recipient for Outstanding Course and Teacher, Dr. Bernstein received the University of Manitoba’s H. H. Sanderson Award and was recognized through Doctors Manitoba with the Health Administration Award for Leadership.

http://nephrology.wiki.umintmed.ca
The Section of Neurology currently encompasses 11 geographical full-time members and 16 additional faculty. We are pleased to have welcomed three additional full-time members in 2020. The section continues to actively recruit faculty with expertise in multiple sclerosis (MS), seizure disorders and stroke.

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 clinics are concentrated primarily at the Health Sciences Centre (HSC), which also includes the MS and seizure clinics. The Stroke Prevention Clinic and electromyography services are distributed between HSC and St. Boniface Hospital (SBH). The neurology and movement disorder clinics, also located at HSC and SBH, are dedicated to the treatment of disorders and diseases such as Parkinson’s. Amyotrophic lateral sclerosis clinics are located at Deer Lodge Centre. Neurology also has general clinics at all three acute care hospitals. A new 27-bed multidisciplinary inpatient stroke unit is scheduled to be constructed in the former HSC Women’s Hospital at HSC, opening in 2021. With this addition, it is anticipated that we will be able to achieve considerable improvements in the quality of care for stroke patients and the ability to perform medical research will be greatly enhanced.

There are currently 13 residents in our training program led by Dr. Sean Udow as Program Director and Dr. Michael Cossoy as Associate Program Director and Competence By Design (CBD) Lead. Both have made exceptional strides in the adoption of CBD methodology. We are excited to announce that two of our residency program graduates have committed to further subspecialty training and will be joining us in 2022.

With significant research contributions, Drs. Ruth Ann Marrie, James Marriott and Marcus Ng have upwards of 200 publications (2016–2020) collectively and have acquired nearly $2 million in active research grants in 2020. The clinical research program in multiple sclerosis continues to be among the most successful at the University of Manitoba.

IN PROFILE:

Marcus Ng,
MD, CSCN, FRCP
Clinician–Scientist

As Principal Investigator, Dr. Ng has obtained nearly $250,000 in competitive grant funding (2016–2020). He has also authored 19 publications in the last 5 years; including 8 in 2020 alone and 3 as senior author.
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.

Our inpatient rehabilitation units are located at the Rehabilitation Hospital at the Health Sciences Centre (HSC) and Riverview Health Centre (RHC). Outpatient clinics are located at HSC, RHC and Pan Am Clinic. Our 8 physiatrists cover a 71-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. These services include electromyography and nerve conduction studies at the Riverview Neurodiagnostic Clinic. We also participate in the HSC Pain Management Clinic and the Pan Am Pain Clinic.

Our section currently has nine trainees in our residency program. Dr. Jennifer Salter is the Postgraduate Medical Education Program Director and Dr. Davyd Hooper is the Undergraduate Medical Education Program Director. Together they work to ensure high standards of education for the residents and students during rehabilitation rotations. We support the UM Max Rady College of Medicine during the musculoskeletal block, including teaching clinical examination skills and running small group tutorials.

Drs. Karen Ethans and Sepideh Pooyania are actively involved in research within the section in areas such as spinal cord injury, stroke rehabilitation, multiple sclerosis and prescription of medical cannabis in physiatry. Under Dr. Ethans’ leadership as the Research Director of the PM&R residency program (1999–2020), the section has produced six national resident research awards through the Canadian Association of Physical Medicine and Rehabilitation. Dr. Pooyania co-authored “Canadian Stroke Best Practice Recommendations: Rehabilitation, Recovery and Community Participation following Stroke” (6th Edition, 2019 Update).

IN PROFILE:

Justin March, MD, FRCPC
New Faculty

Dr. March was recently recruited to the Section of Physical Medicine and Rehabilitation. He graduated from the University of Manitoba Physical Medicine and Rehabilitation Residency Program. He has taken on the administrative roles of Medical Director of the day hospital and Continuing Medical Education (CME) Director since joining the section. Dr. March’s clinical activities include attending on the amputee rehabilitation service and outpatient clinics in both neurodiagnostics and pain management.

Sepideh Pooyania, MD, CSCN, FRCPC
Clinical Researcher

Dr. Pooyania is a site leader for the CanStroke Recovery Platform, which is a collaboration of stroke rehabilitation clinicians and researchers across eight Canadian centres, providing opportunities to test new approaches, therapeutics and technologies for stroke recovery. She is the local principal investigator (PI) for the national FLOW trial (Fluoxetine to Open the Critical Period Time Window to Improve Motor Recovery after Stroke), the local PI for both the ABC (Evaluation of a Program to Increase Upper Limb Recovery After Stroke) and TRAIL (teleRehabilitation with Aims to Improve Lower Extremity Recovery Post-Stroke) studies.

Dr. Pooyania received a $190,000 Heart and Stroke Foundation and Canadian Institutes of Health Research grant through the University Health Network for participation in the FLOW trial and other CanStroke Recovery Platform trials. Dr. Pooyania has received other competitive grants and been published in high-impact journals since 2012.

Faculty: Section Head, R. Skrabek – A. Casey, K. Ethans, D. Hooper, T. Lesiuk, J. March, S. Pooyania, J. Salter, H. Sommer, M. Stitz, L. Woodrow

http://pmandr.wiki.umanitoba.ca
The Section of Respiratory Medicine 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.

Our section members provide consultation services to the 3 main hospitals in Winnipeg. We have a 14-bed inpatient unit at the Health Sciences Centre (HSC) and provide care on the long-term ventilator 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.

Dr. David Christiansen conducts 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. Els de Gussem is the Medical Director for the Hereditary Hemorrhagic Telangiectasia (HHT) Clinic at the Grace Hospital. The clinic has been recognized by the North American Cure HHT as one of four Canadian-based Centres 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. James 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.

We are heavily involved in teaching both at the undergraduate and postgraduate levels. Dr. Nancy Porhownik is the Postgraduate
Program Director. We currently have a total of 4 postgraduate trainees; three PGY4 and one PGY5. Dr. Jacquelyn Dirks is the Undergraduate Course Director. Dr. Gregg Eschun is the Chair of the Royal College of Physicians and Surgeons of Canada (RCPSC) Respiratory Subspecialty Committee. Dr. Martha Ainslie is the internal medicine co-Chair at the RCPSC and was named the 2020 Mentor of the Year Award recipient. Dr. Clare Ramsey is a member of the Adult Respiratory Medicine Exam Committee. We have redesigned the service model at HSC 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 the Royal College’s Competence by Design.

Dr. Andrew Halayko is a basic science researcher in physiology 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. Clare Ramsey is a clinical epidemiologist in addition to being a busy respirologist and intensivist. Her area of research is airway diseases. Dr. Angela Desautels is a clinical epidemiologist, sleep physician and respirologist who is using databases to look at outcomes in patients with sleep disordered breathing. Dr. Steven 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.

**IN PROFILE**

**Els de Gussem, MD**

*Award Winning Faculty*

The Nick Anthonisen Award of Excellence recognizes an outstanding faculty member who has contributed to the care of respiratory patients in Manitoba and to the academic mission of the Section of Respiratory Medicine. Congratulations to Dr. de Gussem who was named the 2020 award recipient!

**Wayne Kepron, MD, FRCP**

*Faculty Retiree*

After completing internal medicine postgraduate training at the University of Manitoba and respirology training at the Royal Brampton Hospital in London, England, Dr. Kepron returned to Winnipeg to undertake immunology post fellowship research training and came on staff in 1975. After 45 years of service as a valued team member, Dr. Kepron retired from the Section of Respiratory Medicine in June 2020. We would like to congratulate him and thank him for the many years he devoted to the section and department!


[http://respiratory.wiki.umintmed.ca](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 with rheumatic diseases, 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 for our patients.

The section is based at the Health Sciences Centre (HSC) with 7 geographical full-time (GFT) faculty 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 8 enthusiastic community rheumatologists, including our Program Director, Dr. Ramandip Singh. These members 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.

Faculty members are actively engaged in undergraduate and postgraduate medical education. The rheumatology training program is a 2-year program undertaken by candidates who have completed training in internal medicine. We accept 2-3 rheumatology fellows to the program per year, in addition to rotating residents from internal medicine, neurology, physical medicine, ophthalmology and other 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 pain syndromes, with ample opportunity to see rare and complex diseases, along with ‘bread and butter’ rheumatology. The program offers flexibility to allow tailoring to the individual interests and future career paths of the trainee. 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.

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. Hani El-Gabalawy holds the Endowed Rheumatology Research Chair position and is internationally recognized for his work on the pathogenesis of rheumatoid synovitis and the mechanisms involved in the initiation of synovial inflammation. Dr. Carol 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. Christine 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. Drs. Ada Man and David Robinson are recognized experts in vasculitis and scleroderma and are active in scleroderma clinical trials and outcomes research. Dr. Annaliese Tisseverasinghe is active in lupus and myositis research and has a particular interest in the impact of mental health on systemic autoimmune diseases.

IN PROFILE:

See page 47 for a feature article on Dr. O’Neil.

Our “postmodern” thinking rests on the notion that everything happening in the world is perceived through the subjective lens of innumerable observers. This means that reality is a collection of myriads of interpretations of an event, neither one of which is per se more correct than another. It is not possible to recognize a single objective truth, i.e. a reality outside a subject’s perception (including that specific to each single one of us). How we perceive and react to what comes our way is influenced by factors that are not integral to what we react to. These include, but are not limited to, the perceiving subject’s personal history, experience and socialization. When we look at a painting, listen to music or read a book, when we interact with others, we are always part of that activity, of that reality; we can never take a standpoint outside of it from where alone an unbiased view and objective judgment would become possible.

While nowadays termed “postmodern”, the above may not be entirely new. Plato’s cave allegory already contains similar thinking and Kant wrote “…we indeed, rightly consider objects of sense as mere appearances, confess thereby that they are based upon a thing in itself, though we know not this thing as it is in itself, but only know its appearances”.

Be it as it may, the postmodern position has been instrumental in reinforcing tolerance, and with tolerance decency in our dealings with each other, irrespective of diverging individual viewpoints. Thus, postmodern thinking serves as basis of accepting the co-existence of dissenting values and opinions in our multicultural society.

That all said, tolerance is fundamentally different from the loosey-goosey attitude of “anything goes” into which postmodern thinking can be at risk of degenerating. The premise that everything is subjective does not mean that all perceptions and opinions have necessarily the same likelihood of being (morally) justifiable. Tolerance does not negate that there are limits. In fact, tolerance requires that there are limits. If nothing else, tolerance itself must be respected, not only as an abstract construct when it is profitable, but as a lived reality also when it may be unpleasant or even risky. Tolerance – and political correctness for that matter – is not a one way street, but must equally apply to all involved. It cannot go on that one party claims to own tolerance, to know what is politically correct. It cannot go on that one party applies its own perception to everybody else, thereby corrupting tolerance to become nothing else than yet another instrument of power and subduction.

So far so good, you may say, but what has that to do with our department? Well, I think a lot. Do we not want to be treated in a decent way by our co-workers and do our co-workers not want to be treated decently by us? Expectations of being treated in a decent manner always go both ways, from us to our co-workers and from our co-workers to us. Substitute co-worker with other interacting partners in an academic health care team such as patients, families, health care providers, learners, teachers, nursing and physician staff, administrators and front line personnel; all can expect to be treated in a decent manner, and all need to accept that they may have differing viewpoints, and must exercise tolerance to diverging opinions. That tolerance always goes both ways 250 years ago by Kant with the imperative “treat others how you wish to be treated”. That reciprocity is the line beyond which tolerance ends. Beyond that line tolerance and political correctness pervert themselves into their contrary and civility claims risk degenerating into a scapegoat for suppressing dissenting viewpoints. We have probably all seen this, let’s avoid falling into that trap.

READ ONLINE:
https://n.umintmed.ca/2019/10/31/on-limits-of-tolerance/
It’s times like these when I am humbled by what happens in a hospital. The individuals who, everyday, come to the unexpected and do the unimaginable. How through all the challenges and difficulties thrown up, somehow, someway, they do what they can, to aid, to save, to care, to help grieve.

I’m not capable of eloquently writing about what I know staff, physicians, colleagues and friends have done this year, nor what path the future may put them on, so I can only offer my most heartfelt respect and gratitude.

When the new year came, no one could have expected the incredible changes that presented. The staff members of the department have reacted as necessary, be it at work or from home, to ensure we can continue to support the students and residents, the researchers and faculty and each other.

We faced the challenges of 2020 well, the closing of our ambulatory care clinics and our research programs, then their slow reopening, plus the disruption to the education of our students and residents.

But we never lost focus on the long term.

Research has always been a priority. Since October 2016, nine new faculty members with research time have joined the department, with protected time equivalent to over five full-time researchers. 2020 was the largest addition ever, when we welcomed six new researches.
The department has contributed over $3 million to our endowed chairs and professorships held at the university, including the new Dr. Lyonel G. Israels Chair in Hematology, which this year was awarded to Dr. Ryan Zarychanski, and two new endocrinology professorships which are yet to be awarded.

This year, our ambulatory care clinic in south Winnipeg was relocated to the Victoria Hospital. The clinic at the Health Sciences Centre is well along its construction schedule – with progress continuing to a summer 2021 completion. The Methods, Standards and Innovation and Accuro Teams continue their work, engaging with staff and physicians in our clinics; learning about their processes and challenges and working towards our target state and move in.

Our four-year plan to transition our financial reporting methods was completed. We have a solid foundation now to make year-over-year comparisons, to track our financial progress and to make informed business decisions.

This year we began processing physician stipends internally, giving us significant cost savings which are being reinvested into the academic mission.

Cleary much has been accomplished. I am proud of the work done by everyone in the department, as none of this happens without their energy.

Finally – this is my last annual report. I write during a transition period as I embark on my next adventure. It has truly been a pleasure to support this department. I arrived four years ago hoping to leave some mark, some impact on the people who work here. I hope in some small way I have done that. It was my honour to serve.

Dale Gustafson, CPA, CMA
Managing Director, Internal Medicine
We Are: Leaders

NEW PROFESSORSHIPS

The Department of Internal Medicine is pleased to announce the establishment of the **FRIESEN PROFESSORSHIP IN ENDOCRINOLOGY**. This opportunity was created to advance the university’s academic goals and objectives through leadership, scholarship and mentorship work of an appointed member of the department in the areas of endocrine and metabolic diseases. Funding is derived from a $1.5 million endowment and will span over a 5-year term to support the appointee in their initiatives.

This professorship was created in honour of Dr. Henry Friesen’s many achievements, which includes the discovery of the hormone, prolactin. Dr. Friesen was born in Morden, Manitoba and graduated from the University of Manitoba’s Medical School in 1958. He trained as an endocrinologist at the New England Center Hospital (Boston), before returning to Winnipeg as Head of the Department of Physiology. Dr. Friesen held many important leadership roles with various research foundations, initiatives and medical councils.

Through the Max Rady Faculty of Health Sciences Dean’s Office, we are thrilled to share that the **MOORHOUSE PROFESSORSHIP IN DIABETES RESEARCH** has been established to support a clinician-scientist in the Section of Endocrinology for related research, with a focus on finding a cure and improving the health care of those suffering from diabetes and related diseases. A portion of the award may be used by the awardee to support a graduate student in endocrinology who is conducting diabetes research. The 3-year endowment is supported by the John A. Moorhouse Fellowship, established by the Diabetes Foundation of Manitoba in 2008. Dr. Moorhouse’s legacy lives on through the newly created Professorship; he was a University of Manitoba Medical School alumni (1950), faculty member and former Head of the Section of Endocrinology, Department of Internal Medicine. He was the creator of the Endocrine & Metabolism Laboratory, serving as the Director for 15 years and was a pioneer in the field of diabetes research in Manitoba.

Inaugural awardees will be announced in 2021.
PODIUM PRESENTATION
ORIGINAL INVESTIGATION
BY CORE RESIDENTS
1st Prize, Original Investigation
Simon Christie, PGY2
– Internal Medicine
Is flaxseed equivalent and/or synergistic with ACE inhibition in the prevention of chemotherapy-induced cardiotoxicity?
Supervisor: Dr. Davinder Jassal

2nd Prize, Original Investigation
Jeffrey Venner, PGY2
– Internal Medicine
Molecular analysis of disease activity in ulcerative colitis: exploring disease heterogeneity
Supervisor: Dr. Brendan Halloran

3rd Prize, Original Investigation
Sandeep Krishnan, PGY3
– Internal Medicine
Angiographic results of pre-hospital antiplatelet selection for ST-segment elevation myocardial infarction
Supervisor: Dr. Kunal Minhas

PODIUM PRESENTATION
ORIGINAL INVESTIGATION
BY SUBSPECIALTY RESIDENT
1st Prize, Original Investigation
Quinlan Richert, PGY3
– Internal Medicine
Patient and healthcare worker satisfaction with table rounds versus traditional bedside rounds on internal medicine clinical teaching units
Supervisor: Dr. Joel Nkosi & Dr. Aditya Sharma

POSTER PRESENTATION
ORIGINAL INVESTIGATION
BY CORE RESIDENTS OR SUBSPECIALTY RESIDENT
1st Prize, Original Investigation
Rebekah Rittberg, PGY5
– Medical Oncology
Population-based impacts of new therapies on outcomes for stage IV non-small cell lung cancer
Supervisor: Dr. David Dawe

POSTER PRESENTATION
RESEARCH PROPOSAL
BY CORE RESIDENT OR SUBSPECIALTY RESIDENT
1st Prize, Research Proposal
Rouchen (Tony) Mao, PGY1
– Internal Medicine
The impact of small group ECG sessions on the competency of ECG interpretation among medical students
Supervisor: Dr. Malek Kass

EMY OZAMOTO AWARD
1st Prize, Quality Improvement
Chris Parr, PGY6 – Cardiology
Using the Zwolle Risk Score at time of coronary angiography to triage patients with ST-elevation myocardial infarction to a telemetry unit is safe
Supervisor: Dr. John Ducas

2nd Prize, Quality Improvement
Ali Taha, PGY2 – Internal Medicine
Implementation of a dialysis-specific medication reconciliation form in the emergency department to reduce medication errors in dialysis patients
Supervisor: Dr. Jay Hingwala
ENDOWED RESEARCH CHAIRS
The Department of Internal Medicine is home to 9 Endowed Research Chairs, established through generous contributions from individuals, foundations, corporations and/or faculty members. These vital investments allow the department to attract, recruit, retain and recognize renowned researchers and their major research endeavors in specialized academic areas; appointing a merited and distinguished chair to each position. With current market value of $38 million, these positions give our department an edge in a competitive environment to assist in developing scientific discoveries that impact medical treatment.

1 THE BINGHAM CHAIR IN GASTROENTEROLOGY

THE BINGHAM CHAIR IN GASTROENTEROLOGY has been instrumental in providing Dr. Charles Bernstein with financial support to pursue research endeavors with the University of Manitoba’s Inflammatory Bowel Disease Clinical and Research Centre, of which he is the Director.

The research centre primarily focuses on inflammatory bowel disease, including Crohn’s disease and ulcerative colitis, as well as studies for irritable bowel syndrome, gastrointestinal cancers, pancreaticobiliary disease and colonoscopy optimization. The centre provides salaries for 8 full-time and 2 part-time employees. The team provides research training, presentations and manuscript writing opportunities for several trainees, including high school students, medical students/residents and undergraduate/graduate/postdoctoral trainees. We collaborate broadly across the Ma Rady Faculty of Health Sciences, cross-campus, and with researchers around the globe. The centre’s co-investigators have received several nationally awarded peer-reviewed grants, bringing in millions of dollars. A clinical trials program is offered, providing Manitobans with options for novel therapies, primarily for treatment of inflammatory bowel disease.

The research group is particularly known for epidemiological studies, especially using the population-based resources available in Manitoba; gut microbiome studies including chronic immune diseases, the intersection of basic biology and clinical outcomes in chronic immune-mediated inflammatory diseases, mental health in relation to inflammatory bowel disease and other chronic immune-mediated diseases. The research program has been a role model for interdisciplinary translational research. The group has been collaboratively supporting research networks across Canada and worldwide for the betterment of the health of all Canadians. They are actively engaged with patient advisors in several projects to ensure research is properly focused and capturing patient needs.

Their website www.ibdmanitoba.org provides important updates on the programs, research productivity, news and knowledge pieces to inform patients with irritable bowel disease (IBD) about different topics in IBD. The centre has a lab which maintains a biobank where whole blood, DNA, serum, stool and tissue biopsies are stored for collaborative research with geneticists, immunologists and microbiologists. The research team has a unique and productive collaboration with scientists at the Public Health Agency of Canada and the National Microbiology Laboratory.

In the past 5 years, Dr. Bernstein has delivered over 75 invited lectures at universities, hospitals or national or international meetings in countries such as China, Israel, Italy, India, Japan, New Zealand and across the US and Canada. Additionally, he has authored 173 publications (2016–2020), with a citation count of 3,045 and an H5-index of 20.

Dr. Bernstein is the organizer and Scientific Director of the Annual International GI Symposium at the University of Manitoba. In 2020, they celebrated 25 years!

His research program has brought international attention and accolades to the University of Manitoba. The Bingham Chair in Gastroenterology provides Dr. Bernstein with the prestige of being a named leader to help support various research programs.

2 RHEUMATOLOGY RESEARCH CHAIR

As the holder of the RHEUMATOLOGY RESEARCH CHAIR, Dr. Hani El-Gabalawy’s most recent achievements include the successful application for the Canadian Institutes for Health Research (CIHR) Human Immunology Initiative team grant entitled, “Prediction and Prevention of Rheumatoid Arthritis in First Nations”, obtaining $1.6 million over 4 years (2020–2024). His research team is comprised of clinician-scientists, basic scientists, clinical trial personnel, Indigenous health researchers, and incorporates a cadre of senior researchers and new investigators.

In the 2019/2020 and 2020/2021 academic years, Dr. El-Gabalawy directly supervised trainees from various stages including PGY1 and 2 trainees and PhD research staff. He is also serving as a junior faculty mentor during the early stages of Dr. Liam O’Neil’s academic career. Dr. O’Neil has recently returned from research training at the National Institutes of Health and plays a substantial role in the CIHR Human Immunology Research Team.

The chair position has also given the opportunity to dedicate efforts to publishing many research articles in high-impact journals such as Arthritis Research and Therapy, Arthritis and Rheumatology, and Rheumatology - Oxford Academic.

The chair position, having been created to promote excellence in research, teaching and care of those with arthritis and other rheumatic diseases and dedicated to the goal of eliminating the burden of rheumatic disease, is aligned with Dr. El-Gabalawy’s personal and team research endeavors.
ENDOWED RESEARCH CHAIRS

3 THE FLYNN FAMILY CHAIR IN RENAL TRANSPLANTATION

THE FLYNN FAMILY CHAIR IN RENAL TRANSPLANTATION supports Dr. Peter Nickerson and the Transplant Manitoba Research Group to conduct innovative research that seeks to determine the mechanisms of immune-mediated graft loss, optimize immunosuppression to improve long-term transplant outcomes, develop prognostic biomarkers of kidney transplant outcomes and identify diagnostics biomarkers for graft rejection. Over the past decade, the Transplant Manitoba Research Group has been supported by the Canadian Institutes for Health Research (CIHR) and the National Institutes of Health (NIH) grant awards to advance all aspects of this ambitious research program. Based on this body of work, the team has become recognized as world leaders in translational transplant medicine that is directly improving the quality of care for patients with kidney transplants in Manitoba, Canada and beyond. Recognized for his significant contributions in the field of immunogenetics, Dr. Nickerson was the 2020 recipient of the Rose Payne Award from the American Society for Histocompatibility & Immunogenetics. Additionally, he was the recipient of the 2020 Canadian Society of Transplantation Lifetime Achievement Award, honouring his long-standing accomplishments as a transplant leader, researcher, administrator, teacher and clinician.

The current focus of the Chair and the team is on supporting novel drug and biomarker development in prospective randomized clinical trials through ongoing support from both the CIHR and NIH.

4 H. E. SELLERS RESEARCH CHAIR IN INTERNAL MEDICINE

Dr. Kelly MacDonald was recruited to the H. E. SELLERS RESEARCH CHAIR IN INTERNAL MEDICINE in 2015. She has a track record of more than 25 years of CIHR-funded-translational and basic science research in human immunodeficiency viruses (HIV), sexually transmitted disease prevention, and is a clinical leader in infectious diseases and microbiology. She continues to focus her broad range of expertise on novel vaccine approaches to HIV and other viruses. She has developed a number of collaborators at the University of Manitoba and at the National Microbiology Laboratory (NML). Her research laboratory is located at the NML’s J.C. Wilt Infectious Diseases Research Centre where she is able to take advantage of the expertise and facilities to collaborate on non-human primate and other applied research studies examining vaccines, immunodiagnostics and immunotherapeutic interventions against HIV, sexually transmitted infections and now COVID-19. Her research chair and associated support have provided her with the time and means to support translational research trainees. Since 2015, Dr. MacDonald has trained PhD students, 6 PhD postdoctoral fellows, more than 10 summer students as well as supervised 8 resident research projects.

Her HIV vaccine research, most recently, is focused on the use of herpes viruses such as varicella-zoster virus and cytomegalovirus as vectors to carry HIV proteins that have shown promise in non-human primates. A recent candidate successfully underwent human trials in Kenya through a longstanding collaboration that Dr. MacDonald has had with the University of Nairobi for more than 30 years.

5 THE MORBERG FAMILY CHAIR IN HEPATOLOGY

THE MORBERG FAMILY CHAIR IN HEPATOLOGY was established in 2010 through the fund-raising efforts of the Health Sciences Centre Research Foundation, working in collaboration with the Jewish National Fund, the Department of Internal Medicine and the Morberg Family. As Chair, Dr. Gerald Minuk’s goal is to maximize the academic activities of the Section of Hepatology and thereby maintain the reputation as a centre of excellence in liver disease research. Since its founding, it has achieved that goal by being directly and indirectly responsible for the publication of close to 100 scientific peer-reviewed papers, providing countless presentations at local, national and international scientific meetings, teaching and educating many undergraduate and postgraduate learners. Most importantly, there have been substantial inroads made towards the understanding and treatment of acute and chronic liver diseases, particularly hepatocellular and cholangiocarcinoma; the two most common and lethal forms of liver cancer.

Dr. Minuk has been given the opportunity of financial stability and protected time to support his personal research program without the interruptions and adaptations required to address the needs and preferences of tri-council funding agencies. At the sectional level, because many members had been directly involved and contributed to the fundraising that helped to establish the position, there is a sense of accomplishment, satisfaction and pride within the section of the legacy. The section has also benefited from the chair’s role in hiring numerous scientists, postdoctoral fellows, graduate students, and technicians who have contributed to the academic profile and reputation of the section. Benefits to the department and faculty include: close collaborations with researchers from the Sections of Gastroenterology, Nephrology, Hematology/Oncology,
Pharmacology, Community Medicine and Allied Health. Provincial and federal agencies have benefited as many viral hepatitis studies have been undertaken with investigators from the Cadham Provincial Laboratory and the National Microbiology Laboratory as well as the Winnipeg Regional Health Authority Indigenous Health. Internationally, the chair has brought the University of Manitoba to the attention of the world’s hepatology community as being the first academic centre in Canada, if not the world, to establish a specific chair in liver disease research. The chair has facilitated the expedited application of bench-to-bedside research that has positively impacted patient care and outcomes.

In terms of the future, in addition to the benefits outlined above, which are expected to continue over the long term, the chair will serve as a key attraction for recruiting future section heads of hepatology. It is anticipated the individual appointed to the chair will play an important role in future fundraising efforts to increase the value and contributions of the position and thereby, further develop and maintain the section’s reputation as a leader in the field of liver disease research.

6 THE WAUGH FAMILY CHAIR

THE WAUGH FAMILY CHAIR is dedicated to providing opportunities for research advancements in the field of Multiple Sclerosis (MS).

As Chair, Dr. Ruth Ann Marrie’s research program includes several components; most notable is the study of comorbidity in multiple sclerosis. Previously, Dr. Marrie and her collaborators have shown that vascular comorbidity, including diabetes, hypertension, hyperlipidemia and ischemic heart disease, are associated with several adverse outcomes in MS including accelerated disability progression, increased health care utilization and increased mortality. This raises the possibility that more effective treatment of vascular comorbidity could improve outcomes in MS, including those that may be regarded as MS-specific such as disability and those that are more general such as mortality. What is unknown is whether screening and treatment approaches for vascular comorbidities should be the same as those for the general population or whether screening should be more frequent or treatment targets should be more aggressive – as is currently the situation for individuals who have diabetes, or in those with a previous cardiovascular or cerebrovascular ischemic event. Formal clinical trials would be needed to establish which treatment approach is most appropriate. As part of moving toward such clinical trials, Dr. Marrie’s most recent work has assessed disparities in the care of acute myocardial infarction between persons with and without MS, and the current status of care of diabetes and hypertension among persons with MS.

In collaboration with Dr. Charles Bernstein, and several other colleagues, Dr. Marrie has also broadly studied the impact of psychiatric comorbidity on persons with MS and two other immune-mediated inflammatory diseases (inflammatory bowel disease and rheumatoid arthritis). This work has established that psychiatric comorbidity adversely affects cognition, disability progression and quality-of-life in persons with MS, and underscores the need to ensure identification and effective treatment of psychiatric comorbidity.

Beyond the University of Manitoba, Dr. Marrie has collaborations that have supported ongoing work into defining the prodromal period in MS using administrative (health claims) data, and understanding disease progression and outcomes in pediatric onset MS. As part of the latter work, she developed surveillance methods for pediatric MS in Ontario using administrative data. This work established that the incidence and prevalence of pediatric MS is among the highest reported in the world, and that children with pediatric-onset MS have substantially increased healthcare use as compared to children without MS. Dr. Marrie and her team hope to extend this work to other Canadian provinces in the future.

7 DR. LYONEL G. ISRAELS CHAIR IN HEMATOLOGY

In 2016, the Dr. Lyonel G. Israels Professorship was established when the University of Manitoba received two gifts of $1 million each. This opportunity was made possible by generous donations from Bayer Inc. and the Israels family. With a recent contribution of $1 million from the Department of Internal Medicine and 70 individual gifts totaling more than $175,000, the endowed DR. LYONEL G. ISRAELS CHAIR IN HEMATOLOGY CHAIR was established.

The purpose of this 5-year term Chair position is to provide leadership, scholarship and mentorship in the areas of benign and malignant hematology and immunology. Dr. Ryan Zarychanski has recently been awarded this position for the 2020–2025 term and was the first researcher to hold the professorship prior. He is looking forward to the support this opportunity will provide his team, trainees and the internationally recognized research programs he leads.

8 EVELYN WYRZYKOWSKI RESEARCH CHAIR IN CARDIOLOGY

9 QUALITY IMPROVEMENT IN HEALTH SERVICES DESIGN RESEARCH CHAIR

For more information, please visit: https://wiki. umintmed.ca/index.php?title=Endowed_ Research_Chairs
We Are:

Educators

A Word From Our Associate Head of Education

In 2020, the COVID-19 pandemic challenged us to preserve and promote internal medicine education in the midst of the worst health crisis in Canada in over 100 years.

Members of the Department of Internal Medicine (DIM) play a leading role in the undergraduate curriculum. In the spring of 2020, we assisted in moving undergraduate programs to an online format and clinical clerkship rotations were temporarily suspended. Postgraduate residents continued to provide clinical care and patient support in hospitals and clinics, with learning activities revised to mitigate risk of infection.

We are proud of the dedication, courage and compassion shown by our undergraduate and graduate trainees. Infectious Diseases residents: Milena Semproni, Thomas Fear and Carl Boodman, worked with medical students, residents and fellows to publish a newsletter collating and analyzing the latest COVID-19 research data for clinicians. Drs. Sylvain Lothar and Brett Houston (Clinical Investigator Program) and Drs. Lauren MacKenzie and Gloria Vazquez-Grande (PhD Programs) are key members of our COVID clinical trials research team. Family practice resident Dr. Kristen Clark (Care of the Elderly Program) worked with attending physicians in geriatric medicine to establish new protocols and methods to safely care for patients.

As of July 2020, we had 126 residents in postgraduate training programs accredited by the Royal College of Physicians and Surgeons of Canada (RCPSC). These included Core Internal Medicine, Neurology, Physical Medicine and Rehabilitation, Cardiology, Critical Care, Endocrinology and Metabolism, Gastroenterology, General Internal Medicine, Geriatric Medicine, Hematology and Oncology, Infectious Diseases, Nephrology, Respiratory Medicine and Rheumatology. Competence by Design has been implemented in 11 of these 15 programs to date.

The department has training programs for physicians who have already qualified as specialists but who seek further training within their specialty. Our RCPSC-approved Area of Focused Competence (AFC) program in Interventional Cardiology, established by Dr. Basem Elbarouni, has trained several cardiologists from Canada and abroad. Our AFC in Hepatology, with Dr. David Perez as Program Director, is one of only 2 such programs in Canada; Dr. Paramvir Virdi completed this program in 2020.
A Resident’s Perspective

After graduating from the University of Manitoba with his MD, Dr. Christopher Parr joined the Internal Medicine Residency Training Program in 2015. While starting off with a strong foundation in physiology and acute care, he didn’t start with all the required skills to systematically address each patient issue comprehensively. He credits the internal medicine program for preparing him to meet this challenge.

“I didn’t know what I was getting into when I first joined the medicine program, or whether medicine was even the right choice for me. You definitely hit the ground running when you do medicine here”, says Dr. Parr. “Over time, and with the help of some dedicated teachers, you develop the discipline, resilience and the thought process needed to thrive. And I think that’s what is especially needed in today’s unpredictable medical training environment.”

Dr. Parr continues to use this learned resilience in his current role as a sixth-year trainee in the Adult Cardiology Residency Training Program at the University of Manitoba, where he is the Chief Resident. His present interests include quality improvement and cardiovascular risk factor modification. He enjoys encountering his former colleagues on a day-to-day basis. Moreover, he is continually inspired by the energy and curiosity of the internal medicine trainees rotating on the local cardiology units.

Christopher Parr, Chief Resident, PGY6
Adult Cardiology, University of Manitoba
For the past 15 years, her clinical activities have included attending on the cardiology clinical teaching units, the ambulatory general cardiology clinics and the echocardiography labs. She has held a number of clinical administrative roles including the Medical Director of the Cardiology Teaching Unit from 2005-2015, and the Medical Director of the WRHA Echocardiography Labs from 2018-2020.

The true passion of Dr. Soni’s academic career has been in education and teaching. In 2006, she was appointed the position of the Undergraduate Medical Education (UGME) Cardiovascular Course Director, a role she continues today. In 2020, the University of Manitoba underwent an exhaustive overhaul of the entire UGME curriculum. Dr. Soni was a member of the Curriculum Framework Task Group which helped to formulate the final structure of the new curriculum. During this time, Dr. Soni also re-created the cardiovascular course into 2 modular sections, incorporating the principals of the new curriculum. She continues to be a key contributor to UGME as a member of multiple committees and has been a significant voice for medical students in the recent pandemic planning.

Under Dr. Soni’s lead, the cardiovascular course has been regarded as one of the most outstanding pre-clerkship medical courses. She has been nominated for more than 40 Manitoba Medical Students’ Association (MMSA) Teaching Awards. During the last MMSA Teaching Awards Ceremony in February 2020, Dr. Soni was nominated for all 8 pre-clerkship awards, and was the recipient of an unprecedented 4 awards for Med I and II Mentorship, Inspiration and Innovation.

This past year, Dr. Soni was nominated by the MMSA as the Honorary Senior Stick, a role based on mentorship and advocacy as an honorary MMSA Executive member. In May 2020, Dr. Soni gave the ‘Celebration Address’ to the medical class of 2020 at their virtual graduation celebration.

WHAT IS YOUR TEACHING PHILOSOPHY AND HOW HAS IT EVOLVED THROUGH THE YEARS?

My teaching goals have transformed from a focus of imparting medical knowledge to students, to fostering creative, critical thinkers who are dedicated to lifelong learning through inquiry. Ensuring a respectful and safe environment for sharing ideas is integral to achieving this. As a teacher, I continue to learn from my students. I encourage constructive feedback,
listen to my students and keep an open mind to trying new approaches. My hope is that an environment has been created which ultimately empowers the students to guide their own goals, learning and educational experiences.

**WHO HAS INFLUENCED YOUR TEACHING PRACTICE?**

Dr. Keevin Bernstein has led undergraduate medical education for over 30 years in his role as an educator and as the Director of Curriculum Renewal at the University of Manitoba. He has certainly been a role model for me. I have been fortunate to have had the support of outstanding teachers and role models. My greatest mentors have been passionate about teaching, given generously of their time and have led by example. It has been these interactions and relationships that have shaped me as a person, a teacher and as a physician.

**WHERE DO YOU SEE YOUR ROLE AS A MENTOR?**

I was both honoured and humbled, when I was named in the Valedictory Address to the Medical Class of 2017, along with some of my greatest mentors. It was at that moment when I realized that one of my most significant accomplishments was the role I have played as a mentor to students. Over the following few years, I was proud to receive MMSA awards for mentorship, inspiration and innovation. However, even more meaningful to me, has been the appreciation and feedback I receive from students.

I have also had the privilege of hosting an annual Women in Medicine Mentorship Event for female medical students. My hope is that young women can truly believe they can balance a medical career with a family, if that is the route they choose.

**HOW DO YOU BALANCE WORK AND FAMILY?**

I am a mother, and that will always be my most important role. I am married to Travis Minish, an emergency room physician who works at the Health Sciences Centre. We both work full-time. We have 4 children ranging from ages 7 to 14. We have a very large colour-coded calendar in our kitchen to keep us on track! Probably a sentiment of most working mothers is a concern that we are not succeeding in all of our roles. I think we can only put forward our best efforts in all facets of our personal, professional and academic life, and really believe that this will be fabulous. Travis and I do our best to give our children all the opportunities to help them reach their potential. We strive to be good, hardworking and honest people as we ultimately hope these are the values that they learn are most important in life.

**YOU GAVE THE CLASS OF 2020 A VIRTUAL GRADUATION CELEBRATION SPEECH THIS YEAR. WHAT WAS THE THEME OF YOUR SPEECH? WHAT ADVICE DID YOU GIVE?**

I focused on how the students showed their strength as individuals, and ultimately as health care providers, in the face of the COVID-19 pandemic. The students really showed their strength as a collaborative team, putting their own personal curricular education on hold and risking their own safety to help out co-workers and members of our community. Their widespread organized efforts were impressive and commendable. As for advice, I gave the following: “It is important to remember and remind ourselves from time to time, why we chose this path to become physicians. For me, it is the impact that we can have on our patients that is most important. Sometimes, it will be the small things, like holding the hand of a dying patient, as there is no family present, and no one should die alone. This will not get you an award; this will not get you recognition; but, this is the real privilege.”

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**MANITOBA MEDICAL STUDENTS’ ASSOCIATION TEACHING AWARDS:**

2018-2019 Recipient: Med I Award for Inspiration
2018-2019 Recipient: Med I Award for Mentorship
2018-2019 Recipient: Med II Award for Innovation
2018-2019 Recipient: Med II Award for Mentorship
2017-2018 Recipient: Med I Award for Mentorship
2017-2018 Recipient: Best Course Cardiovascular I
2015-2016 Recipient: Award for Best Course: Cardiovascular
2014-2015 Recipient: Award for Best Course: Cardiovascular
2012-2013 Recipient: Cardiovascular - Most outstanding Med I or II Course
2011-2012 Recipient: Cardiovascular - Most outstanding Med I or II Course
2010-2011 Recipient: Medicine I Teaching Excellence
2010-2011 Recipient: Medicine I Teaching Excellence
2009-2010 Recipient: Cardiovascular - Most outstanding Med I or II Course
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2007-2008 Recipient: Cardiovascular - Most outstanding Med I or II Course
A Word From Our Associate Head of Research

It is stating the obvious to say that 2020 has been a year like no other in our lifetime. Every facet of our lives has been impacted one way or another by the pandemic and its economic and social consequences. Research, particularly that involves human subjects, is no exception. The funding structure, institutional capacity to undertake research, individual willingness to participate and perhaps most importantly, the relevance of the research questions, has been shaken to its foundation.

Canada’s premier health research funding agency, the Canadian Institutes of Health Research (CIHR), initially cancelled its spring competition after applications had already been submitted, denying thousands of researchers the opportunity to fund their research programs. This was primarily driven by the logistical challenges inherent in undertaking credible and equitable peer review during the pandemic. In a reversal of this decision, CIHR’s peer review of the submitted applications for the spring competition was undertaken “virtually” during the summer of 2020. In a sense, it felt similar to the large tables in the basement of the Ottawa Marriott that we had sat around for past peer review panels, but something was missing - those intangible moments when body language spoke louder than the words that were said. Virtual panel participants would agree that the organization generally did a good job of planning and undertaking this task and I for one felt that the reviews were as rigorous and fair as the in-person panels. Thank you CIHR staff and the hundreds of peer reviewers who took valuable time from their summer vacations to do this. There is every indication that this type of peer review is likely to stay for a while.

The University of Manitoba campuses literally shut down completely during the early stages of the pandemic. It truly felt like a ghost town - if you haven’t heard the Rolling Stones new song by that title, you should; vintage Stones that captures the essence of that moment. The campus remains at limited capacity, masks are required and experiments are underway again, although clinical studies are still lagging behind due to the logistical challenges.

Clinical research is heterogeneous but has one critical element, it requires people to participate. Understandably, people do not want to leave their homes and indeed have been told repeatedly to do so as much as possible. This is particularly the case for patients with chronic diseases who are the focus of much of the clinical research activity. Most clinical trials have come to a grinding halt, with one notable exception, COVID-19 trials. These studies are thriving as funding agencies such as CIHR and Research Manitoba set aside juicy pockets of funding for this research. Investigators who were poised to take advantage of these jackpots were well rewarded. At one point, Manitoba had some of the lowest numbers of cases in Canada, and COVID-19 studies were difficult to populate in this region. As we all know, this is changing rapidly leaving a rather unfortunate new opportunity for COVID-19-related clinical research.

Seasoned researchers can acknowledge the first principle of research; it’s all about the question. Are the questions that were prioritized 6 months ago still a priority in this new world? Notwithstanding the COVID-19-related research alluded to above, what about other research areas of focus? It is unclear what research priorities are going to emerge in this rapidly evolving new world order. Successful researchers are notorious for being able to “turn on a dime” so-to-speak. Stay tuned.

Hani El-Gabalawy, MD, FRCP, FCAHS
Professor & Associate Head of Research, Internal Medicine
Over his two years at the NIH, he studied the role of neutrophil cellular death in rheumatoid arthritis (RA), an autoimmune disease. He also completed a Master's of Health Sciences, awarded through Duke School of Medicine (Durham, NC), with a focus on immunology, genomics and proteomics. His thesis, titled: “Neutrophil-mediated carbamylation promotes articular damage in rheumatoid arthritis”, which sought to understand how neutrophils contribute to autoimmunity and joint damage in RA, was published in Science Advances this year.

He returned to the University of Manitoba as a faculty member of the Manitoba Centre for Proteomics and Systems Biology in January of 2020.

He continues to focus his research on rheumatoid arthritis, studying the immunological events that occur prior to, and with the onset of clinical arthritis. Importantly, much of his work is focused on indigenous relatives of RA patients, a group that has a high propensity to develop this lifelong disease. Currently, he is using state-of-the-art proteomic methods to better understand the source and contribution of modified proteins in facilitating arthritis. Proteins get modified by enzymes, and in people at risk, drive antibody responses before the clinical disease begins. Where these proteins come from, and which ones are actually causing autoantibodies to form, remains entirely unclear. His research team hopes to address this important question and to help understand targets to prevent autoimmunity from happening in people who are at risk. Dr. O’Neil is also co–principal investigator for a CIHR-funded team immunology project, which is undertaking a clinical trial that aims to modulate RA autoimmunity in indigenous Manitobans. Their team hopes to translate findings from an arthritis mouse model and use curcumin to treat individuals with RA-specific autoantibodies. Dr. O’Neil is the principal investigator on the randomized clinical trial and is investigating the symptoms, proteomic and immune cell changes that occur when participants are treated with the study drug.

Liam O’Neil, MD, MHSc, FRCP
1. What have been the challenges of the UM Ethics Committee this year?

During the SARS-CoV-2 outbreak in Toronto in 2003, it was recognized that research ethics review needed to be adaptable to facilitate safe and appropriate research activities during publicly declared emergencies. This was addressed in subsequent revisions to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. The declaration of the coronavirus (COVID-19) public health emergency in Manitoba in March of 2020 required substantial changes to the operations of the UM Research Ethics Office and modifications in review and oversight of research activity which specifically addressed COVID-19.

It was recognized that prompt review of submissions of therapeutic trials for a potentially serious illness for which there was no known effective therapy was needed to facilitate access for patients to treatments, and identify efficacy as soon as possible. The Research Office, wherever possible, provided delegated review to support early implementation of selected trials. This included rapid review by the Research Office co-coordinator and a limited number of board members. Most of these trials were reviewed with an initial response within 48 hours. There were also an increased number of submissions managed by the office due to the surge in applications for COVID-19 trials. This not only applied to the Biomedical Research Ethics Board (BREB), but also the Health Research Ethics Board, under Dr. John Arnett. There was a substantial increase in applications for non-therapeutic interventions, the public health emergency required a pause of most ongoing clinical trials, and subsequent review and approval of amendments to address the changes in practice for the pandemic. This included online activities and modifications for in-person visits. This again added a substantial workload. As part of the University of Manitoba, the Research Office was required to follow university directives with respect to moving work off-site. The BREB required rapid changes to facilitate continued operation, with immediate introduction of online processes, which had not been routinely used previously. This was also complicated by the variable technological capabilities for individuals working from home and was often a challenge. In addition, these changes were required while adapting to personnel losses in the context of budgetary restrictions.

The efforts of the Research Office to meet the needs to change practices, as well as deal with the increased applications in an efficient and expedited manner, were extraordinary.

In addition to providing timely review of COVID-related applications, the public health emergency required a pause of most ongoing clinical trials, and subsequent review and approval of amendments to address the changes in practice for the pandemic. This included online activities and modifications for in-person visits. This again added a substantial workload. As part of the University of Manitoba, the Research Office was required to follow university directives with respect to moving work off-site. The BREB required rapid changes to facilitate continued operation, with immediate introduction of online processes, which had not been routinely used previously. This was also complicated by the variable technological capabilities for individuals working from home and was often a challenge. In addition, these changes were required while adapting to personnel losses in the context of budgetary restrictions.

2. You have had long and successful career in research as well as clinical care, teaching and administration. What changes have you observed in research during this time?

My first clinical trial was initiated in 1978, so I look back over 42 years of exposure to the research agenda from different perspectives. The most obvious immediate observations would be the changes in technology, some of which did not exist then and are now pervasive. This includes the development of large databases and the use of information technology, which has introduced a whole new field of research that is now omnipresent. Another major change, of course, has been the development and introduction of genetic methods which has opened up new fields of exploration.

Research is now a far more structured and regulated activity, certainly with respect to clinical trials.

This includes aspects of research ethics approvals and oversight, but also other components of the approval process, including approvals for health care facility impact and privacy legislation. To some extent, this more structured environment with additional requirements is frustrating for researchers because it increases the complexity and often may prolong study initiation. However, it

DID YOU KNOW? Dr. Nicolle started her career as a General Practitioner in Churchill, MB. In recognition of her extraordinary contributions to science and medicine, she received the Queen Elizabeth II Diamond Jubilee Medal in 2012.

Q&A

With the Chair of the University of Manitoba’s Biomedical Research Ethics Board (Bannatyne), Dr. Lindsay Nicolle, Professor in Infectious Diseases

Dr. Nicolle is an internationally renowned clinician and researcher in the field of infectious diseases. Her work is foundational to our understanding of the pathogenesis and treatment of urinary tract infections and to our best practices in infection prevention and control.
also provides clarity with respect to requirements and process consistency. From that perspective, it protects not just research subjects but also individuals who participate in all aspects of research.

3. Looking to the future, what would you like to see in terms of education and support for the ethical conduct of research?

There needs to be an understanding by all individuals, in all aspects of health care work and training, that research is an integral part of providing optimal patient care. It should be recognized for the important contributions it has made. Research should be promoted and facilitated so further advances are possible. Obviously, appropriate resources to facilitate optimal research activities are essential and should be provided from all parties who are contributing and benefiting.

In terms of support, there is an urgent need to align the necessary approval processes – ethics, impact and privacy, to provide a competent, knowledgeable and timely review of proposed and ongoing research and to limit redundancy and, occasionally, outright contradictions. This can be achieved through streamlining the process with a view to making it reliable and efficient. Research Manitoba has been tasked with developing a single review process to streamline research review which, when implemented, could address much of the current frustration and redundancy of the approval process.

Over 33 years ago, faculty member Dr. Kelly MacDonald started her devoted research work as a medical student amidst one of the largest world pandemics of the 20th century. We sat down with Dr. MacDonald to find out more about where her passion and commitment to HIV research is seeded from and what her outlook is on finding a vaccine for the novel COVID-19 virus.

Can you tell us how you became involved in HIV vaccine research?

I had a life changing experience in Kenya, Africa as a 4th year medical student, while I was doing a clinical research elective in 1987. At that time, there were few symptomatic people with human immunodeficiency virus (HIV) in the general population in east Africa but HIV had already infected the vast majority of sex workers and an increasing number of their clients. However, because very few of these people were yet symptomatic, unlike certain other parts of Africa or North America, the idea that all of these people with a positive blood test would eventually get sick and die was a completely hypothetical concept to health professionals on the ground and to most of the public.

I was working on a sexually transmitted disease (STD) study with an infectious diseases medical fellow who was doing a 2-year research project in an STD clinic in the poorest part of Nairobi. We enrolled sex worker clients, of whom about a third, were already HIV positive. The nurses assisted counselling these patients in Kiswahili. One day, a man from Kinshasa (now Congo), was carried in. He was near death, skeletal and breathing very laboriously with Kaposi’s sarcoma lesions on his face. He obviously had pneumonia and little time to live. We all tried to make him comfortable and gave him medicine for pain.

As soon as we left the room, the nurses asked me “Daktari Kelly, what is that man’s illness? What has caused this?”

I realized they didn’t recognize that he had end stage acquired immune deficiency syndrome (AIDS). I gently said “he has Ukimwi, he has AIDS, this is the disease at the end”. The Clinic Director and nurses looked at me incredulously and paused for the longest time and then said “you mean that all these men we diagnose and see every
day will die like this?” I looked at them and shared their sense of devastation but there was more. They looked at me as if I’d kept something from them instead of sounding the alarm more forcefully. They said “we have to do something, you can’t just stand by!” I felt so helpless and embarrassed that as a physician I could do so little. I vowed then that I would find a way to make a contribution to preventing HIV infections, not just “stand by” and palliate people and care for orphans. I realized that globally, a vaccine was really the only way we could permanently prevent HIV, so I switched gears and entered infectious diseases as a career, and have worked as a clinician-scientist in HIV prevention and strategies aimed at HIV vaccine development specifically with a global perspective in mind.

WHAT LESSONS FROM YOUR WORK IN HIV RESEARCH CAN WE APPLY TO OUR SEARCH FOR A COVID-19 VACCINE?

I learned from all of my mentors, Drs. Allan Ronald, King Holmes, Frank Plummer and Donald Low, that the best infectious disease researchers are a triple threat. They capitalize on their ability to combine epidemiological, clinical and basic science research perspectives to identify human populations that are showing us variation in infection or disease susceptibility and outcome; using that to study both the variability in the host and the pathogen that mediates this. The exciting part comes when one is able to apply that understanding with an intervention whether it is a prevention such as a vaccine or a treatment such as gene therapy or medication. This approach by nature is multidisciplinary and requires individuals who are able to work collaboratively, cooperatively and strategically.

My research started with understanding the interplay between HIV and other STD pathogens to alter host susceptibility.

It then moved to look at host immunogenetic factors in conjunction with identifying genetic factors associated with reduced risk and immune mechanisms that mediate protection from HIV in exposed uninfected persons and long-term survivors. The next phase of my career, starting around 2000, focused on applying my findings in a number of vaccine strategies that are practical for use in the developing world. HIV mutates quickly and requires robust cellular and antibody-mediated responses to conserved parts of the virus that are not very immunogenic. Therefore, eliciting vaccine responses to HIV is very good practice for developing other vaccines.

With COVID-19 or SARS-CoV-2, the virus does not mutate as quickly as HIV but it does change and so a vaccine aimed at conserved parts of the virus and specifically antibodies aimed at the conserved spike protein, which binds the host receptor, are likely to be most successful. Almost certainly, these immune responses will not be sufficiently robust or long-lasting unless the vaccine employs an adjuvant or generates ancillary cellular immune responses through other means to generate robust immune “memory”. This is something my lab has worked on for a long time with HIV. For instance, one vaccine I’ve developed utilizes the varicella (chickenpox) vaccine vector which can reactivate and self-boost immune responses without requiring repeated vaccination. This is due to its latency and generates both robust cellular and antibody-mediated immune responses. Not only is this an exciting approach for HIV, but also for a number of other viral threats. This attenuated varicella vaccine vector has been licenced and in use for many decades. Its safety is well studied, perhaps one of the most important issues is deployment and uptake of any vaccine.

YOU HAVE BEEN A RESEARCH MENTOR TO MANY YOUNG SCIENTISTS AND DOCTORS. WHAT MAKES A GOOD MENTOR?

I’ve described previously, the approach to research that my own mentors modelled for me but I admit that I have never had a female mentor. As a bench-scientist working with mostly PhD scientists for much of my career, I have been very aware of the implicit bias and the subtle differences in support, mentoring, advice and networking offered to me and other women trainees in science. I have made a special effort to generate a research environment that emphasizes the access to mentoring and networking for everyone, not just those who are “connected”.

I emphasize that success at all costs is not real success in science.

A meaningful and rewarding career as a scientist is underpinned by fundamental ethical principles and also possession of a strong personal internal compass that detects impropriety and gives one the courage to keep or take a principled course. Even a junior person in science must pursue truth and their conscience. My advice is to enjoy the process as a scientist, aim to let the science and inquiry itself satisfy you, not so much external accolades. Strive to also generate a sense of internal motivation and accomplishment. This has served me well and allowed me to take a longer and more independent and creative view as a scientist.
Currently, the gold standard for diagnosis of COVID-19 is with nucleic acid amplification testing (NAAT). However, NAAT tests may only detect the virus within a short period - days to weeks from exposure or symptom onset. Additionally, the diagnostic yield of NAAT in asymptomatic or mildly symptomatic individuals is poor.

Serological tests that look for host antibodies against the COVID-19 virus in blood are being developed; however, validation of these tests has not been completed. These assays have the advantage of being able to identify those who had been infected previously, which can provide insights for targeted public health interventions.

The Government of Canada has identified widespread serologic testing as a national priority. The National COVID-19 Immunity Task Force (CITF) was thus formed to catalyze, support and harmonize the design and rapid implementation of population-based serologic studies. Provincial platforms are needed to identify and test at-risk populations based on local need, while harmonizing interprovincial efforts.

To this end, and funded by a $448,500 grant from Research Manitoba, our multidisciplinary team of researchers have come together to form the Manitoba COVID-19 Serology (MaCS) Network.

Our MaCS Network will provide a Manitoban foundation to aid national efforts for the rapid and rigorous evaluation of serologic testing kits.

We also aim to provide epidemiologic data to help identify at-risk populations and viral reservoirs, track epidemiologic linkages and better understand the role of asymptomatic infection. Following the seroprevalence over time will provide insights into transmission dynamics and protection from infection with COVID-19 amongst at-risk populations. The identification of sero-positive individuals will also feed into promising opportunities for use of convalescent serum for therapeutic interventions.

Our research team includes co-Principal Investigators Dr. Lauren MacKenzie (Primary Applicant, Section of Infectious Diseases), Dr. Yoav Keynan (Section of Infectious Diseases, Medical Microbiology) and Dr. Sylvain Lother (Sections of Infectious Diseases and Critical Care), and co-investigators Dr. Souradet Shaw (Community Health Sciences, Manitoba Health), Dr. Jared Bullard (Cadham Provincial Laboratory; Medical Microbiology), Dr. Mike Drebot (National Microbiology Lab), Dr. Dylan Mackay (Community Health Sciences), Dr. Ryan Zarychanski (Sections of Critical Care and Hematology/Oncology) and Dr. Anand Kumar (Sections of Infectious Diseases and Critical Care).

As part of the first phase of our research, Dr. Keynan has led the Health Sciences Centre (HSC) health care worker (HCW) serology study, recruiting infected HCWs from a hospital ward experiencing an...
outbreak, asymptomatic workers from the outbreak ward, consultants with shorter exposure times on the ward and controls without exposure. All participants submitted serum for testing and provided detailed demographics, exposure risk, comorbidities and clinical outcome variables. The primary outcome of interest is the seroprevalence among HCWs that worked on the ward, with varying degrees of patient contact compared to HCWs working at other sites. In collaboration with our co-investigators at Cadham Provincial Lab and the National Microbiology Lab, samples from this study are being used to validate a panel of serological tests and to identify those that have the potential for scalability.

Once the leading candidate serological tests have been identified, the next phase of our research will aim to expand serologic testing to vulnerable and at-risk Manitobans; such as those working or living in congregated settings (eg. emergency shelters) and individuals at higher risk for exposure (eg. transportation workers). Focusing on populations such as these is particularly important, given that random population serosurveys may not accurately reflect the true prevalence of disease among more vulnerable or at-risk populations. Population serosurveys may exclude individuals who are unstably housed or utilizing emergency shelters. Due to their congregated setting and higher burden of comorbid conditions, these populations may be disproportionately impacted by COVID-19. Dedicated outreach and targeted sampling, as we plan to do, is required to adequately reach these underserved populations, and inform public health interventions though accurate estimates of COVID-19 prevalence.

Our group of Manitoban researchers are working collaboratively with local, national and global colleagues, and has risen to meet the greatest global health-care challenge in the past century. We hope our research will enhance provincial public health efforts that are crucial to mitigate the pandemic impact in Manitoba. We will generate reliable first estimates of COVID-19 seroprevalence in priority populations in Manitoba, which will align with priorities set by the CITF and contribute to seroprevalence measures within Canada.

With nearly $10 million in national and international grant funding in 2020, Dr. Ryan Zarychanski is making a name for Manitoba in the world of clinical trials and COVID-19 research. With a pandemic at our doorstep and no specific treatments available, Dr. Zarychanski’s team quickly pivoted their resources to bring COVID therapeutic trials to the University of Manitoba.

In an effort to prevent community transmission, protect front-line health care workers and ‘flatten the curve’, Dr. Zarychanski and his team led the first interventional trial of hydroxychloroquine in Canada, in collaboration with investigators in the United States and McGill University. Hydroxychloroquine did not reduce transmission or disease severity, but this innovative media-based trial rapidly answered this important question, which was published in the New England Journal of Medicine. A “media-based” trial was new for the group, which required participants to find out about the trial opportunity via press releases, radio, TV and social media and eligibility was ascertained through a website.

To address the needs of moderately and severely ill patients with COVID-19 who are admitted to hospital, and to effectively create a learning health system in Manitoba with regard to the management of COVID-19, the research team initiated and developed a suite of trials to evaluate potential therapeutics – both on the ward and in the intensive care unit (ICU). All trials are active at the Health Sciences Centre, St. Boniface Hospital and the Grace Hospital – including on the ward at the Grace; a first for clinical research at this hospital.

In response to a clinical observation that patients with COVID-19 are at increased risk of thrombotic events, Dr. Zarychanski teamed up with two investigators from the University of Toronto to design and launch two international trials of therapeutic anticoagulation in moderately ill (ward-like) and severely ill (ICU-like) patients with the virus. The ATTACC trial (anticoagulation to ameliorate complications of COVID-19)
is currently enrolling ward-like patients from 62 sites in 4 countries. The REMAP-COVID therapeutic anticoagulation domain led by Dr. Zarychanski is randomizing critically ill patients to receive an identical protocol of therapeutic anticoagulation or usual care. To maximize enrolment globally, both trials have recently merged to facilitate enrollment of all admitted patients under a unified trial protocol.

The combined trial has recruited approximately 1,000 patients thus far from Canada, the United States, Mexico, Brazil, the UK, Ireland, the European Union, Australia, New Zealand and Saudi Arabia.

Recently the ATTACC/REMAP trial was adopted by the National Institutes of Health in the United States as their national inpatient anticoagulation trial.

Both of the Canadian Institutes of Health Research funded ATTACC and REMAP trials are novel Bayesian adaptive platform trials that incorporate trial design elements to address a variety of unknowns and ethical considerations relevant to a global pandemic. Two of these design elements include the creation of a multiplatform randomized controlled trial and implementation of a harmonized consent form.

To quickly initiate and operationalize the COVID-19 interventional trials, a team of investigators, coordinators and project managers were required. Managed by a committed and hard working group of project managers and research coordinators from Dr. Zarychanski’s team, many junior, mid and senior investigators from the Department of Internal Medicine stepped forward to provide the local leadership required to quickly open COVID trials in Winnipeg. The trial leadership team includes infectious diseases physicians (Drs. Ken Kasper, Yoav Keynan, Terry Wuerz, Lauren MacKenzie, Amila Heendeniya), hematologists (Drs. Emily Rimmer, Vi Dao, Arjuna Ponnampalam), clinical trialists (Drs. Lauren Kelly, Dylan MacKay), general internists (Dr. Glen Drobot) and intensive care physicians (Drs. Anand Kumar, Barrett Rush, Kendiss Olafson, Bojan Paunovic).

Many senior trainees, clinical fellows and junior faculty notably have significant leadership roles, both locally and internationally, including Dr. Sylvain Lother, (MSc candidate), Dr. Brett Houston (PhD candidate) and Dr. Gloria Vazquez-Grande (PhD candidate).

The COVID-19 clinical trials include Nicole Marten (St. Boniface Hospital), Dayna Solvason and Brendon Foot (Centre for Healthcare Innovation), Gary Annable (Research Institute of Oncology and Hematology) and Zina Zaslawski (University of Manitoba). Enrolling coordinators for trials in the ICU and medical wards are Maggie Wilson, Maureen Hutmacher, Nora Choi and Lisa Rigaux. The COVID-19 clinical trials team is supported by Chantale Pineau (Research Assistant) and Sheri Stein (Executive Assistant). Dr. Evelyn Lo, Dr. John Embil and Myrna Dyck (Infection Prevention and Control) and several other health professionals play vital roles identifying COVID-19 patients so that clinical trials can be integrated into daily care.

COVID-19 has presented extreme challenges in all aspects of our life, but with adversity comes opportunity. At the end of this pandemic, and with the experience garnered by members of the research team, the Department of Internal Medicine and the University of Manitoba will have gained significant research capacity to initiate and lead national and international randomized trials. The locally led clinical trial methods, specifically designed to meet the needs of the pandemic, are expected to alter the conduct of future clinical trials in a variety of diseases and health domains.

Dr. Zarychanski would like to recognize the COVID-19 clinical trials research team for their intense efforts to initiate these studies in record time, and for the passion and pride that they bring to work each day despite difficult circumstances and often immense pressure. It is because of their commitment that Manitobans with COVID-19 can be offered a range of potential therapeutic treatments. It is thanks to their leadership that we can contribute to knowledge-generation that will establish best-practices for patients with COVID-19 around the globe.

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<td>Addressing challenges to care in Indigenous individuals on hemodialysis: An ethnographic study</td>
<td>$21,274</td>
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<td>Desautels, Angela</td>
<td>Health Sciences Centre Foundation</td>
<td>HSCF Trust Fund</td>
<td>Gabapentin/Pregabalin use and the incidence and severity of Sleep Apnea</td>
<td>$15,000</td>
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<td>Keynan, Yoav</td>
<td>Sunnybrook Research Institute</td>
<td>COVID-19 Funding</td>
<td>Canadian Treatments for COVID-19: CATCO</td>
<td>$11,300</td>
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<td>Kraut, Allen</td>
<td>Workers Compensation Board of Manitoba</td>
<td>Research and Workplace Innovation Program (RWIP)</td>
<td>Occupational disease surveillance in Manitoba</td>
<td>$190,593</td>
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<td>Krokhin, Oleg</td>
<td>University of Manitoba</td>
<td>UCRP</td>
<td>Development of a new proteomics-based assay for the clinical measurement of globular adiponectin</td>
<td>$25,000</td>
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<td>Larcombe, Linda</td>
<td>Manitoba Sport, Culture and Heritage</td>
<td>Heritage Grants Program</td>
<td>Sayisi Dene First Nations’ resettlement at Tadoule Lake, MB - gathering and sharing the knowledge</td>
<td>$2,675</td>
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<td>Liu, Shuangbo</td>
<td>University of Manitoba</td>
<td>Start-Up Fund</td>
<td>Manitoba cardiovascular outcomes</td>
<td>$150,000</td>
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<td>MacKenzie, Lauren</td>
<td>Research Manitoba</td>
<td>Manitoba COVID-19 Rapid Response Grant</td>
<td>Manitoba COVID-19 Serology (MaCS) Network</td>
<td>$448,500</td>
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<td>Marrie, Ruth Ann</td>
<td>Multiple Sclerosis Society of Canada</td>
<td>Discovery Research Pilot Grant</td>
<td>Subclinical atherosclerosis in multiple sclerosis</td>
<td>$49,993</td>
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<td>Marrie, Ruth Ann</td>
<td>Unity Health Toronto</td>
<td>Pilot Research Grant</td>
<td>Demographic and environmental risk factors for neuromyelitis optica spectrum disorder</td>
<td>$400</td>
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<td>Mendelson, Asher</td>
<td>University of Manitoba</td>
<td>Start-Up Fund</td>
<td>Critical illness translational research program</td>
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<td>Mishra, Suresh</td>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Project Grant</td>
<td>Exploring the role of a mitochondrial protein prohibitin in Leydig cell steroidogenesis</td>
<td>$508,725</td>
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<td>Mookherjee, Neeloffer</td>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Chair: CIHR Sex and Gender Science Chair</td>
<td>Sex and asthma: Immunomodulatory mechanisms of airway inflammation</td>
<td>$694,484</td>
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<td>Mookherjee, Neeloffer</td>
<td>Natural Sciences and Engineering Research Council of Canada (NSERC)</td>
<td>Discovery Grants Program</td>
<td>Cytokines and host defence peptides: Mechanisms of immunomodulation</td>
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<td>Mookherjee, Neeloffer</td>
<td>University of Manitoba</td>
<td>Small Research Equipment Grant (SREF)</td>
<td>Bioanalyzer for sample quality control of RNA, DNA and proteins</td>
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<td>Ng, Marcus</td>
<td>Mitacs Inc.</td>
<td>Mitacs Accelerate</td>
<td>Exploring the effects of functional connectivity to depict key differences between stages of sleep to determine why REM protects against seizures</td>
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<td>Nickerson, Peter</td>
<td>National Institutes of Health (NIH)</td>
<td>R34 - NIAID Clinical Trial Planning Grant (PAR-16-272)</td>
<td>Biomarker guided CNI substitution in kidney transplantation</td>
<td>$273,306</td>
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<td>Nickerson, Peter</td>
<td>Private Donation</td>
<td>Operating</td>
<td>HLA molecular mismatch in kidney transplantation</td>
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<td>Principal Investigator</td>
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<td>Program</td>
<td>Project Title</td>
<td>Award Amount</td>
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<td>O'Neil, Liam</td>
<td>University of Manitoba</td>
<td>Start-Up Fund</td>
<td>Proteomic biomarkers in pre-clinical rheumatoid arthritis</td>
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<td>Peretz, David</td>
<td>Paladin Labs Inc.</td>
<td>Contract</td>
<td>Post liver transplant diabetes mellitus and the impact of an extended release tacrolimus formulation in Canadian First Nations populations</td>
<td>$94,078</td>
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<td>Peschken, Christine</td>
<td>University Medical Group</td>
<td>Bridge Funding</td>
<td>Bridge funding for research programs</td>
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<td>Rimmer, Emily</td>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Project Grant</td>
<td>Therapeutic plasma exchange in septic shock: A pilot study</td>
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<td>Rimmer, Emily</td>
<td>Hamilton Health Sciences Corporation</td>
<td>COVID Grants</td>
<td>A randomized open-label trial of convalescent plasma for hospitalized adults with acute COVID-19 respiratory illness (CONCOR-1)</td>
<td>$29,000</td>
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<td>Shen, Garry</td>
<td>University of Ottawa</td>
<td>Subcontract</td>
<td>SMARTMOMS Canada trial: An evaluation pregnancy-specific mobile health application to manage gestational weight gain</td>
<td>$32,988</td>
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<td>Singh, Harinder</td>
<td>University of British Columbia</td>
<td>Subcontract</td>
<td>Pro-active fecal calprotectin monitoring to improve patient outcomes in Ulcerative Colitis: A prospective randomized control trial (PROMOTE-UC)</td>
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<td>St. John, Philip</td>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Project Grant</td>
<td>Characterization of frailty in older men</td>
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<td>Tangri, Navdeep</td>
<td>Hamilton Health Sciences Corporation</td>
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<td>Dialysis symptom control-Restless Legs Syndrome trial (DISCO-RLS trial): A randomized controlled trial</td>
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<td>Tangri, Navdeep</td>
<td>Janssen Inc.</td>
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<td>Post doctoral fellowship in innovative clinical trials at the Chronic Disease Innovation Centre</td>
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<td>Wiebe, Chris</td>
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<td>New Investigator</td>
<td>Allopeptide presentation as a prognostic biomarker for primary alloimmunity</td>
<td>$50,000</td>
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<td>Yamamoto, Jennifer</td>
<td>University of Manitoba</td>
<td>Start-Up Fund</td>
<td>Diabetes in pregnancy research program</td>
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<td>Zarychanski, Ryan</td>
<td>Manitoba Medical Service Foundation</td>
<td>R. Samuel McLaughlin/MMSF Research and Education Fellowship Award in Medicine</td>
<td>Fatigue in children with cancer: A systematic review and a survey of perspectives of health care professionals across Canada</td>
<td>$25,000</td>
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<td>Zarychanski, Ryan</td>
<td>Research Manitoba</td>
<td>2020 Research Manitoba COVID-19 Research Fund</td>
<td>Antithrombotic therapy to ameliorate complication of COVID-19 (ATTACC)</td>
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<td>Zarychanski, Ryan</td>
<td>Unity Health Toronto</td>
<td>CAPTIC consortium/CIHR SPOR</td>
<td>Randomized, embedded, multifactorial adaptive platform trial for community-acquired pneumonia (REMAP-CAP)</td>
<td>$1,800</td>
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<td>Zarychanski, Ryan</td>
<td>University Health Network (UHN)</td>
<td>LifeArc COVID-19 Fund</td>
<td>Antithrombotic therapy to ameliorate complications of COVID-19: The ATTACC randomized trial</td>
<td>$1,721,400</td>
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<td>Zarychanski, Ryan</td>
<td>University of Manitoba</td>
<td>R. Samuel McLaughlin/MMSF Research and Education Fellowship Award in Medicine</td>
<td>Fatigue in children with cancer: A systematic review and a survey of perspectives of health care professionals across Canada</td>
<td>$50,000</td>
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<td>Zarychanski, Ryan</td>
<td>University of Pittsburgh</td>
<td>ACTIV-4 Inpatient Platform</td>
<td>Antithrombotic therapy to ameliorate complications of COVID-19 (ATTACC), in collaboration with accelerating COVID-19 therapeutic interventions and vaccines (ACTIV-4)</td>
<td>$4,092,660</td>
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</table>
A Word From Our Associate Head of Clinical Services

At the beginning of 2020, few could have predicted what would be asked of us in terms of clinical service delivery. The COVID-19 pandemic brought its challenges in terms of resource deployment, which in the first wave, was at a manageable pace. As the year progressed, summer brought a lull with consecutive days with no new cases. We have been challenged, like never before, with rising infection rates and fatalities.

The Department of Internal Medicine has been key in the response across our region. This has involved expanding the bed-base both in critical care and general medicine, allocating personnel to geographic COVID units and reorganizing existing schedules often at short notice. Self-isolation requirements for staff presented challenges with resource availability and planning. The strain on our department is unprecedented and reaches beyond health professionals to involve families and loved ones.

To date, we have met this challenge through the selfless commitment of our colleagues, our nursing colleagues and our allied health partners. The quick response to reallocate staff has been key to our ability to expand our bed-base to accommodate ever increasing numbers of patients and is a tribute to our commitment to continue to provide care in these challenging times.

To what extent we will be challenged in the coming weeks and months is still unknown. We can be sure that for the foreseeable future, it most certainly will not be business as usual.

Nick Hajidiacos, MD, FRCPC
Assistant Professor & Associate Head of Clinical Services, Internal Medicine

NEW CLINIC UPDATE

Construction is well underway on the new Department of Internal Medicine’s Ambulatory Care Centre! Working with our partners at Shared Health Capital Planning, Health Sciences Centre and MMP Architects, the department is building a new ambulatory care facility to house many of the outpatient subspecialty clinics currently scattered across the HSC campus. Located in a former school, adjacent to HSC, the clinic is designed using evidence-based principles and an updated approach to outpatient medicine. The floor plan is intended to reduce physician and staff travel and to increase both subspecialty collaboration as well as the time physicians can spend with their patients. The guiding principles for the clinic include patient-centred care, a focus on tertiary and academic medicine and accommodation for undergraduate and postgraduate teaching.

In a “ground-up” approach, planning involves input from our Physician Advisory Group, Support Staff Advisory Group and most importantly the Patient Advisory Group. This approach will allow us to provide the best care available in an exciting, collegial, academic environment.

The department expects to move into our new clinic space in late 2021.

David Robinson, MD, MSc, FRCPC
Medical Director, Ambulatory Care Centre, Internal Medicine
METHODS, STANDARDS AND INNOVATION TEAM (MSI)

WHO WE ARE:
We are a resource within the Department of Internal Medicine who work with physicians, management, leadership and support staff to continuously drive improvement – focusing on our three pillars: clinical, research and education. With Lean principles and methodology experience in healthcare and industry, the MSI Team members are leaders on process and continuous improvement activities and standards development.

WHAT WE’VE BEEN UP TO:
- The successful move of the Adult Medical Clinic from the Bairdmore location to the Victoria Hospital
- The current state analysis of our ambulatory care clinics and identification of efficiencies and improvements
- Involvement with the coordination and schedule-build to ensure our clinics opened safely to see patients in-person while ensuring provider, staff and patient safety
- Working with Transcription Services to improve turn-around times and delivery of letters
- Facilitating physician, patient and support staff advisory groups and committees to ensure all voices are heard and reflected in our move to the new Ambulatory Care Centre
- Leading the planning and transition of the Ambulatory Care Centre, as well as working with the department’s partners at Health Sciences Centre and the Internal Medicine Program to ensure its success

WHAT MSI CAN DO FOR YOU:
This year has brought many challenges to overcome and it has required us to look at our daily work differently. There is a heightened importance to maintain staff and patient safety all while providing quality patient care and developing our learners. To achieve this, our team is equipped with methodologies and tools that can help you look at your current operations and find innovative and efficient ways to continue being successful in our ever-changing environment.

Do you have a change or improvement idea you want to trial? Do you want to use the scientific method to make process changes to get a desired result? Reach out to the MSI Team and we can help provide facilitation, project management and coaching support.

Have an improvement opportunity or want to learn more? Engage with the MSI Team by calling (204) 794-4632 or email: MSITeam@hsc.mb.ca

ACCUCRO UPDATE
The Accucro Clinical Support Team is comprised of professionals representing engineering, medicine, nursing, information technology and health care. Sponsored and supported directly by the members of the Department of Internal Medicine, the team has, in a short period of time, achieved some notable successes with Accuro electronic medical record software. They are responsible for the implementation of Accuro and are a direct line of support to users; including new accounts, navigation, troubleshooting and service requests. They are active in training, system upgrades and report generations for system needs and research. The Accuro Clinical Support Team continues to mature in terms of its ability to deliver value-added services to the local health care community.

The team’s main focus this year has been to support the ambulatory clinics through the COVID-19 pandemic, redesigning process flows that enable the clinics to identify different appointment types for booking and reporting purposes.

Dan Roberts, MD, FRCPC and Kym Morris, Accuro Clinical Support Manager, Internal Medicine

MEDICAL TRANSCRIPTION SERVICES
The relationship between a physician and a patient comprises many aspects. One very important element is the medical record, also known as a patient’s chart, which is an integral part of the patient care experience. Physicians refer to the chart as it diarizes information needed for medical history, diagnosis, medications and diagnostic results. A visit often involves the review of letters or notes in a patient’s chart.

Did you ever wonder who types those letters? In our department, skilled Medical Transcriptionists listen to, interpret and transcribe voice files in the Provincial Dictations and Transcription (PDAT) system and in Accuro.

In 2020, the department transcribed over 117,000 letters for 200 Physicians in 14 subspecialties. This number equates to over 5,000 letters per transcriptionist for ambulatory care clinics at sites including the Health Sciences Centre, St. Boniface Hospital, Seven Oaks General Hospital, Riverview Health Centre, Misericordia Sleep Disorder Centre and Victoria Hospital Adult Medical Clinic.

Attention to detail, along with a plethora of patience, is required to ensure that confidential and complex patient information is typed accurately, becoming a legal document used by members of the multidisciplinary care teams.

Twenty-four transcriptionists in the department work diligently to ensure thousands of hours of dictation are accurately processed to help make for a positive first experience for patients.

Liane Davidson, Physician Services Manager - Transcription, Internal Medicine
Home is where the heart is

Did you know that 75% of our 2020 physician recruits were locally trained?!
This year marked 150 years as the fifth province and centre of our beautiful country.

Our love and gratitude for our province and its people is evident as we work together to conquer the challenges that this year has presented. We celebrated by staying close to home and exploring the many wonders our widely varied landscape has to offer. We rediscovered our province and what it has to offer through its visual magnificence, cultural diversity, and rich history. Our sense of community grew stronger as we recognized our small town feel and personal connections.

Learn more about our Manitoba roots; where we come from, where we work and conduct research within the community — this is what connects us.

WE ARE MANITOBA PROUD!

1. Drs. Davinder Jassal & Mahwash Saeed (Cardiology) are from Thompson, MB
2. Dr. David Robinson (Rheumatology) has clinics in Red Sucker Lake, MB
3. Dr. Konstantin Jilkine (Rheumatology) has clinics in Norway House, MB
4. Shauna Ritcher, (Admin Support) is from Ashern, MB
5. Dr. Graham Duff (GIM) & Terrence Styba (Clinical Support) are from Roblin, MB
6. Dr. Shelley Zieroth (Cardiology) is from Dauphin, MB
7. Dr. Hani El-Gabalawy (Rheumatology) conducts research in Fort Alexander, MB
8. Dr. Bertram Unger (Critical Care) is from Steinbach, MB
9. Dr. Brady Anderson (Oncology Fellow) is from Reston, MB
10. Dr. Julia Uhanova (Hepatology) has clinics in Winkler, MB
Richard Warrington, MBBS, PhD, FRCPC
Section of Allergy and Clinical Immunology

Dr. Warrington trained at the Royal London Hospital, University of London, England from 1961 to 1968, receiving a first class honours degree in Physiology and a MBBS degree.

He came to Canada in 1969, moving to St. John’s, Newfoundland to assist with the establishment of the new medical school at Memorial University. He was awarded a PhD in cell studies in 1973 from Memorial University. In 1974, he relocated to Winnipeg to undertake subspecialty training, and upon completion he joined the Section of Clinical Immunology and Allergy as an assistant professor in 1976.

He was the Section Head from 1980 to 2018 and the Residency Program Director (PD) from 1980 to 2009. During those 29 years as PD, the section trained over 50 subspecialty residents, with many now in senior positions nationally and around the world. He served as a knowledgeable, kind and patient mentor to trainees and offered highly regarded knowledge and experience. Dr. Warrington was awarded an MRC Scholarship in 1980 and in 1983. Along with Dr. John Wilkins, they established the Rheumatic Disease Unit Research Laboratory (affiliated until 1996) and was appointed Professor of Internal Medicine & Immunology in the same year. He served as a member of the Board of Examiners in Clinical Immunology & Allergy of the Royal College of Physicians and Surgeons of Canada and was Chief Examiner for several years. He recently received an award commemorating 30 years of service to the Royal College.

Further to his experience and leadership roles, Dr. Warrington was appointed Editor-in-Chief of the Allergy, Asthma & Clinical Immunology journal in 2004 and remains in that position. He became President of the Canadian Society of Allergy, Asthma and Clinical Immunology in 2008 and subsequently was elected the first Honorary Member. From 2010–2018, he was appointed to the Public Health Agency of Canada’s National Advisory Committee on Immunization. He also worked on the Centers for Disease Control and Prevention Committee for herpes zoster vaccine for 2 years.

His research has included drug allergy, rheumatic diseases, anti-cytokine antibodies, allergic responses to vaccines and myeloid suppressor cells. He has over 120 peer-reviewed publications.

Dr. Richard Warrington has headed the Section of Allergy and Clinical Immunology at the University of Manitoba with great vision and passion. On a national and international stage he has garnered the respect and admiration of his colleagues. He has strived through his career to advance the specialty overall, to foster the careers of his trainees and above all, has dedicated himself to compassionate and expert patient care. He has been a research mentor, a clinical role model and a strong support for early career colleagues.

We would like to wish Dr. Warrington the very best in his well-deserved retirement.
CHASING DREAMS CLOSE TO HOME

Lindsay Woodrow, MD, FRCPC
Section of Physical Medicine & Rehabilitation

Having lived away from Manitoba for the past nine years, I know there is no place like home. I am pleased to return to the University of Manitoba as a new GFT physician and Assistant Professor in the Department of Internal Medicine within the Section of Physical Medicine and Rehabilitation.

I was born and raised in Winnipeg, growing up in North Kildonan. I attended the University of Manitoba, obtaining undergraduate and master's degrees in kinesiology in 2008 and 2010, respectively. In 2011, I moved to Hamilton, Ontario to attend medical school at McMaster University. I completed my residency in physical medicine and rehabilitation at McMaster University, becoming a Fellow of the Royal College of Physicians and Surgeons of Canada in 2019. Following my residency, I undertook additional subspecialty training in cancer rehabilitation medicine at the prestigious University of Texas MD Anderson Cancer Center in Houston, Texas.

I have always been inspired by Manitobans who have chosen to chase their dreams at home. During my medical training, I visited Winnipeg frequently and was always excited to see a new business or endeavour created by someone local. The importance of community and desire to make Manitoba better has drawn me back home to do the same. After discovering cancer rehabilitation medicine during my residency training, I knew I had found my opportunity to contribute as a physician by serving Manitobans compassionately.

Manitobans with cancer deserve the best care possible throughout their journey. As cancer therapies improve, there are more patients living with impairments related to their cancer or its treatments. Access to specialized physical medicine and rehabilitation services is critical to address these impairments and maximize function and quality of life. I truly hope that I can enhance the lives of cancer survivors in Manitoba and help train future physiatrists to be able to look after those patients holistically and with dignity.

I am thrilled to have the opportunity to work closely with the oncology team at CancerCare Manitoba, in addition to my physiatry colleagues in the Section of Physical Medicine and Rehabilitation at the University of Manitoba. I have received an incredibly warm welcome and look forward to growing as a physician, teacher, researcher, mentor and leader right here at home.

“The importance of community and desire to make Manitoba better has drawn me back home to do the same.”
“Alone we can do so little; together we can do so much.”

- Helen Keller