



UNIVERSITY
OF ALBERTA



Department of Medicine
2022 ANNUAL REPORT

Recovery
& Wellness



UNIVERSITY
OF ALBERTA

We are the Department of Medicine.

“ Wherever the art of
Medicine is loved,
there is also a love
of Humanity.

Hippocrates

Department of Medicine
Faculty of Medicine & Dentistry
University of Alberta

13-103 Clinical Sciences Building
11350 – 83 Avenue
Edmonton, Alberta
Canada T6G 2G3

T 780.248.1861 F 780.248.1637
eachair@ualberta.ca
ualberta.ca/department-of-medicine

[DONATE](#)

Please **CLICK DONATE** to give to the department of Medicine today.
For more information on giving to the Department of Medicine,
please contact Brooke Rose: ber@ualberta.ca

Contents



4	Chair's Message	18	Indigenous Partnership for Health
7	Steering Committee 2022	20	Diversity & Wellness
8	ZCDEC Committee 2022	22	Research Illuminations
9	Spotlight on Awards & Honours	26	Medical Education
12	Clinical Care Recovery	28	Divisional Leadership & Profiles
16	The Health of Us All	58	Funding & Stats

AS PHYSICIANS AND RESEARCHERS,
RECOVERY AND WELLNESS FOR
PATIENTS ARE OUR REASONS
FOR DOING WHAT WE DO. **YET**
THE GRUELLING REALITY OF 2022
MEANT THAT, AS THOSE TASKED
WITH DELIVERING WELLNESS
AND RECOVERY IN CHALLENGING
WORK CONDITIONS, OUR OWN
RECOVERY AND WELLNESS
BECAME PARAMOUNT.

Dr. Narmin Kassam

Professor and Chair, Department of Medicine

Chair's Message



We realized that unless we began taking care of ourselves, we simply couldn't keep up the marathon pace of the last three years. How we as individuals have acted on this realization manifested itself in small but important ways. A few extra vacation days tacked onto conferences. Long-delayed family trips and reunions finally taken. Time taken to rest, regroup, and recharge.

The need for wellness flowed from the personal to the professional. A tight, supportive, collegial network grew among the General Internal Medicine sites in the Edmonton Zone hospitals. A partnership was formed with the Alberta Medical Association (AMA) and the Faculty of Medicine & Dentistry to bring the Well Doc Program to our members, co-facilitated by **Rob Pauly**, Assistant Dean, Faculty Wellbeing. The AMA recognized **Cheryl Goldstein**, our Associate Dean of Advocacy and Wellbeing, with the Greatest of All Time (GOAT) award for her work promoting wellness among our learners.

The profiles in this annual report provide an account of the experiences of our department members in 2022, the year when COVID was supposedly in our rearview mirror but in reality has resulted in overcrowding our hospitals with unprecedented numbers. The year when, as our In-patient Medicine leads tell us, delayed care during the pandemic resulted in many patients admitted with late-stage illnesses and diseases requiring intensive and complex care, and bed occupancy was routinely over 100 per cent. Having so many requiring so much when resources were depleted at every level was and will always be morally distressing to all frontline medical staff.

Yet frontline medical staff persevered, collaborating in new ways to shoulder the burden and stepping up to find novel approaches to improve quality in every aspect of clinical care. Training continued, with staff ensuring learners received the highest levels of medical experience and education. Within hospitals, service teams worked together with a new cohesiveness to make the seemingly impossible, possible.

Within our department, division directors spoke of the pressures of the all-consuming clinical demand and how its impact fanned out into other academic areas. But their top concern was division members' wellbeing, because in addition to the clinical load, productivity in research and publication and in education remained high.

We put a lot of emphasis on leadership development in 2022, and the result is we had an infusion of new division leadership with five new directors who came on in 2022 and four more slated for 2023. In addition to the fresh perspectives and ideas the new directors will bring, all divisions are rethinking how they operate, initiating quality improvement initiatives and division-wide planning for the future. People want to move forward and build for the future, as noted by several division directors.

After three years of working through a screen, we need to figure out the right balance between virtual and in-person engagement. Despite the isolation of virtual academic medicine, some areas worked exceedingly well with it. Attendee numbers for our medical ground rounds, for example, quadrupled with virtual attendance. Virtual medicine also connected us to our many out-of-town patients, saving them the time and expense of coming into the city to see their doctor. A recent medical education innovation is the reverse classroom, which blends virtual lectures with an in-person question-and-answer session with lecturers. Our learners love this innovation, and we wouldn't have developed it without the pandemic experience.

But there's no doubt that human contact—whether as caregivers or colleagues—is necessary. For learners, you cannot replace putting your hands on a patient to do a physical exam. And for all of us, being able to have coffee and catch up in person or to get together for a departmental event is another step towards our aggregate wellness.

We are getting back on track with clinical research and are now able to provide patients with the best opportunities to participate in clinical trials. The possibilities of what can be achieved by the fusion of virtual and in-person clinical trials I believe, will help move medicine forward, toward recovery and wellness for many in the future.

Several individuals are profiled in this report for moving medicine forward in their respective fields. **Michelle Graham** successfully co-lead an implementation clinical trial that resulted in a statistically significant decrease of acute kidney injury in patients undergoing invasive cardiac procedures in Alberta, an achievement noted by the editor of *JAMA*. Kidney health is a passion of **Aminu Bello**, whose leadership of collaborative community-led programs in Alberta's Indigenous and other rural and remote communities is laying the foundation for better outcomes for kidney disease.

Christopher Sikora leads multi-pronged population health actions in the Edmonton Zone and during the pandemic helped to implement wastewater monitoring for COVID, a novel tool developed by scientists **Bonita Lee** and **Lilly Pang**. **Andy Mason** is seeing growing recognition of the significance of his decades-long research focus on human betaretrovirus and its role in many human illnesses, including cancer and gastrointestinal diseases.

A general internal medicine team comprising **Nabil Mitha**, **Dominic Mudiayi**, **Jennifer Ringrose**, and **Lindsay Bridgland** initiated a multi-year awareness and education project to apply equity, diversity, and inclusion principles to the CaRMS process. In **Steven Katz's** tenure as Core Internal Medicine Program Director, he revamped the curriculum, led the program through Competence by Design implementation, and maintained both the signature culture of the program and its standing as one of the best in the country—all during COVID.

In a year of recovery, our losses must also be remembered. For our Department, the loss of a beloved colleague and friend, **Larry Svenson**, was a great blow. Larry is very much missed and his many accomplishments and contributions are highlighted in the Division of Preventive Medicine profile in this report.

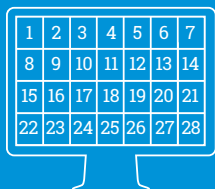
Our duty is to care for people, whether at the bedside or through scientific research, and we do this exceedingly well. It is just as important to look after each other and ourselves, especially during incredibly difficult times. This past year has shown us that wellness is a necessity for recovery on so many levels, and it can be achieved when we work together and support each other. And that is a solid foundation to build on for our future growth.

Narmin Kassam

Professor and Chair, Department of Medicine

STEERING COMMITTEE 2022

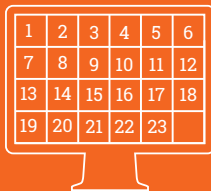
Department of Medicine Steering Committee Members



- | | | |
|--|---|--|
| 1 Narmin Kassam , Chair | 10 Joseph Brandwein , Director, Hematology | 20 Jan Willem Cohen Tervaert , Director, Rheumatology |
| 2 Michelle Graham , Director, Cardiology | 11 Karen Doucette , Director, Infectious Diseases | 21 Evangelos Michelakis , Associate Chair, Research |
| 3 Robert Gniadecki , Director, Dermatology | 12 Branko Braam , Director, Nephrology | 22 Vijay Daniels , Associate Chair, Education and Faculty Development |
| 4 Jacques Romney Interim Director, Endocrinology & Metabolism | 13 Janis Miyasaki , Director, Neurology and EDI | 23 Steven Katz , Director, Postgraduate Medical Education (PGME) |
| 5 Daniel Baumgart , Director, Gastroenterology (up to October 2022) | 14 Ming Chan , Co-Interim Director, Physical Medicine & Rehabilitation (up to March 2022) | 24 Rebecca Lee , Director, Undergraduate Medical Education (UGME) |
| 6 Clarence Wong , Director, Gastroenterology (as of November 2022) | 15 Nigel Ashworth , Co-Interim Director, Physical Medicine & Rehabilitation (up to June 2022) | 25 Gopinath Sutendra , Director, Graduate Education |
| 7 Raj Padwal , Interim Director, General Internal Medicine (up to September 2022) | 16 Vivian Mushahwar , Co-Interim Director, Physical Medicine & Rehabilitation (as of November 2022) | 26 Fraulein Morales , Director, Clinical Faculty |
| 8 Jennifer Ringrose , Director, General Internal Medicine (as of October 2022) | 17 Heather Lindstrom , Co-Interim Director, Physical Medicine & Rehabilitation (as of November 2022) | 27 Francois Bouman , Academic Department Manager |
| 9 Adrian Wagg , Director, Geriatric Medicine, Deputy Chair and Associate Chair, Finance | 18 Sebastian Straube , Director, Preventive Medicine | 28 Elaine Yacyshyn , Ambulatory Representative |
| | 19 Giovanni Ferrara , Director, Pulmonary Medicine | |

ZCDEC COMMITTEE 2022

Zone Clinical Department Executive Committee Members



- | | | | |
|---|---|--|---|
| 1 Narmin Kassam , Zone Clinical Department Head, Medicine | 8 Joseph Brandwein , Zone Section Chief, Hematology | 15 Dan Slabu , Covenant Site Chief, Medicine, Misericordia Community Hospital (MCH) | 21 Pamela Mathura , Clinical Quality Improvement Consultant |
| 2 Elaine Yacyshyn , Deputy Zone Clinical Department Head, Medicine | 9 Karen Doucette , Zone Section Chief, Infectious Diseases | 16 Winnie Sia , Site Chief, Medicine Royal Alexandra Hospital (RAH) | 22 Rob Hayward , Connect Care Medicine |
| 3 Marlene Dytoc , Zone Section Chief, Dermatology | 10 Branko Braam , Zone Section Chief, Nephrology | 17 Hernando Leon , Site Chief, Medicine, Sturgeon Community Hospital (SCH) | 23 Lana Chivers , Senior Operations Director (GNH) |
| 4 Jacques Romney , Zone Section Chief, Endocrinology (Interim) | 11 Sebastian Straube , Zone Section Chief, Occupational Medicine | 18 Fraulein Morales , Site Chief, Medicine, University of Alberta Hospital (UAH) | <i>No photo available:</i>
Liane Manz , Executive Director (RAH) |
| 5 Clarence Wong , Zone Section Chief, Gastroenterology | 12 Giovanni Ferrara , Zone Section Chief, Pulmonary Medicine | 19 Yvonne Suranyi , Executive Director, Medicine Program | Mary Lou McKenzie , Site Director (SCH) |
| 6 Adrian Wagg , Zone Section Chief, Geriatrics | 13 Jan Willem Cohen Tervaert , Zone Section Chief, Rheumatology | 20 Greg Hrynchshyn , Medical Director, Virtual Health | Michael Melia , Executive Director, Ambulatory Care (<i>passed away March, 2022</i>) |
| 7 Brian Wirzba , Zone Section Chief, General Internal Medicine | 14 Jayant Varghese , Covenant Site Chief, Medicine, Grey Nuns Community Hospital (GNH) | | Elizabeth Seib , Executive Director, Ambulatory Care (Interim) |

SPOTLIGHT ON AWARDS & HONOURS

Department of Medicine Awards

Buck, Brian	Clinical Investigation Publication Award
Lau, Angela	Clinical Faculty Research Award
Madsen, Karen	Translational Research Award
Beaudry, Rhys	Paul Man Award
Alavi, Parnian	First Prize, Poster Presentation, DoM Me2 Majumdar Research & Quality Improvement Day
Lai, Justine	First Prize, Oral Presentation, DoM Me2 Majumdar Research & Quality Improvement Day
Saleme, Bruno	First Prize, Oral Presentation, DoM Me2 Majumdar Research & Quality Improvement Day
Satkunam, Lalith	Thomas J. Marrie Mentorship Award
Ghosh, Monty	Jonathan B. Meddings Clinical Innovation Award
Stalker, Gilda	J. Charles "Chuck" Morrison Award
Kar, Satyabrata	Paul W. Armstrong Excellence in Research Award
Sykes, Gina	Ballermann Translational Research Fellowship Award
Olagundoye, Olawunmi	University of Alberta Doctoral Recruitment Scholarship

SPOTLIGHT ON AWARDS & HONOURS

Department of Medicine Undergraduate Medical Education Teacher of the Year

Anwar, Saifal (UAH)
 Hrimiuc, Ramona (RAH)
 McNab, Tammy (UAH Subspecialty Endocrinology & Metabolism)
 Sprague, Elliott (GNH)

Department of Medicine Undergraduate Medical Education Teacher of the Year Honourable Mention

Chea, Rith (RAH)
 Daniels, Vijay (UAH)
 Rosser, Stuart (RAH Subspecialty Infectious Diseases)
 Varghese, Jay (GNH)

Department of Medicine Postgraduate Medical Education Teacher of the Year

Birdi, Kam (GNH)
 Captan, Vasile (RAH)
 Li, Pen (UAH Subspecialty Pulmonary)
 Strand, Alicia (UAH)

Department of Medicine Postgraduate Medical Education Teacher of the Year Honourable Mention

Araneta, Patricia (UAH)
 Cena, Jonathan (RAH)
 Patterson, Jeffery (UAH Subspecialty Hematology)
 Varghese, Jay (GNH)

International Research Awards

Bello, Aminu	Fellow, International Society of Nephrology
Gramlich, Leah	Fellow, International Union of Nutrition Sciences
Hoentjen, Frank	Best Abstract, United European Gastroenterology
Osman, Mohamed	Scleroderma Clinical Trial Consortium Award
Ye, Carrie	Young Investigator Award, American Society for Bone and Mineral Research

National Research Awards & Honours

Ba, Fang	Social Sciences and Humanities Research Council grant
Bhutani, Mohit	Canadian Institutes of Health Research grant
Chan, Ming	Canadian Institutes of Health Research (two) grants
Ferrara, Giovanni	Canadian Institutes of Health Research grant
Heffernan, Courtney	Canadian Institutes of Health Research grant
Lam, Grace	Canadian Institutes of Health Research (two) grants
Lau, Angela	Canadian Institutes of Health Research grant
Long, Richard	Social Sciences and Humanities Research Council grant
Kar, Satyabrata	Canadian Academy of Health Sciences (CAHS) Fellowship
Mitchell, Ross	Artificial Intelligence Chair, Canadian Institute for Advanced Research
Mushahwar, Vivian	Brain Canada Foundation grant
Plemel, Jason	Canada Research Chair in Glial Neuroimmunology
Senger, Jenna	Best Resident Research Award, Canadian Society of Plastic Surgery
Steve, Trevor	Canadian Institutes of Health Research grant
Stickland, Michael	Canadian Institutes of Health Research grant
Sutendra, Gopinath	Tier 2 Canada Research Chair in Cardio-Oncology and Molecular Medicine
Weatherald, Jason	Canadian Institutes of Health Research grant

Provincial Research Awards

Abraldes, Juan	Distinguished Researcher Award, Alberta Society of Gastroenterology
Lau, Darren	PRIHS Award, Government of Alberta
Mirkiani, Soroush	Alberta Graduate Excellence Scholarship
Norris, Colleen	Carvazan Chair in Mature Women's Health, Alberta Women's Health Foundation

University of Alberta Research Awards

Damant, Ron	University of Alberta Hospital Foundation/Alberta Boehringer Ingelheim Collaboration Fund grant
Mirkiani, Soroush	Faculty of Medicine & Dentistry 75th Anniversary Award and the Delnor Award
Mushahwar, Vivian	University Hospital Foundation grant
Osman, Mohamed	Paul Davis Award
Stickland, Michael	University of Alberta Hospital Foundation/Alberta Boehringer Ingelheim Collaboration Fund grant

National Teaching Awards & Appointments

Daniels, Vijay	3-M National Teaching Fellow, Society for Teaching and Learning in Higher Education
Katz, Steven	Certificate of Merit, Canadian Association of Medical Education
Lazarescu, Adriana	Certificate of Merit, Canadian Association for Medical Education
Montano-Loza, Aldo	Research Excellence Award, Canadian Association for the Study of the Liver
Naidu, Dhiren	National Review Course Teaching Award, Canadian Association of Physical Medicine & Rehabilitation
Weinkauf, Justin	Education and Teaching Excellence Award, Canadian Society of Transplantation

Provincial Teaching Awards

Wong, Clarence	Distinguished Educator Award, Alberta Society of Gastroenterology
Yacyshyn, Elaine	Educator of the Year, Alberta Medical Association

University of Alberta Teaching Awards

Clifford, Alison	Rheumatology Teaching Award, Residents Association
Dacks, Joel	Outstanding Mentorship in Undergraduate Research & Creative Activities
Katz, Steven	University of Alberta Mentor Award
Kroeker, Karen	Resident Appreciation Award for Excellence and Support as Program Director
Oswald, Anna	E.N. Skakun Award (FOMD)
Patterson, Jeff	Teacher of the Year, Residents Association
Satkunam, Lalith	Physicianship Lecturer Excellence award, Medical Students Association
Sutendra, Gopinath; Jickling, Glen; Michelakis, Evangelos	David Cook Award (FoMD Award)
Wagg, Adrian	Faculty of Medicine & Dentistry Tier 1 Mentorship Award

International Clinical Awards

Siddiqi, Zaeem	Distinguished Alumni, Duke University School of Medicine
Sutendra, Gopinath Jickling, Glen Michelakis, Evangelos	David Cook Award, FoMD
Wong, Clarence	Fellow, American Society for Gastroenterology Endoscopy

National Clinical Awards

Juby, Angela	Fellow, Canadian Geriatric Society
Wagg, Adrian	Fellow, Canadian Geriatric Society
Yu, Jamie	Association of Academic Physiologists Women in Medicine Award

Local Clinical Awards

Ghosh, Monty	Physician Innovator of the Year, EZMSA
--------------	--

National Administration Awards

Ghosh, Monty	Royal College of Physicians & Surgeons of Canada, Early Career Leadership Award
Naidu, Dhiren	Hugh Campbell Distinguished Leadership Award, Canadian Football League
Yu, Jamie	President, Canadian Association of Physical Medicine and Rehabilitation

Provincial Administration Awards

Goldstein, Cheryl	Alberta Medical Association Greatest of All Time (GOAT) Award
Hinshaw, Deena	Queen's Platinum Jubilee Medal
Klarenbach, Scott	Queen's Platinum Jubilee Medal
Osman, Mohamed	Future Leader in Rheumatology Award, Alberta Medical Association
Saxinger, Lynora	Queen's Platinum Jubilee Medal



1



2

1 Jay Varghese
Facility Chief Grey Nuns

2 Dan Slabu
Facility Chief Misericordia

3 Winnie Sia
Facility Chief Royal Alexandra

4 Fraulein Morales
Facility Chief University of Alberta

5 Hernando Leon
GIM Site Lead Sturgeon



3



4



5

Clinical Care Recovery

Edmonton Zone Hospital Sites

The toll the COVID years took on the five hospitals in the Edmonton area ranged from physical space constraints to staff members' physical, emotional, and mental exhaustion. While vaccines along with recovery from COVID infection have helped tremendously to reduce the severity of COVID, the longer-term effects of the pandemic are still overwhelming hospitals and their staff into 2023.

These effects include high hospitalization numbers, with most hospitals routinely over 150 per cent bed capacity. The patients being admitted are sicker, with more serious levels of disease because, for a number of reasons, many people deferred or delayed care during the pandemic. Their complex care, along with care given to record numbers of patients suffering from mental health and substance abuse issues, require huge draws on health care resources.

The sustained volume of patients led to short staffing across frontline staff. "First staff had to deal with the pandemic and then the high volume," says Royal Alexandra Hospital Department of Medicine Site Chief **Dr. Winnie Sia**. "People are feeling quite burned out and just don't have that resilience anymore."

The negative impacts on all healthcare staff in hospitals have led to them making the preservation of their own health a priority. And, as Grey Nuns Community Hospital General Internal Medicine (GIM) Facility Chief **Dr. Jay Varghese** says, "staff have compassion fatigue" because of the vitriol from some quarters of the public resulting from the proliferation of misinformation and distrust of medical expertise.

The other worrying trend is an aging population that uses a lot of health care resources. "We're seeing increased need for health care in the hospital because of the lack of resources in the community," says Dr. Sia. "We're building up our ambulatory care to keep patients out of the hospital."

Despite all this, each of the five site directors and medical chiefs have positive stories to share about how they have managed and prevailed during the ongoing crises and what they are hoping for in the future.

The new collegiality among the General Internal Medicine (GIM) staff in the five hospitals is one of the success stories. Sturgeon GIM Site Chief **Dr. Hernando Leon** says, "With every wave of COVID, the GIM group became more solid, structured, and connected."

The Misericordia Hospital's GIM Facility Chief **Dr. Dan Slabu** credits the efforts of General Internal Medicine Zone Section Chief **Dr. Brian Wirzba** as crucial to the new working relationship among GIM colleagues in the Edmonton Zone. "Dr. Wirzba has created a sense of cordiality among all of the sites," says Dr. Slabu.

Dr. Varghese adds, "Dr. Wirzba spent countless hours building bridges with the Zone medical directors and bridging the gap between the frontline needs and Zone level solutions." The tighter GIM network led to the development of guidelines and better boundaries about expectations around type of service, scope of practice, and workforce. "That common voice has been very effective in relating what's happening on the front line," says Dr. Varghese. "GIM is the single largest admission service in the Zone."

Dr. Fraulein Morales, Site Chief for Department of Medicine, University of Alberta Hospital, adds that "The GIM cohesiveness among the sites is reflected in the hospital as well with the services taking on more patients than the beds available in their units," she says. "GIM, Pulmonary, and Family Medicine are all working outside their bed base, which really helps in managing the increase in patient volumes."

She sees that cohesiveness not just on the wards but in other facets of clinical operations. The hospital's Joint Practice Committee, for example, was not well attended prior to COVID but now has almost every service attending. "The culture shift in how we collaborate to improve patient care and support each other has been terrific," she says.

One of the highlights of the past year for Dr. Slabu is the efforts of many of his team to take on issues and problems. He highlights the work of **Dr. Hamam Abuoun**, who is keenly interested in establishing a clinical teaching unit (CTU) at the Misericordia. Another colleague, **Dr. Emil Nath** looks at quality improvement to use the hospital's data to improve care. **Dr. Shwan Mohydeen** is the Medical Staff Association's treasurer and represents internal medicine staff interests at the MSA level. **Dr. Kevin Wilson** created tools within Connect Care, prior to its launch at the Misericordia, that help physicians use it to increase quality of care delivery and productivity.

The strains felt in hospitals because of the pandemic have prompted quality improvement projects at all the hospitals to improve processes of care. At the Sturgeon Hospital, Dr. Leon leads a project to develop common protocols that can be used in hospital, in different practices, and in the community. Another project underway is a plan to build a simulation centre. "This is a place to test the team dynamics among different disciplines in various medical situations," he says. "The goal is to refine practice and develop processes that can be used and taught."

At the Royal Alexandra Hospital, Dr. Sia oversaw the piloting of the Acute Care Bundle Initiative (ACBI), incorporating several existing patient experience improvement plans that follow patients from hospital admission to hospital discharge, encouraging improvements along the patient's journey.

"Having the Connect Care platform made the rollout of a number of the ACBI initiatives so much better," says Dr. Sia. "**Dr. Rahul Mehta**, our site department's Medical Informatics Lead, prepared us and helped us navigate through the Connect Care launch."

The return to in-person teaching and learning in 2022 after more than two years of virtual learning provided a morale boost for everyone. Education and training were stabilized at the Grey Nuns, Dr. Varghese says, compared to the two previous years when students needed to be pulled out. "The Grey Nuns has had more senior residents than before, enabling a full rotation of senior residents on the inpatient GIM service," says Dr. Varghese. "That's been a good thing, as well as a learning curve, as to how to best integrate them with our workflow."

"The Royal Alex continues to be a very busy site for training fellows, residents, and students," says Dr. Sia. "We have a number of excellent teachers who are dedicated to ensuring an enriching, learning experience."

Dr. Varghese points out a number of dynamic changes that will transform medicine and medical education, one of them being Connect Care, the province's electronic records system. "Connect Care automates a lot of decisions," he says. "Medical education emphasis will be on coaching trainees to document thoughtfully and check for fidelity to make the most of the system."

Currently, the Sturgeon is an elective site for medical students and third year Core GIM residents. Dr. Leon is hoping to bring in more residents who are thinking about establishing a community practice in smaller centres. "Our site is a good place to try because we are a community hospital," he says. "We are very happy to get them to our site—it's a great experience for them and for us."

At the University of Alberta Hospital, the GIM division is moving from hybrid to full in-person consultations in 2023. "I'll miss the efficiencies of virtual, and we'll continue it with rural patients," Dr. Morales says. "But overall, it will be nice to get back to normal."

Dr. Winnie Sia is Professor, Dr. Fraulein Morales is Clinical Professor; Drs. Jay Varghese and Hernando Leon are Associate Clinical Professors; and Dr. Dan Slabu is Assistant Clinical Professor in the Department of Medicine's Division of General Internal Medicine.

“

A lot of the appeal of internal medicine is Sherlockian—solving the case from the clues. We are detectives; we revel in the process of figuring it all out. It's what doctors most love to do.

Lisa Sanders, MD, author and columnist for New York Times column Diagnosis



Christopher Sikora

Dr. Christopher Sikora loves his job. “I’ve never had two weeks that look the same,” says the public health physician and lead Medical Officer of Health for Alberta Health Services’ Edmonton Zone. Once he describes his portfolio it’s easy to see why.

There are **six major domains** in his public health role, ranging from surveillance and communicable disease control to environmental public health and health promotion, each requiring ongoing engagement and collaborations with different agencies, institutions, and levels of government throughout Alberta and across Canada.

The Health of Us All

Public health during COVID

One domain that has been front and centre during the past three years is emergency disaster management.

“We’ve had at least one emergency response every year, from the Fort McMurray fires and the Connect Care launch, to COVID-19 responses and Ukrainian newcomer settlement,” says **Dr. Sikora**.

COVID-19 put the role of public health in the spotlight, from the calm messages delivered regularly by Alberta’s Chief Medical Officer of Health at the beginning of the pandemic to the decisions to relax the restrictions initially needed to contain the virus. “It’s only recently that we are winding down the three-year deployment of our emergency and disaster management processes for the pandemic,” he says.

Dr. Sikora is a member of the University of Alberta’s (U of A) Public Health Response Team (PHRT), convened to interpret provincial public health directives and legislation to develop campus responses and decisions. The PHRT was part of a novel pilot project on campus supported by Dr. Sikora and his public health team.

The pilot was driven by the need to monitor COVID-19 on a large, population scale. With the support of Alberta Health, a collaboration with two Edmonton researchers, **Drs. Bonita Lee** and **Lilly Pang**, was formed to develop and implement the first-ever wastewater virus monitoring processes. The public health team worked with wastewater facilities people throughout Alberta, including staff at EPCOR in Edmonton and at one of the residences on the U of A campus, to set up the monitoring systems.

“As testing of individuals waned, wastewater monitoring gives us data in near real-time that was or is representative for all of Edmonton,” says Dr. Sikora. On campus, the resulting data was used to inform the management plan for the residence. “With wastewater, nobody escapes, and it gives us a good indication of what to expect in terms of increased hospital admissions,” says Dr. Sikora.

Planning for future emergencies centres around the core principles of relationship building and population improvement for the team. “We’ll be well-situated,” says Dr. Sikora. “Whether it’s COVID-19, influenza, Norovirus, or a school outbreak, our approach will be very similar.”

Associate Clinical Professor Christopher Sikora is in the Department of Medicine’s Division of Preventive Medicine and is an adjunct faculty member with the University of Alberta School of Public Health. Associate Professor Bonita Lee is in the Department of Pediatrics. Professor Lilly Pang is in the Department of Laboratory Medicine & Pathology.

“Sickness and health are neighbors with a common wall.

Aeschylus



Aminu Bello

Nephrologist and epidemiologist Aminu Bello has a passion for addressing health inequity, sparked by his experience growing up in Nigeria where, for many, access to healthcare is limited.

Since his recruitment to the University of Alberta a decade ago, **Dr. Bello** has focused on establishing the rate of disparity in kidney care between remote Indigenous communities and urban populations, and then developing innovative solutions to tackle it.

Indigenous Partnership for Health

Kidney care in Indigenous communities

“Indigenous people living in rural and remote communities have three to five times the risk of kidney disease, and the quality and access to care is limited compared to the non-Indigenous communities and/or people living in urban centres,” he says.

Early identification and management of risk factors such as high blood pressure, diabetes, dyslipidemia, and proteinuria is key to keeping people away from developing kidney disease. Dr. Bello refined a Manitoba-based project called Kidney Health Check for use in Alberta’s Indigenous communities for early identification, timely intervention, and prevention.

“When at-risk people are identified and managed early on, they are much less likely to develop severe complications from early-stage kidney disease that may require interventions such as dialysis,” he says. Dialysis is mainly offered in larger urban centres because the technology is so expensive to establish. Many Indigenous people live in very remote areas; if they develop kidney failure, they often have to relocate from their community, their culture, their land, and their livelihood.

Dr. Bello and his team have spent time over the years building relationships and trust among Indigenous communities. With the support of Elders and other community members, the team shaped the Kidney Check program using each community’s beliefs and culture. “We sat together in community circles and communicated through storytelling,” says Dr. Bello. “Someone with kidney disease who had had to move to the city for dialysis would tell their story, how the disease started, their challenges.” The result is that people listen and take seriously information on prevention strategies.

Significant help from Alberta Health Services and its Strategic Clinical Networks (SCNs), particularly the Diabetes, Obesity and Nutrition SCN and the Kidney Health section of the Medicine SCN, as well as provincial programs such as Indigenous Wellness Core and Primary Health Care Integration Network, facilitated the initiative with engagement, training, and patient management and monitoring.

“Our metric for success for the Kidney Check program is building trust with the communities,” says Dr. Bello. “Community members feel that they now have more access to care within their communities and that they can prevent not only kidney disease but other chronic conditions.”

Dr. Aminu Bello is Professor in the Division of Nephrology in the Faculty of Medicine & Dentistry’s Department of Medicine. He is the National Project Lead for the [Kidney Check Program in Indigenous Communities of Canada](#), a national collaborative kidney care and research network that aims to transform kidney health by creating and implementing innovative kidney care solutions under the auspices of the [Can-SOLVE CKD Network](#), Canada’s largest-ever kidney research initiative.

“ It is more important to know what sort of person has a disease than to know what sort of disease a person has.

Hippocrates



L > R Dr. Lindsay Bridgland, Dr. Dominic Mudiayi, Dr. Janis Miyasaki, Dr. Jennifer Ringrose. Missing: Dr. Nabil Mitha

EDI

Equity, diversity, and inclusion (EDI) efforts recognize and address the fact that individuals from equity deserving groups face many obstacles due to structural hierarchies, racism, and biases. It isn't a comfortable topic for some, particularly when methods and processes that have been used for decades in vaunted fields like medicine are examined for biases and found wanting.

One such process is the Canadian Resident Matching Service (CaRMS) that all applicants to medical school and to residency programs, such as General Internal Medicine (GIM), must undergo. CaRMS is a multistage process consisting of an application review, interview, and candidate ranking.

In 2021, Associate Professor **Jennifer Ringrose**, then program lead for GIM Residency Program, and **Dominic Mudiayi**, then a fifth-year GIM resident, began developing a project to reduce bias at the resident selection level of GIM CaRMS.

Diversity and Wellness

Equity, diversity, and inclusion

“The overall initial sentiment was that ‘CaRMS is working well, we’ve got great trainees, and we’ve got great people in our division. Why change things?’,” says Dr. Ringrose. “But this is a big issue in medicine, and it’s a big issue in our society.”

Drs. Mudiayi and Ringrose bounced ideas around, agreeing that a starting point for a CaRMS-focused project was a literature search, which Dr. Mudiayi took on, about bias reduction techniques in medicine.

“The literature review was an opportunity for me to learn about what was being done in medical education to reduce these biases,” says Dr. Mudiayi. “The review quantified these issues and showed us what tools are available out there to bring them to light.”

A questionnaire sent out to all GIM division members revealed that many people had their own preconceived ideas about bias or were unsure of what EDI was. Drs. Ringrose and Mudiayi then collaborated with the Faculty of Education’s EDI and racial justice special consultant, **Farha Sharif**, to show a bias reduction video to CaRMS evaluators prior to the 2021 GIM CaRMS process.

“Going into the first iteration I don’t think there was a consensus about what EDI is, and how it is impacting our learners,” says Dr. Mudiayi. “We achieved two goals; the first was that more people gained an understanding of what EDI means and, second, that EDI helped us identify and record issues within our assessment processes.”

In 2022 Dr. Ringrose was appointed GIM division director. **Lindsay Bridgland**, who had joined the EDI team the year before, became the new GIM Residency Program director. **Nabil Mitha**, a fourth-year GIM resident with a strong interest in EDI, also joined the team, recruited by Dr. Mudiayi.

A second literature review conducted by Drs. Mitha and Mudiayi focused on interviewing techniques in medical school to address racial and gender bias, and sociological aspects of intersectionality (the effects of many concurrent forms of discrimination on marginalized people). Their work resulted in the refinement of a second intervention tool, a “cheat sheet” that reviewers could use during the CaRMS interviews to reflect on the differences between their backgrounds and those of the candidates they were assessing. A third intervention tool, a mandatory session to discuss bias within the CaRMS interview process, was also developed.

While a post-CaRMS 2022 assessment by CaRMS reviewers showed little agreement on what interventions and methods should be used, there was general acknowledgement that EDI requires attention.

“I think it’s becoming very common and normal for any search and selection to require some form of EDI training, whether it is taking Harvard University’s Implicit Association Test, or attending EDI sessions, or having an EDI representative on the committee,” says Dr. Bridgland. “We need to keep refining our approach in terms of how we engage people, and identify what works and what doesn’t, but we hope to keep building on it.”

For 2023, the team plans to expand the project to include data from directors of several other University of Alberta residency programs on their approaches to EDI. The team also hopes to collaborate with the EDI lead for the Department of Medicine and with Post-graduate Medical Education (PGME) to develop workshops on a regular basis.

In January 2023, the team presented their work in a medicine grand round session for all Department of Medicine faculty and learners. Dr. Mudiayi says, “Having started the conversation with our project, I hope that in the future others can use what we have done and introduce EDI in a form that is backed by medical literature.”

“We wanted to start by raising awareness so that we could gain support and interest,” says Dr. Ringrose. “That way we can hold a mirror up and be aware of the way we approach admissions.”

Dr. Lindsay Bridgland is Associate Clinical Professor, Dr. Jennifer Ringrose is Associate Professor, and Dr. Dominic Mudiayi is Clinical Lecturer in the General Internal Medicine Division of the Department of Medicine. Dr. Nabil Mitha is a fourth-year GIM resident.



Andrew Mason

Hepatologist and researcher **Andy Mason** has been on the trail of a stealthy virus for more than two decades with tremendous success. But he's had a tough time convincing other scientists that it plays a role in human diseases.

The virus, called the human betaretrovirus, is very similar to a mouse retrovirus that causes breast cancer in mice discovered by **John Bittner** nearly one hundred years ago. In the 1970s, researchers found this same human betaretrovirus in breast milk of human patients with breast cancer. But because there weren't diagnostic assays at the time, debate raged about whether or not it was a real virus. When HIV exploded in the '80s, all attention was focused on that pathogen.

Research Illuminations

Viruses under the radar

In the late '90s, Dr. Mason discovered the retrovirus in primary biliary cholangitis (PBC), an autoimmune liver disease. "We showed that the virus made changes in cells in patients with PBC that caused the autoimmunity," he says.

Six months later, a paper was published highlighting the negative findings in his paper and refuting his claims. What was required, the authors said, was proof of viral integration—when viruses insert their genetic material into a human cell and the cell then produces more virus—in a substantial number of patients.

Dr. Mason went on to isolate the virus from humans, show viral integration, and characterize the same betaretrovirus infection in PBC mouse models with cholangitis. "This model was helpful in finding antiretroviral therapy that has helped PBC patients reverse the disease process," he says. He's also found the virus in a colitis mouse model developed by his lab neighbour **Dr. Karen Madsen**. In both cases, mice treated with antivirals got better, suggesting a central role for viral infection as a causative agent in the disease process. "We are now finding evidence of human betaretrovirus in patients with Crohn's disease."

"We've received a \$1 million grant to characterize the virus in breast cancer, lymphoma, and other solid organ cancers," says Dr. Mason. "Our main thrust is to make a reproducible diagnostic assay that shows that patients have viral infection that other researchers can use and validate." The interferon gamma release assay he has developed shows a positive test in about half of primary biliary cholangitis patients and in about 35 per cent of breast cancer patients. He's also working with rheumatologist **Dr. Mo Osman**, who has found the virus in a number of his systemic sclerosis patients.

"There's been a whole special issue of the journal *Viruses* that outlines the effects of the virus in breast cancer and in primary biliary cholangitis," says Dr. Mason. "So, there's beginning to be interest in this area now in the biologic press."

All the diseases Dr. Mason studies are increasing worldwide, and no one knows why. One of the explanations could be that there is an environmental component to them such as a virus. "Hopefully we can develop a commercial QuantiFERON assay with Qiagen to actually link human betaretrovirus infection with each disorder," says Dr. Mason. "That would be a great leap forward in understanding and treating these diseases."

Professor Andrew Mason is in the Department of Medicine's Division of Gastroenterology. He co-leads the Centre of Excellence for Gastrointestinal Inflammation and Immunity Research at the University of Alberta.

“ I didn't want just to know the names of things. I remember really wanting to know how it all worked.

*Elizabeth Blackburn, PhD
Winner of the 2009 Nobel Prize
for Physiology or Medicine*



Michelle Graham

Angiograms, percutaneous coronary intervention (stents), and other invasive cardiac procedures save lives, but they carry the risk of acute kidney injury (AKI) in up to 10 per cent of patients.

Injury occurs when the contrast dyes used overwhelm the kidney's filtration system. In cases where the injury is severe, patients can require lifelong medical care.

Research Illuminations

Implementation project

“The two best ways to mitigate AKI are to limit the contrast use and to give fluids to wash the contrast out,” says cardiologist and researcher Michelle Graham.

It sounds simple, and there are risk models to identify which patients are most likely to be harmed. But most cardiac centres do not have consistent processes in place to use risk models and to deploy prevention strategies once risk is identified.

Dr. Graham wanted to change that. Funded by the province, she teamed up with a colleague, nephrologist **Matthew James** at the University of Calgary, to lead a randomized clinical trial involving a multifaceted intervention aimed at preventing AKI in cardiac patients.

The first step was to tweak the risk models used to predict acute kidney injury so that they worked with Alberta’s population. This helped establish safe contrast levels for those patients at risk.

Then, Drs. Graham and James spent a lot of time in the province’s three catheterization labs just watching the process and flow of procedures. Their observations helped to inform the integration of the decision tool into care without creating additional work or disruption for staff.

The team mapped out a comprehensive education and communication approach to help implement the tool among 34 of the province’s invasive cardiologists and the entire catheterization lab team at the three cardiac sites. The implementation took time—two years from start to follow-up—and involved more than 7100 adult patients who had a risk greater than 5 per cent for AKI.

The researchers implemented the decision tool differently in each catheterization lab to fit into the different flows in each. “We had to get boots on the ground engagement,” says Dr. Graham. “We spent six months just getting all of that organized.”

Small groups of doctors were randomly assigned eight start dates to be introduced to the decision support tool by research leads in each lab. Once the cardiologists had been using the tool for three months, the researchers started audit and feedback sessions, which showed each doctor the numbers of patients they catheterized and the incidence of AKI among them, and where their results fit among everyone else.

By the time the trial concluded, the absolute risk reduction for AKI during the trial period had dropped by a statistically significant 2.3 per cent. The research team published several papers about their work, including a September 2022 publication in JAMA that was the subject of a laudatory editorial.

“It was an implementation project, and that requires so much engagement,” says Dr. Graham. “This is about the entire cardiac catheterization laboratory team, who are there every day and were dedicated to making this a success.”

Professor Michelle Graham is an interventional cardiologist and director of the Department of Medicine’s Division of Cardiology. She and Dr. James received a PRIHS grant from the Government of Alberta for their research.



L > R Dr. Larissa Albino, Dr. Kristin Milloy, Dr. Steven Katz, Doris Kurtz, Dr. Vivian Nguyen, Dr. Getanshu Malik
(Drs. Albino, Milloy, Nguyen and Malik are Core Internal Medicine Residents.)

Steven Katz

Soon after becoming Core Internal Medicine’s program director in 2018, **Steven Katz** saw that the program needed to prepare for the Royal College of Physicians and Surgeons of Canada’s mandatory Competency by Design standard, which was steamrolling towards him. “The first step was a review of the entire three-year clinical curriculum,” says Dr. Katz. “We called the review Vision 2020, and it led to a total strip down of the clinical curriculum.”

The next step was a summit held in 2019. That led to ten program recommendations, all implemented by July 2020. As it turned out, the timing was perfect. “We all know what happened in March 2020, and we were already struggling in terms of having enough residents to fulfill on-call needs,” Dr. Katz says.

Medical Education

Competency by design

The clinical changes to the program—increased emphasis on ambulatory rotations, for example—meant that residents were able to support staff who were all deployed on the COVID wards. “For us it was critical to be able to maintain the status quo in all the places where residents normally are,” says Dr. Katz.

When the program curriculum moved online during COVID, the in-person engagement between residents disappeared for about two years. “Normally you really grow up in the program with that group right from the get-go,” says Dr. Katz. “That resident engagement and resident leadership sets a culture for the program—that I’d say was my biggest worry with COVID.”

Thanks to the efforts of the program team and the residents, the program flourished. “I think, based on the statistics that we have, we probably led the country in terms of our matches,” says Dr. Katz. “And our pass rate was exceptional on the Royal College exams.” The program’s successes, Dr. Katz is quick to point out, are due to a large and dedicated team of administration, faculty, and residents, led by **Doris Kurtz**, the medical education lead for the Department of Medicine.

In January of 2023, Dr. Katz passed the leadership of the program to **Thirza Carpenter**. “I took over a fantastic program, I hope I left a really good program, and I know Dr. Carpenter will do an exceptional job,” says Dr. Katz. In April of 2023, he took on a new role as Division Director for Rheumatology.

“Being Core Internal Medicine Program director was a very positive experience,” he says. “You do it because of the residents and to make the changes that need to be made.”

Dr. Steven Katz is Professor (July 1, 2023) in and Director of the Department of Medicine’s Division of Rheumatology. He is an award-winning clinician, medical educator, researcher, and medical community leader.

“Better than a thousand days of diligent study is one day with a great teacher.

Japanese Proverb

Division Directors Department of Medicine

“

Keep in mind that whenever you are in a crisis, you are in the midst of danger as well as opportunity

*Adeline Yen Mah, MD
Author and founder of Falling Leaves Foundation*

DEPARTMENT OF MEDICINE

2022 DIVISIONAL LEADERSHIP



1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

- 1 **Michelle Graham**, Cardiology
- 2 **Robert Gniadecki**, Dermatology
- 3 **Jacques Romney**, Endocrinology & Metabolism (*Interim*)
- 4 **Daniel Baumgart**, Gastroenterology (*until October 2022*)
- 5 **Clarence Wong**, Gastroenterology (*as of November, 2022*)
- 6 **Raj Padwal**, General Internal Medicine (*Interim until September 2022*)
- 7 **Jennifer Ringrose**, General Internal Medicine (*as of October 2022*)
- 8 **Brian Wirzba**, Zone Section Chief, General Internal Medicine (*Interim*)
- 9 **Adrian Wagg**, Geriatric Medicine
- 10 **Joseph Brandwein**, Hematology
- 11 **Karen Doucette**, Infectious Diseases
- 12 **Branko Braam**, Nephrology
- 13 **Janis Miyasaki**, Neurology
- 14 **Ming Chan**, Physical Medicine & Rehabilitation (*Co-Interim until March 2022*)
- 15 **Nigel Ashworth**, Physical Medicine & Rehabilitation (*Co-Interim until June 2022*)
- 16 **Vivian Mushahwar** Physical Medicine & Rehabilitation (*Co-Interim as of November 2022*)
- 17 **Heather Lindstrom** Physical Medicine & Rehabilitation (*Co-Interim as of November 2022*)
- 18 **Sebastian Straube**, Preventive Medicine
- 19 **Giovanni Ferrara**, Pulmonary Medicine
- 20 **Jan Willem Cohen Tervaert**, Rheumatology

CARDIOLOGY



Director Michelle Graham

Cardiologists are seeing an increase in common heart issues such as blockages in the arteries that supply the heart, but they are also seeing fairly rare diseases that are now more common because of long COVID. One example is Postural Orthostatic Tachycardia Syndrome (POTS), which mainly affects women.

POTS causes fast heart rates and dizziness when the patient stands up, along with other debilitating symptoms. “We don’t have POTS specialists in Edmonton, but the good thing is that patients understand that treatment will be a bit of trial and error and a lot of patience,” says Division Director **Michelle Graham**. “They’re just so grateful that they are listened to and taken seriously.”

Dr. Graham is proud of the way division members have stepped up, shouldered extra work, and helped each other out in the past three years. She’s also delighted that two members have been recognized with prestigious awards for their academic achievements.

“**Colleen Norris**, who is an adjunct professor with Cardiology, was awarded the Carvazan Chair in Mature Women’s Health from the Alberta Women’s Health Foundation,” says Dr. Graham. “Dr. Norris is an incredible advocate for women’s cardiovascular health.” **Gopinath Sutendra** was awarded a Canada Research Chair in Cardio-Oncology and Molecular Medicine. “Dr. Sutendra’s work is illuminating the ways that cardiovascular health is impacted by cancer therapies and how those effects can be ameliorated,” says Dr. Graham.

While no new faculty joined in 2022, three people departed (**Ian Paterson**, **Bibiana Cujec** and **Lucille Lalonde**) and Dr. Graham is anticipating three new faculty members joining in 2023. Four new clinical lecturers also joined the division: **Debraj Das**, **Bradley Brochu**, **Hatem Linjawi**, and **Sanam Verma**.

Several division members contributed to important publications. “Reduction of Dietary Sodium to Less Than 100 mmol in Heart Failure (SODIUM-HF): An International, Open-label, Randomised, Controlled Trial” was published in *Lancet* by lead author **Justin Ezekowitz** and contributing authors **Wendinagegn Alemayehu** and **Finlay McAlister** (General Internal Medicine).

“Effect of Clinical Decision Support with Audit and Feedback on Prevention of Acute Kidney Injury in Patients Undergoing Coronary Angiography: A Randomized Clinical Trial” was published in *JAMA* by lead co-authors **Michelle Graham** and **Matthew James** (University of Calgary) and contributing authors **Benjamin Tyrrell**, **Scott Klarenbach**, and **Neesh Pannu** (Nephrology Division).

“RIM35-mediated Degradation of Nuclear PKM2 Destabilizes GATA4/6 and Induces P53 in Cardiomyocytes to Promote Heart Failure” was published in *Science Translational Medicine* by lead author **Gopinath Sutendra** and contributing authors **Evangelos Michelakis** and **Jason Dyck** (Pediatrics).

In addition to recruitment, Dr. Graham is planning quality metric initiatives for the division. She believes strongly that data needs to inform operational decisions. “We want to have people understand what their data are like,” says Dr. Graham. “Quality metrics show us what we’re really good at and where we could be better.”

Dr. Graham highlights the cardiac lead extraction program run by **Soori Sivakumaran** as a high-quality program that compares to any lead extraction program in the world. Sometimes patients with implanted pacemakers and defibrillators develop an infection or as the devices age, the wires, or leads, need to be removed. Replacing the old system with a new one is complicated and requires great skill. It also requires collaboration with colleagues, in this case, with **Wei Wang** from the Department of Surgery.

Residents 13

Fellows 7

Specialized & Multidisciplinary Clinics 12



InProfile

CARDIOLOGY

JANEK SENARATNE



Janek Senaratne is a cardiologist and intensivist who works at the University of Alberta Hospital and Grey Nuns Hospital and is a Vital Heart Response physician for Alberta Health Services. Dr. Senaratne is an associate clinical professor, Critical Care Cardiology Fellowship Program director, and Cardiology Residency Associate Program director. He is also director of Simulation for Critical Care Medicine, which provides interdisciplinary, full-team, in-situ simulation of complex cases in the Cardiac Intensive Care Unit, General Systems Intensive Care Unit, and Cardiac Catheterization Laboratory. He is principal investigator on more than a dozen clinical trials, and mentors students, residents, and fellows.

KENNETH QUADROS



An international medical graduate, Clinical Lecturer Kenneth Quadros joined the Division of Cardiology in 2020 after completing a cardiac electrophysiology (EP) fellowship at Harvard Medical School. In his fellowship, Dr. Quadros trained in all facets of EP with a focus on complex ablation of cardiac arrhythmias, specifically ventricular tachycardia (VT). At the University of Alberta, he has been developing the VT ablation program, which helps alleviate life-threatening VT episodes in patients, many of whom have advanced heart disease. Dr. Quadros finds the collegiality, expertise, teamwork, and access to cutting edge technology at Mazankowski Alberta Heart Institute tremendous assets in his work.

DERMATOLOGY



Director **Robert Gniadecki**

“We had a banner year in terms of science with 29 papers published,” says Division Director **Robert Gniadecki**. A long-term research collaboration with **Mo Osman** from the Division of Rheumatology has resulted in a new understanding of scleroderma, a rare autoimmune disease, and a top publication in 2022. The duo has received funding to continue their work.

Dr. Gniadecki and **Dr. Osman** were lead co-authors on “Genomic Instability in Early Systemic Sclerosis” in the *Journal of Autoimmunity*, with contributing authors **Aishwarya Iyer**, **Dylan Hennessey**, and **Sandra O’Keefe** from the Division of Dermatology, and **Desiree Redmond** and **Jan Willem Cohen Tervaert** from the Division of Rheumatology.

Other aspects of 2022 were trying. “We lost key people in administration and there’s general ongoing exhaustion from the delayed care effects of COVID,” he says. “There’s also a decrease in numbers of residents pursuing academic medicine, although research is mandated in the speciality program.”

Dr. Gniadecki highlights the importance of research with the example of **Aishwarya Iyer**, one of his former post-doctoral fellows, who has been hired as a senior scientist with Juniper Genomics in Ontario. “You often hear that by training PhDs, we’re not preparing them for proper work,” he says. “Aishwarya’s move into industry shows how relevant research is in today’s economy and how well we’ve prepared her for success.”

Two other publications also demonstrate the division’s research strengths. **Dr. Gniadecki** was lead author, and **Mr. Hennessey**, **Dr. Iyer**, **Ms. O’Keefe**, **Maggie Xiao**, and **Arunima Sivanand** were contributing authors of “Transcriptomic Changes during Stage Progression of Mycosis Fungoides” in the *British Journal of Dermatology*. **Drs. Iyer** and **Gniadecki** and **Mr. Hennessey** co-authored “Clonotype Pattern in T-cell Lymphomas Map the Cell of Origin to Immature Lymphoid Precursors” in *Blood Advances*.

One of the outcomes of the past year is a renewed focus on priorities for division members. “Academic medicine has three pillars: teaching, research and patient care,” he says. “We’re prioritizing that, in the face of uncertainty, excellent patient care for people who can’t get care elsewhere is of great value and importance to us.”

He points out that for most of the past two years, the Division’s clinics remained in-person though with the strictest precautions, in part because of the nature of dermatological disorders and also because clinic dermatologists are not as restricted in terms of time.

Looking ahead to 2023, **Dr. Gniadecki** is hiring two new people with PhDs from China to join his lab. The Division is also looking to recruit an academic dermatologist.

Graduate Students 2

Post-graduate trainees 2

Residents 11

Specialized Clinics 8



InProfile

DERMATOLOGY

DYLAN HENNESSEY



Bioinformatician and IT expert Dylan Hennessey safeguards the private computer cluster in Dr. Robert Gniadecki's lab. The translational research lab investigates the development and immunology of skin cancers as well as experimental therapies for skin T-cell lymphomas. In 2022, Dylan implemented a program called Physicell to help model how the immune system impacts the growth of tumors. The resulting simulations were able to reproduce cellular patterns resembling mycosis fungoides lesions. The team also did spatial transcriptomics of actual mycosis fungoides biopsies, which allow them to see how different cell types are distributed in an actual tumor.

MARLENE DYTOC



Clinical Professor of Medicine Marlene Dytoc has pioneered care for complex and often hard to treat dermatological conditions. She founded and leads the Occupational and Hand Eczema, Vulvar Dermatology, and Psychodermatology Clinics at the Kaye Edmonton Clinic and the Lois Hole Women's Hospital. Dr. Dytoc has led clinical trials to identify successful empathic interventions applicable to doctors and patients receiving care, resulting in an "empathy kit." She is Dermatology's Deputy Zone Chief and Undergraduate Medical Education Director, the Dermatology Lead for Quality Improvement, and the Provincial Lead for Dermatology in Connect Care, and she serves on the Dermatology residency program committee.

ENDOCRINOLOGY & METABOLISM



Interim Director **Jacques Romney**

“We’re slowly coming back to doing more ambulatory in-person patient assessment, although virtual medicine will continue, especially for out-of-town patients,” says Interim Division Director **Jacques Romney**. “Everyone is rebounding after the past three years, figuring out how they best want to use clinic space and perhaps do things a bit differently.”

Just as division members were returning to in-person work in mid-2022, a flood in the Clinical Science Building necessitated half of them vacating their offices for the latter half of the year, and so many continued working from home rather than returning to the office.

“Given the past few years, the big positive with our group has been the adaptability of people to virtual care, to covering for each other’s clinical practice, to finding creative ways to deliver excellent training and care,” says Dr. Romney.

The division welcomed new members **Sola Mansour** (locum) and **Hanna Slabu** (Clinical Lecturer). Division member **Richard Lewanczuk** retired from clinical medicine after a distinguished career.

The University of Alberta’s 2021 COVID-19 Remote Teaching Award was won by MED 513, led by **Elizabeth Rosolowsky** in the Department of Pediatrics, and a team comprising discovery learning preceptors, program administrators, and the assessment support team in the Faculty of Medicine and Dentistry. **Dr. Rosolowsky** was the co-creator, along with **Drs. Romney, Tammy McNab** and **Andrea Opgenorth**, of the virtual *Endocrinologists in Cars Getting Coffee*, a favourite of first-year medical students doing Endocrine Block.

Several division members had important publications in 2022. **Anna Lam** was lead author and **Tolu Olateju** and **Peter Senior** co-authors on “Estimation of Early Graft Function Using the BETA-2 Score Following Clinical Islet Transplantation” in *Transplant International*.

Laurie Mereu, Albert Vu, and Mahua Ghosh from the Division of Endocrinology and Metabolism were contributing authors and **Tianqui Wang** from the General Internal Medicine Division was lead author on “Malignant Insulinoma in a Patient with Hypoglycemia” in the *Canadian Medical Association Journal*.

Dr. Senior was a contributing author on “Enhancing Diabetes Surveillance Across Alberta by Adding Laboratory and Pharmacy Data to the National Diabetes Surveillance System Methods” in the *Canadian Journal of Diabetes*.

Dr. Romney’s term as Interim Divisional Director finishes on April 30, 2023, as the Division welcomes **Terra Arnason** into the role. “It’s in a way a homecoming as Dr. Arnason did her Endocrinology Fellowship and then returned to the University of Saskatchewan,” Dr. Romney says. “Dr. Arnason coming on board gives us the opportunity to think about the goals of the division and future recruitment.”

Dr. Romney will still be busy as he’s taken over as Associate Chair Finance for the Department of Medicine. “The division director position was actually fun and rewarding, although it is a lot of work,” he says. “I enjoy administration and am looking forward to shifting gears.”

Residents 4

Multidisciplinary Clinics 1

Specialized Clinics 3



InProfile

ENDOCRINOLOGY & METABOLISM

DONALD MORRISH



Professor Donald Morrish is an endocrinologist with a special interest in thyroid cancer and neuroendocrine tumours. He currently specializes in general endocrinology and neuroendocrine tumours. He is endocrine tumour group leader at the Cross Cancer Institute and neuroendocrine tumour group lead for the Provincial Endocrine Tumour Group. He is principal investigator in the trial of 177-Lu DOTATATE for treatment of metastatic neuroendocrine tumours.

ROSE YEUNG



Associate Professor Rose Yeung is an academic endocrinologist, Senior Medical Director with the University of Alberta's Office of Lifelong Learning/Physician Learning Program, an Implementation Hub, and member of the Alberta Diabetes Institute. While her clinical and research work focuses on diabetes care, Dr. Yeung also broadly supports the Physician Learning Program's mission to create information that physicians can act on, and to engage with physicians, teams, patients, and partners to co-create sustainable solutions to advance practice. Through her collaborations, she is co-creating educational programs and interventions to address care gaps and to support healthcare quality improvement across the care continuum.

GASTROENTEROLOGY



Director Clarence Wong

“What really stood out for me in 2022 is the amount of academic productivity of our group given the intense clinical service we’ve given,” says Division Director **Clarence Wong**, who was section chief for two years prior to taking on the division leadership in November 2022.

Achievements of division members have led to Edmonton’s standing as a centre for liver transplantation. In 2022, the program performed the most transplants to date. The Gastroenterology and Hepatology group was ranked #3 in Canada by US News.

The Division’s involvement in international clinical trials for inflammatory bowel disease and collaborations with industry give patients access to new treatments. Other areas of strength noted by Dr. Wong are the robust trainee complement, research, and transplantation.

“We work closely with primary care, and in 2023 we’re launching a single portal for gastroenterology referrals,” says Dr. Wong. “That’s huge, because right now we get roughly 2000 referrals a month.” All new referrals from primary care physicians will go through the portal once it goes live in 2023. “It’s going to streamline people according to their need,” he says. “It will triage patients, help with wait lists, and help us focus on the people who need us most.”

Assistant Professor and oncology hepatologist **Carlos Moctezuma Velasquez** joined the division in 2022. **Daniel Baumgart** and **Klaus Gutfreund** left the division.

Several division members won awards and honours. **Leah Gramlich** became a fellow of the International Union of Nutrition Sciences; **Frank Hoentjen** won Best Abstract Award from United European Gastroenterology; **Karen Kroeker** was given the Resident Appreciation Award for Excellence and Support as program director for the division; and **Juan Abraldes** was named the 2022 Alberta Society of Gastroenterology Distinguished Researcher Awardee.

The Canadian Association for Medical Education Certificate of Merit award and the Teacher of the Year Award for the division were awarded to **Adriana Lazarescu**; **Aldo**

Montano-Loza won the Research Excellence Award, Canadian Association for Study of the Liver; and **Clarence Wong** was inducted as a Fellow of the American Society of Gastrointestinal Endoscopy and won the Distinguished Educator Award, Alberta Society of Gastroenterology.

Notable publications by division members include “Clinical and Mechanistic Insight into the Beneficial Effects of Fecal Microbiota Transplantation in Recurrent Clostridioides Difficile Infection” in *Cell Host and Microbe* by lead author **Dina Kao** and contributing author **Karen Wong**; “Risk Factors and Outcomes Associated with Recurrent Autoimmune Hepatitis Following Liver Transplantation” in *Journal of Hepatology* by lead author **Aldo Montano-Loza**; and “Quality of Surveillance Impacts the Colitis-associated Advanced Neoplasia Risk: A Multicenter Case-control Study” in *Clinical Gastroenterology and Hepatology* by lead author **Frank Hoentjen**.

For 2023, **Dr. Wong** has revised the academic and clinical governance for the citywide division, integrating clinical care throughout the zone. Several large projects are underway, including ambulatory plans for the Cirrhosis, Inflammatory Bowel Disease, and Small Bowel Programs, intended to further integrate clinical and academic needs for all gastroenterologists in the Edmonton area.

“My vision is that we’re going to be a centre that focuses on excellence in terms of clinical and on translational basic science research,” Dr. Wong says. “We are one of the few centres that has a link from basic labs to a large patient volume.”

Graduate students 14

Residents 6

Clinical fellows 7

Multidisciplinary clinics 10



InProfile

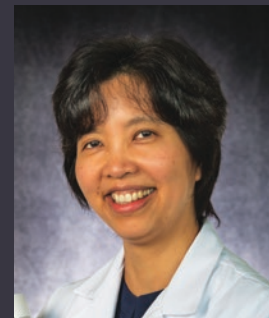
GASTROENTEROLOGY

LANA BISTRITZ



Gastroenterologist, Associate Professor, and Assistant Dean, Curriculum Lana Bistriz works with a cross-divisional team to ensure the MD program curriculum is at the forefront of medical schools nationally. In 2022, the medical school went through accreditation by the Committee on Accreditation of Canadian Medical Schools, with the final report and recommendations for continuous quality improvement forthcoming. One recent update to the MD program curriculum is a component on Indigenous Health, designed and taught by representatives of the Indigenous Health Initiatives Program, in keeping with Truth and Reconciliation calls to action.

DINA KAO



Professor Dina Kao established the Edmonton Fecal Microbiota Transplantation (FMT) program in 2012 to treat recurrent *C. difficile* infection (rCDI). Dr. Kao's research on FMT's role in the gut biome and in rCDI has received Canadian Institutes of Health Research (CIHR) funding. One CIHR project looks at the viability of using fecal filtrate without live bacteria in transplantation; another studies the use of FMT in patients with an initial episode of *C. difficile* infection to reduce antibiotic resistance genes and organisms. Her international research collaborations show that there are systemic immune responses that can modulate gene expression and have therapeutic potential.

GENERAL INTERNAL MEDICINE



Director Jennifer Ringrose

Jennifer Ringrose took on the Director role in October 2022 with an eye on moving the division into a new post-COVID era.

At every hospital site during the pandemic, General Internal Medicine (GIM) expanded their clinical teams, expecting that as COVID numbers lessened, so would the need for these additional services. “What we’ve found is that there hasn’t been a decline in the overall need for general internal medicine or any of the medicine sub-specialties,” Dr. Ringrose says.

Dr. Ringrose and her division colleagues recognized that creative solutions will be needed to deal with the new reality for GIM. “I’m really excited and grateful that the Department of Medicine is supporting a GIM retreat in May of 2023, the first in a decade,” she says. “We’re going to co-create a path forward for GIM and reimagine and refocus clinical general internal medicine.”

Other good news in the division was the recruitment and appointment of new clinical lecturers: **Graham Mah, Epsita Shome-Vasanthan, and Antonia Barnes** at the Grey Nuns Hospital; **Schwan Mohydeen, Mostafa Kamaleldin, Mena Rashed, Hamam Abuoun, Mamdouh Yousef, and Kevin Wilson** at the Misericordia Community Hospital; **Rena Bedaba and Meagan Lyszczyk** at the Royal Alexandra Hospital; and **Kelvin Tran, Dominic Mudiayi, and Mitchell Rohatensky** at the University of Alberta Hospital.

Two division members, **Enenajor Gilbert** and **Reena Maraj**, retired in 2022.

Several division members received honours and awards. **Vijay Daniels** is the first Department of Medicine member to win a 3M Teaching Award, Canada’s most prestigious education award. **Cheryl Goldstein** was given the GOAT (greatest of all time) award by the Alberta Medical Association Digest. **Monty Ghosh** was the student speaker at Harvard’s School of Public Health and EZMSA Physician Innovator of the Year. **Dr. Ghosh** was also awarded the Jon Meddings Clinical Innovation Award and the Royal College Award for Early Career Leadership.

Ross Mitchell was awarded a Canadian Institute for Advanced Research Artificial Intelligence Chair and was issued a patent. **Peter Hwang** also was issued a provisional patent for a new drug. **Darren Lau** was awarded a \$1.4 million PRIHS Grant to work with First Nations populations in the province to improve the delivery of diabetes care.

Notable publications by division members include “Epidemiology of Resistant Hypertension in Canada” in *Canadian Journal of Cardiology* by **Raj Padwal** as lead author. **Dr. Padwal** was also the lead author and **Drs. Lau, Ringrose, McAlister, and Klarenbach** co-authors on “Telemonitoring and Protocolized Case Management for Hypertensive Community Dwelling Older Adults (TECHNOMED): A Randomized Controlled Trial” in *Journal of Hypertension*. **Dr. Mitchell** was a co-author on “Federated Learning Enables Big Data for Rare Cancer Boundary Detection” in *Nature Communications*.

Clinical innovations include the Active Mind, Active Body Program founded by **Dr. Winnie Sia**, medical students **Iain Sander** and **Elena Spronk**, and the physiotherapy and occupational therapy teams at the Royal Alexandra Hospital. This program involves medical student volunteer visits with patients to engage in social, cognitive, and mobility activities.

Other initiatives in 2023 include recruitment and the resumption of clinical rounds and educational events. “We’ve restarted our journal club and our quality assurance rounds, and in May we’ll be re-starting division-wide complex care rounds,” says Dr. Ringrose.

Students 147

Graduate students 6

GIM Subspecialty Residents 14

Specialized clinics 6



InProfile

GENERAL INTERNAL MEDICINE

MONTY GHOSH



Assistant Professor, Internist, and Addictions Specialist Monty Ghosh works at the University of Alberta Hospital, as well as the Foothills and Rockyview Hospitals in Calgary, doing Addiction Medicine. As medical co-lead for the AHS Rapid Access Addiction Medicine Program, Dr. Ghosh is expanding addictions treatment into rural communities. He works with community organizations, developing programs to support people living with substance use and experiencing homelessness. His current focus is virtual harm reduction, wastewater substance surveillance, and establishing respite care for those experiencing homelessness. He is co-chair of the Canadian Network for the Health and Housing of People Experiencing Homelessness.

DARREN LAU



Assistant Professor and diabetes specialist Darren Lau conducts research using large databases to answer questions about the outcomes of medical care in adults with diabetes. Dr. Lau recently received a \$1.4 million Partnership for Research and Innovation in the Health System grant from Alberta Innovates to advance his work in improving diabetes care in Alberta's First Nations communities. The grant supports the LINK intervention, a partnership between Dr. Lau and other University of Alberta researchers and Okaki (Calgary, AB), a provider of technology-based health solutions. LINK will provide care coordination and diabetes care virtually to First Nations communities.

GERIATRIC MEDICINE



Director **Adrian Wagg**

“We were delighted to welcome Associate Clinical Professor **Joyce Lee** and Assistant Professor **Paula Horsley** to our division in 2022,” says Division Director **Adrian Wagg**. “**Dr. Lee** will lead our Parkinson’s disease service, and **Dr. Horsley** is lead for perioperative care, both of which are priorities for 2023.”

Dr. Lee has taken over the Parkinson and Movement Disorders Clinic in the Kaye Edmonton Clinic, where she worked previously with **Janice Miyasaki**, now Division Director of Neurology.

Dr. Wagg said it was the success of the EASE program (postoperative older adult consultation service) that laid the foundation for Dr. Horsley’s recruitment. Several years ago, Dr. Wagg collaborated with **Rachel Khadaroo** in the Department of Surgery to develop the EASE program. “Compared to younger people, older adults don’t do well following invasive surgery, but there are steps that can be taken to improve outcomes,” he says. “We saw tangible, measurable benefits of providing geriatrician care following acute surgery.”

Dr. Horsley is taking on the academic lead at the University of Alberta Hospital to provide perioperative care and to optimize outcomes for older adult patients. Her colleague **Naheed Rajabali** will lead perioperative care services at the Royal Alexandra Hospital.

The effects of the pandemic on older adults mirrors what has been seen in younger patients: people waiting to seek care until they are acutely ill. “Our remote and rural clinics have been overwhelmed and continue to be overwhelmed with acutely ill older people,” Dr. Wagg says. In Edmonton, trying to discharge patients into community care and services has proven challenging. “There’s a huge staffing crisis across the entire sector,” he says.

Several awards and honours were given to division members. **Dr. Wagg** was awarded a Faculty of Medicine & Dentistry Tier 1 Mentorship Award and named a top reviewer by the journal *Contenance*.

He and **Angela Juby** were elected to the fellowship of the Canadian Geriatric Society. **Darryl Rolfson** successfully led the medical school through its accreditation with the Royal College of Physicians & Surgeons of Canada, and **Aatif Hussain** did the same for the Geriatric Medicine Postgraduate Education program. **Ashif Rahman** took over as Undergraduate Medical Education Coordinator.

Highlighted publications by division members include “Changes in Urinary Continence After Admission to a Complex Care Setting: A Multistate Transition Model” in *Journal of the American Medical Directors Association* by lead author **Dr. Wagg**; “What Are the Chances of Improvement or Cure from Overactive Bladder? A Pooled Responder Analysis of Efficacy and Treatment Emergent Adverse Events Following Treatment with Fesoterodine” in *Neurology and Urodynamics* by lead author **Dr. Wagg**; and “Use of Medium Chain Triglyceride (MCT) Oil in Subjects with Alzheimer’s Disease: A Randomized, Double-blind, Placebo-controlled, Crossover study, with an Open-label Extension” in *Alzheimer’s and Dementia* by lead author **Dr. Juby**.

Recruitment of more clinical staff is a goal for Dr. Wagg in 2023. “We are building out our specialized clinical geriatric services to really expand the provision of comprehensive internal medicine care by filling positions with clinical ARP physicians,” he says.

Graduate Students 9

Post-doctoral Fellows: 1

Specialized/Multidisciplinary Clinics 9



InProfile

GERIATRIC MEDICINE

JOYCE LEE



After founding Canada's first Geriatric Parkinson's Program in Toronto, Associate Clinical Professor Joyce Lee was appointed co-director of the Parkinson Foundation Center of Excellence at the University of Alberta (U of A) in 2022. Dr. Lee's passion for helping primary care providers, especially those in rural Alberta, offer high-quality Parkinson's care is demonstrated by the many initiatives she has created. These include a Geriatrics Assessment Program within the Kaye Edmonton Clinic's Parkinson and Movement Disorder Program, an educational series on Parkinson Disease in Canadian Family Physician, and an upcoming Parkinson's care course for the Department of Family Medicine at the U of A.

FIONA LAWSON



After completing her medical degree at the University of Glasgow, an Internal Medicine residency at the University of Alberta, and training in Geriatric Medicine at the Universities of Alberta and Ottawa, Dr. Fiona Lawson joined the Department of Medicine in 1999. Dr. Lawson was the program director for Geriatric Medicine from 2007 to 2019 and was awarded the Canadian Association of Medical Education Certificate of Merit in 2019. She teaches undergraduate and postgraduate learners and provides clinical service in outpatient clinics and the UAH inpatient Geriatric consult service 48 weeks per year. In 2022, she was promoted to Clinical Professor.

HEMATOLOGY



Director **Joseph Brandwein**

“We are the only leukemia centre in the entire northern part of Alberta,” says Division Director **Joseph Brandwein**. “While COVID had an impact on us as it had on every sub-specialty, we continued to treat patients as we had before the pandemic. Because UAH has been so overcrowded, getting these urgent acute leukemia patients admitted in a timely manner has been problematic,” he says.

Hematology members, as with all Department of Medicine members, were under stress because of having to provide backup and fill in on COVID rosters on wards. “I think our team really pulled together and pitched in to help,” says Dr. Brandwein. “However, the patient load in hospitals has not let up at all, and the whole system remains under stress.”

Academic and trainee accomplishments hit some high notes in 2022. A hematology resident, **Jennifer Croden**, was a first author, **Haowei Linda Sun** a senior author, and **Minakshi Taparia** a contributing author on “Incidence of Bleeding and Thromboembolism and Impact on Overall Survival in *Adult Patients with Hemophagocytic Lymphohistiocytosis: A 20-year Provincial Retrospective Cohort Study*,” published in the prestigious *Journal of Thrombosis and Haemostasis*. Other notable publications include “Frequency and Utility of Bone Marrow Examination in Relapsed/refractory Immune Thrombocytopenia” in *Journal of Thrombosis and Haemostasis* by **Dr. Sun** as senior author and **Erika Wall** co-author; and “Treatment Patterns and Outcomes of Second-line Rituximab and Thrombopoietin Receptor Agonists in Adult Immune Thrombocytopenia: A Canadian Retrospective Cohort Study” in *Thrombosis Research* by **Dr. Sun** as senior author and **Drs. Wall, Jeff Patterson**, and **Lauren Bolster** as co-authors.

Awards won by division members include **Dr. Patterson** being nominated as Teacher of the Year by the residents. Several trainees won awards, including **Dr. Croden**, named winner of the *Journal of Thrombosis and Haemostasis* Editor’s Award for the top 10 papers by early

career investigators. Graduate students **Justine Lai** won for best oral presentation, and **Parnian Alavi** won for best poster presentation at the Department of Medicine’s Research Day.

The Division welcomed a new clinical lecturer in 2022, **Monika Oliver**. Dr. Oliver has done additional fellowship training in complement-mediated disorders and apheresis, and brings new expertise in these areas to the Division.

In 2023 Dr. Brandwein has several goals, starting with further recruitment to compensate for retirements and departures. A second goal is to enhance the role of Cancer Care. While the division runs the acute leukemia centre at the University of Alberta Hospital, it is not part of the provincial cancer care system. “One of our goals is to have Cancer Care Alberta provide support for our inpatient hematology unit,” he says. “It’s been a missing piece just because these patients were not physically located within a cancer centre.”

Under the leadership of **Bruce Ritchie**, the development of a zone-wide integrated venous thromboembolism ambulatory program is underway. Also in the planning stages is the activation of an extracorporeal photopheresis (ECP) treatment program in Edmonton to treat patients with hematologic and immunologic disorders, as well as people with graft versus host disease after transplantation.

Graduate Students 5

Residents 4

Specialized Clinics 9



InProfile

HEMATOLOGY

MARLENE HAMILTON



Faculty Service Officer and Assistant Teaching Professor Marlene Hamilton has been the program director for Hematology residency training since 2003. In 2022, Dr. Hamilton successfully led the transition of the program to the Competence by Design (CBD) format. Under her leadership, the program has maintained full accreditation status with the Royal College of Physicians and Surgeons of Canada. Dr. Hamilton is lead hematologist for the Continuity Care clinic resident rotation and has supervised seven residents over the years, four of whom work as staff hematologists in Edmonton. Dr. Hamilton serves on the Hematopathology and the Pediatric Hematology Training programs as a Residency Program Committee member.

MONIKA OLIVER



Clinical Lecturer and staff hematologist Monika Oliver's clinical interests include thrombotic microangiopathies and complement mediated disorders, with a particular emphasis on paroxysmal nocturnal hemoglobinuria (PNH). Dr. Oliver also has a keen interest in the area of apheresis with a focus on quality improvement. She was the 2021 recipient of the Marshall Eliuk Fellowship Award in Hematology, which she used to complete a clinical fellowship in complement disorders and apheresis at the University Health Network in Toronto. In 2022 she completed a preceptorship in PNH in the UK. She has a cross-appointment as Apheresis co-lead at the University of Alberta Hospital.

INFECTIOUS DISEASES



Director Karen Doucette

One of Division Director **Karen Doucette's** goals in 2022 was to establish an Edmonton Zone central triage for ambulatory referrals to Infectious Diseases. Most of the work occurred in 2022, with rollout beginning in 2023. "This shortens waiting times overall, equalizes them across specialty providers, simplifies the referral process for primary care providers, and distributes the workload across the zone," says Dr. Doucette.

Workload is something the division felt acutely in 2022 due to a manpower shortage, which added to the strain of COVID care demands. "We saw the impact of deferred care, with patients presenting with advanced and complicated conditions such as endocarditis, a heart valve infection, and other conditions that we haven't typically seen in such an advanced stage in years," says Dr. Doucette.

Focus on process improvement initiatives helped streamline and share patient care in the division's three provincial HIV clinics through the Rapid Start program. The Rapid Start program gets newly diagnosed patients an appointment with an infectious disease specialist within seven days. Antiretroviral therapy is started immediately, which has been shown to result in long-term adherence and improved outcomes.

Lynora Saxinger was awarded the Queen's Platinum Jubilee medal and **Joel Dacks** the 2022 University of Alberta Award for Outstanding Mentorship in Undergraduate Research & Creative Activities (Established Researcher Category).

Outstanding publications by division members include "Vancomycin-resistant Enterococcus Sequence Type 1478 Spread across Hospitals Participating in the Canadian Nosocomial Infection Surveillance Program from 2013 to 2018" in *Infection Control & Hospital Epidemiology* by lead author **Stephanie Smith**; "Prospective Population-level Validation of the Abbott ID NOW Severe Acute Respiratory Syndrome Coronavirus 2 Device Implemented in Multiple Settings for Testing Asymptomatic and Symptomatic Individuals" in *Clinical Microbiology and Infection* by first author

William Stokes; and "Retrospective Cohort Study Examining the Correlates of Reported Lifetime Stimulant Use in Persons Diagnosed With Infectious Syphilis in Alberta, Canada, 2018 to 2019" in *Sexually Transmitted Diseases* by lead author **Ameeta Singh**.

In addition to central triage, the division is launching two other initiatives in 2023. The PRIHS-funded OPTIMUS SAB project will establish a provincial protocol for rapid, multidisciplinary treatment once a blood culture is positive and identifies *Staphylococcus aureus* bacteraemia (SAB).

The second project is a clinic to treat nontuberculosis mycobacteria, which cause stubborn infections that are complex to treat. "This specialized clinic requires multidisciplinary support, including pharmacists, nurse case managers, and physicians specializing in this field to optimize the multidrug therapy, manage adverse effects, and provide monitoring to support patients," says Dr. Doucette.

Recruitment priority areas include transplantation/immunocompromised host ID, sexually transmitted infections, and clinical trials design. "The highlight of 2022 is that we all came through it, and we now have some renewed energy," says Dr. Doucette. "There is enthusiasm to capitalize on opportunities that arise and utilize our clinical data for program quality improvement."

Graduate students 6

Residents 4

Multidisciplinary/Specialized Clinics 4



InProfile

INFECTIOUS DISEASES

CONAR O'NEIL



Associate Clinical Professor Conar O'Neil cares for patients at the Misericordia, University of Alberta, and Royal Alexandra Hospitals. Dr. O'Neil's outpatient practice, which includes the Northwest Territories and Corrections Services Canada, focuses on HIV and viral hepatitis. He is co-medical director of Covenant Health infection prevention and control and is quality improvement lead for the Hepatitis Support Program. Dr. O'Neil's clinical research includes trials on COVID-19 and chronic hepatitis B. He was a site principal investigator for the World Health Organization SOLIDARITY trial for COVID-19. Results of this study have been published in the *New England Journal of Medicine*, *The Lancet*, and *CMAJ*.

DIMA KABBANI



Assistant Professor Dima Kabbani has been the transplant infectious disease (TID) fellowship educational lead since 2020. The fellowship has attracted trainees from around the world, many of whom take on academic careers in TID after graduation. She was co-principal investigator on a PHAC-funded grant in 2022 evaluating COVID vaccine efficacy in solid organ transplant (SOT) recipients. The study, involving more than 500 SOT, showed that four vaccines increased immunogenicity and protected against severe disease, even with new Omicron variants. Dr. Kabbani is a member of the Canadian Society of Transplantation TID committee and drafted COVID and monkeypox consensus guidance in SOT.

NEPHROLOGY



Director **Branko Braam**

“Our biggest achievement in 2022 was the number of kidney transplants performed by our multidisciplinary team,” says Division Director **Branko Braam**. “We transplanted 140 patients, an increase of 35 per cent from the previous year, and this was achieved without an increase of our team members.”

“That increase means an extra 35 per cent in all aspects of transplantation—in workups, in follow-ups, for everyone on the team,” says Dr. Braam. The 140 patients represent about 8 per cent of the 1500 patients in the dialysis program. Dr. Braam rejoined the transplant team in 2023. “It’s humbling to see everyone making everything work at this enormous pace,” he says.

The division welcomed two nephrologists, **Lavanya Bathini** and **Mark McIsaac**, who joined the team to help with all the extra work.

Several division members are in the spotlight for their achievements in 2022. **Aminu Bello** was made a Fellow of the International Society of Nephrology, granted to nephrologists who have demonstrated outstanding professional accomplishments in research, service, teaching, or through their other contributions to the specialty of nephrology around the world.

Dr. Bathini was lead author of “Initiation Dose of Allopurinol and the Risk of Severe Cutaneous Reactions in Older Adults With CKD: A Population-Based Cohort Study,” published in the *American Journal of Kidney Diseases*. She also received a Canadian Institutes of Health Research operating grant for a study called “Effect of Pregnancy on Long-term Kidney Function in Women with Chronic Kidney Disease.” **Dr. Bathini** also received the Alberta Graduate Excellence Scholarship.

Emily Christie and **David Collister** were authors on “Sexual Orientation and Gender Identity in Organ and Tissue Donation and Transplantation” in *Nature Reviews Nephrology*.

Notable publications by division members include “Epidemiology of Peritoneal Dialysis Outcomes” in *Nature Reviews Nephrology* with lead author **Aminu Bello** and co-authors **Ikechi Okpechi**, **Mohamed Osman**, and **Nikhil Shah**; “Effect of Clinical Decision

Support with Audit and Feedback on Prevention of Acute Kidney Injury in Patients Undergoing Coronary Angiography: A Randomized Clinical Trial” in *JAMA* with lead co-author **Michelle Graham** (Cardiology) and co-authors **Neesh Pannu**, **Scott Klarenbach**, and **Benjamin Tyrrell** (Cardiology); “The Effects of Plasma Exchange in Patients with ANCA-associated vVasculitis: An Updated Systematic Review and Meta-analysis” in *BMJ* with co-author **David Collister**.

Dr. Braam notes that delayed care, late referrals, and scarcity of primary care mean that greater numbers of patients come into the hospital with end-stage kidney disease, needing immediate dialysis. “There’s a lot of pressure on the job, and trying to keep that separate from other aspects of life is really challenging,” he says. “People are so preoccupied with work and with three years of working in isolation, that it’s proving to be slow going to reengage in person.”

The division is planning a research retreat in 2023 to look at all aspects of research: new approaches to research training and collaborative research, greater visibility, recruitment in core areas, financial planning, and clinical trials. “The great thing is that members are really receptive and want things to start moving again,” says Dr. Braam.

Other plans for 2023 include the full rollout of the Most Responsible Physician Model for hemodialysis in the Edmonton Zone, where instead of having physicians on rotating shifts, each patient is assigned one doctor for their care. Dr. Braam has also instituted a quality improvement initiative that tasks the nephrology leads to perform SWOT analysis on their areas. “The data will help us see where gaps are and where we can formulate efficiencies,” says Dr. Braam.

Graduate Students 10
Residents 6
Specialized Clinics 4



InProfile

NEPHROLOGY

SITA GOURISHANKAR



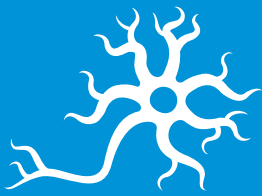
Professor Sita Gourishankar is medical director of the Renal Transplant Program, director of the Living Donor Kidney Program, and co-director of the Kidney Transplant Fellowship training program. In 2022, the success of the transplant program translated into 140 kidney transplants, a record program high that is equivalent to several dialysis units. Dr. Gourishankar points out that the success of the program is due to a multidisciplinary team effort that ensures every patient receives the highest quality care. In addition to her program leadership, Dr. Gourishankar maintains a busy clinical practice in general nephrology and kidney transplantation.

SCOTT KLARENBACH



Professor Scott Klarenbach combines his two passions, kidney care and health economics, in many leadership roles, including Kidney Health Research chair, Canadian Task Force on Preventive Health vice-chair, and Real World Evidence Consortium director. He also co-chaired Alberta Health Services' COVID-19 Scientific Advisory Committee. Dr. Klarenbach aims to use data and evidence to inform health decision-making in clinical and policy areas. His success was amply demonstrated in 2022 when he received the Queen Elizabeth II Platinum Jubilee Medal in recognition of his contributions to clinical practice and health policy that have helped inform the health system.

NEUROLOGY



Director **Janis Miyasaki**

Improving wellness for faculty and learners is a priority for Division Director **Janis Miyasaki**, especially when neurology reached over 190 per cent bed capacity in the Edmonton Zone for a sustained time in 2022. “The situation is a result of a combination of delayed care because of the pandemic and population growth,” she says. “It’s stressful; it impacts patient safety and the ability of division members to fulfill the other areas of academic medicine.”

One of her goals for 2023 is to find new ways of managing the bed census in Neurology, including advocating for a more balanced allocation of patients among neurologists. “We now have a neurology executive that is tackling the issue in the division of neurology,” she says.

A second goal is to help improve wellness among division members and learners. Dr. Miyasaki has used various strategies to emphasize the importance of psychological safety. “I’m encouraging people, especially mid-career people, to take leadership courses,” she says. “People often gain insights about themselves as well as how to interact in difficult situations.”

Dr. Miyasaki also publishes a weekly newsletter called *Neurotransmission* that highlights the achievements of division members, and hosts leadership sessions where she discusses some of the steps people can take to improve their team functioning. The residency program has also undergone change, with a new emphasis on wellness and psychological safety.

“We are starting to have new leadership in the division,” Dr. Miyasaki says. The Parkinson’s and Movement Disorder Clinic, headed by **Dr. Miyaskai** before she became Division Director, is now led by **Fang Ba**. The Edmonton Zone Stroke Program, formerly under **Ashfaq Shuaib**, is now led by **Tom Jeerakathil**.

The division welcomed several new faculty members and clinical lecturers. New faculty include Associate Professors **Jennifer McCombe** and **Mahesh Kate**; Assistant Clinical Professors **Aakash Shetty**, **Mar Lloret I Villas**,

and **Pierre- Marc Villeneuve**; and Assistant Professor **Grayson Beecher**. New clinical lecturers are **Gordon Mark Brown** and **Asif Butt**.

A number of division members received awards and honours: **Satya Kar**, the Paul W. Armstrong Excellence in Research Award; **Brian Buck**, Clinical Investigation Publication Award; **Fang Ba**, Social Sciences and Humanities Research Council Grant; **Trevor Steve**, Canadian Institutes of Health Research grant; and **Jason Plemel**, Canada Research Chair in Glial Neuroimmunology. **Zaeem Siddiqi** was recognized as a distinguished alumnus of Duke University School of Medicine.

Among the notable publications by division members are “Health Care Utilization in the Last Year of Life in Parkinson Disease and Other Neurodegenerative Movement Disorders” in *Neurology Clinical Practice* by lead author **Dr. Miyasaki** and contributing author **Richard Camicioli**; “Progression of Cerebral White Matter Hyperintensities Is Related to Leucocyte Gene Expression” in *Brain* by first author **Glen Jickling**; and “Oligodendrocyte Death and Myelin Loss in the Cuprizone Model: An Updated Overview of the Intrinsic and Extrinsic Causes of Cuprizone Demyelination” in *Molecular Neurodegeneration* by lead author **Jason Plemel**.

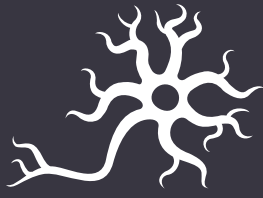
Graduate Students 23

Post-doctoral Fellows 10

Clinical Fellows 8

Residents 24

Speciality & Multidisciplinary Clinics 4



InProfile

NEUROLOGY

GRAYSON BEECHER



Grayson Beecher completed a neuromuscular medicine fellowship at the Mayo Clinic and joined the Neurology Division as assistant professor in 2022. During his fellowship, Dr. Beecher's research contributed to the identification of a novel biomarker in immune-mediated rippling muscle disease, leading to publication in *JAMA Neurology* in 2022. His current research involves the use of point-of-care ultrasound in improving diagnosis and monitoring disease progression in neuromuscular disorders. Specifically, he evaluates the use of diaphragm ultrasound as a predictor of respiratory failure and mortality in amyotrophic lateral sclerosis (ALS). Dr. Beecher received the division's 2022 Teacher of the Year Award.

TOM NOWACKI



Assistant Clinical Professor Tom Nowacki is a specialist in epilepsy and electroencephalography. He joined the Parkinson and Movement Disorder Program in 2015. In 2022, Dr. Nowacki took on the role of Neurology site lead for the University of Alberta (UAH) Hospital and the Kaye Edmonton Clinic (KEC). This new position was created to organize neurology clinical activities taking place at the UAH and KEC. Dr. Nowacki works with Alberta Health Services operational dyads, allied health professionals, and physician colleagues in the Department of Medicine in the delivery of patient care.

PHYSICAL MEDICINE & REHABILITATION



Division Director **Vivian Mushahwar**

“Our division is fairly small when it comes to faculty members who have an appointment at the university,” says Co-Interim Division Director **Vivian Mushahwar**. “But we bring in lots of funding and get lots of attention for our size.”

She highlights examples of attention garnered in 2022. “**Jaime Yu** was elected president of the Canadian Association of Physical Medicine, which speaks volumes about her status in the field,” Dr. Mushahwar says. **Dr. Yu** also was the recipient of the Association of Academic Physiatrists Women in Medicine Award. “And **Dhiren Naidu** received the Canadian Football League’s Hugh Campbell Distinguished Leadership Award for his work managing COVID in sports.”

Several division members were recognized for contributions to teaching and mentoring, including **Lalith Satkanum’s** Thomas J. Marrie Mentorship Award from the Department of Medicine and his Physicianship Lecturer Excellence Award from the Medical Students Association at the University of Alberta. **Dr. Satkanum** was also recognized for both best recorded lecture and best collaborative live virtual session for the 12th Canadian Comprehensive Review Course in Physical Medicine & Rehabilitation (PM&R). **Dr. Naidu** also received a Canadian Association (PM&R) national review course teaching award.

Dr. Mushahwar received a Brain Canada Foundation grant and a University Hospital Foundation grant totalling more than \$2 million. She was the primary inventor on an issued Canadian patent titled “Apparatus and Method for Prevention and Mitigation of Deep Vein Thrombosis.”

Trainees with the division also excelled. **Jenna Senger**, a trainee with **Ming Chan**, received the Canadian Society of Plastic Surgery Best Resident Research Award, and **Soroush Mirkiani**, a trainee with Dr. Mushahwar, received the FoMD 75th Anniversary Award, the Delnor Award, and the Alberta Graduate Excellence Scholarship.

Dr. Chan received two Canadian Institutes of Health Research grants totalling nearly \$3 million. He was also the keynote speaker at Harvard University’s Centre for Paralysis Research Conference.

Dr. Mushahwar highlights the achievements of **Jacqueline Hebert** and **Patrick Pilarski**, co-leads of the internationally recognized BLINC lab, which develops artificial intelligence-guided prosthetic limbs. “Drs. Hebert and Pilarski are giants in their fields, moving ideas into discovery into human application.” **Dr. Mushahwar** herself has garnered international recognition for her research on and development of wearable devices and micro-implants to stimulate paralyzed limbs.

Key publications by division members include “Predicting Upper Quadrant Musculoskeletal Injuries in the Military: A Cohort Study” in *Medicine & Science in Sports & Exercise* by lead author **Jacqueline Hebert**; “Autonomous Locomotion Trajectory Shaping and Nonlinear Control for Lower-Limb Exoskeletons” in *IEEE Trans Mechatronics* by contributing author **Dr. Mushahwar**; and “Reverse End-to-side Nerve Transfer for Severe Ulnar Nerve Injury: A Western Canadian Multicentre Prospective Non-randomized Cohort Study” in *Neurosurgery* by lead author **Dr. Chan**.

Future planning for Dr. Mushahwar includes a focus on recruiting for both academic and clinical personnel. “We have to increase our numbers, and we need to bring in new blood,” she says. “Retirements are inevitable, and it’s critical for us not to wait until we have gaps in teaching, research, and clinical practice.”

Graduate Students 24
Clinical Fellows 1
Residents 15
Post-doctoral Fellows 4
Specialized Clinics 5



InProfile

PHYSICAL MEDICINE & REHABILITATION

TREVOR BARSS



Trevor Barss completed a postdoctoral fellowship with Dr. Vivian Mushahwar within the SMART Network. In 2022, Dr. Barss led a research intervention to determine if the long-term application of non-invasive spinal stimulation paired with arm and leg cycling exercise could improve over-ground walking for individuals living with a spinal cord injury (SCI). He received funding from provincial and federal agencies for his research, which aims to develop a new, cost-effective therapy to reduce paralysis and improve walking after SCI. Dr. Barss was recently recruited to be the Lead Researcher of Sensory Neuroscience for Nike in Oregon.

HARDEEP KAINTH



Assistant Clinical Professor Hardeep Kainth is the medical lead of the Spinal Cord Injury (SCI) program at Glenrose Rehabilitation Hospital (GRH) and associate program director for the Physical Medicine and Rehabilitation residency program. In 2022, Dr. Kainth developed a provincial SCI admission order set for Connect Care for the ICU and general acute care. He also developed a prophylaxis and treatment guideline for heterotopic ossification post-SCI and initiated the use of electrical stimulation for pressure injury treatment. Dr. Kainth's interest is in integrating research into clinical practice to help build the Glenrose into a leading SCI medicine centre in North America.

PREVENTIVE MEDICINE



Division Director **Sebastian Straube**

Division members lost an esteemed colleague when **Larry Svenson** passed away in March of 2022. Dr. Svenson held academic positions of associate professor, special continuing with the division as well as adjunct professor with the School of Public Health.

“Larry’s passing was a huge loss, and we are feeling the impact tremendously,” says Division Director **Sebastian Straube**. “He was a wonderful colleague, and his outstanding academic productivity contributed enormously to the academic success of the division.”

Dr. Svenson’s academic roles were in addition to his employment with the provincial health ministry as provincial health analytics officer and executive director for analytics and performance reporting. He also served on national surveillance advisory committees and councils. Dr. Svenson’s work at the ministry was instrumental in the province’s early public health response to COVID and earned him the Premier’s Public Service Award for Individual Leadership in 2020.

Despite the part-time nature of his division appointment, he published 12 papers in 2022 alone, most coming out in journals in the months after his death.

Dr. Straube highlighted three of Dr. Svenson’s publications in 2022:

From the Division of Preventive Medicine, **Dr. Svenson** was senior author, and **Ellen Rafferty** a co-author, along with colleagues from the University of Alberta and other institutions across Canada, of “Impact of the COVID-19 Pandemic on Vaccine Coverage for Early Childhood Vaccines in Alberta, Canada: A Population-based Retrospective Cohort Study” in *BMJ Open*.

He was a co-author on “Association between Influenza Vaccination and Risk of Stroke in Alberta, Canada: A Population-based Study” in *Lancet Public Health*.

Lastly, he was senior author on “Text Message Reminders to Improve Immunization Appointment Attendance in Alberta, Canada: The Childhood Immunization Reminder Project Pilot Study” in *JMIR Mhealth Uhealth*.

Dr. Svenson was actively involved in all facets of academic life, including preparing grant and funding proposals, facilitating research projects, and mentoring younger faculty and trainees. One of the people he mentored was Dr. Ellen Rafferty, a senior principal economist with the Institute of Health Economics, who joined the Division shortly before Dr. Svenson died. In the months leading up to his death, Dr. Svenson championed Dr. Rafferty’s [see cameo] appointment as a special continuing faculty member.

“I met Dr. Svenson at a conference where I presented my PhD work on economic evaluations of vaccines,” says Dr. Rafferty. “He was really interested in vaccine research, and he followed up with me about my work. He was instrumental in my coming to Alberta and doing a post-doctoral fellowship with Alberta Health.”

“He was very excited about improving Alberta Health data systems and making them the best in Canada and probably one of the best in the world to enable research,” says **Dr. Rafferty**. “He was definitely what I like to call an ideas man. He always had ideas about how to improve the surveillance in the province, how to link better with researchers, how to do things to really improve the health of Albertans.”

Mila Luchak, Assistant Clinical Professor; **Antia Daniel**, Clinical Lecturer; and **Ahmed Elmezughi**, Clinical Lecturer, joined the division in 2022.

In 2023, the division is recruiting a new public health and preventive medicine specialist, **Dr. Ellina Lytvak** [see cameo], whose interest is obesity medicine.

Graduate Students 7
Post-graduate Trainees 2
Residents 12
Clinical Fellows 1
Specialized Clinics 3



InProfile

PREVENTIVE MEDICINE

ELLEN RAFFERTY



Assistant Professor Ellen Rafferty is a senior principal health economist at the Institute of Health Economics. Dr. Rafferty's PhD is in epidemiology and health economics, and she completed a post-doctoral fellowship embedded at Alberta Health. Attracting several federal research grants, her current research focuses on the epidemiologic and economic impact of public health policies and infectious diseases. She has an interest in and works with provincial and national agencies on the incorporation of economics into immunization decision-making. She helps lead the NSERC-PHAC-funded One Society Network (<https://onesocietynetwork.ca/>), which aims to incorporate an intersectoral perspective into pandemic response and policy.

ELLINA LYTVYAK



Assistant Professor Ellina Lytvyak is an obesity medicine specialist with clinical and research interests in the prevention and management of excess weight and chronic diseases, and their risk factors at the individual and population levels. Dr. Lytvyak's current research includes the impact of excess weight on health and healthcare outcomes, liver diseases, gender disparities in food security and its association with obesity, and gender inequalities in colorectal cancer screening among people living with obesity. She is a prolific author, with more than 147 publications, and an active medical educator, serving as an evidence-based medicine lead with the MD Program.

PULMONARY MEDICINE

Division Director **Giovanni Ferrara**

“The time between October 2022 and mid-February 2023 was extremely tough for us because with the reopening of the world, people started to circulate again, and that meant that viruses also started to circulate again,” says Division Director **Giovanni Ferrara**. “We had a huge number of people admitted for viral illness on the top of their chronic respiratory disease, and it was very demanding clinically.”

The pressures of the past few years have led Dr. Ferrara to see 2023 as an opportunity to take a step back and determine the best investments to produce high-quality results and value. “Where do we want to make an impactful and long-lasting difference in care, in research, in education?” he says. This planning for the future will involve the whole division participating in a retreat in 2023.

The stressful clinical demands aside, Dr. Ferrara says that the division had a productive year, with successes on various fronts. One such success was in recruitment, with Associate Professor **Jason Weatherald** [see cameo] and Clinical Lecturer **Alia Daoud**.

The Edmonton Long COVID clinic and its protocols have become the model for post-COVID care in Canada, thanks mostly to the work of **Grace Lam** and **Maeve Smith** in coordinating a large multidisciplinary team.

Several division members were the recipients of awards and funding. **Pen Li** was named Teacher of the Year Subspecialty, and **Justin Weinkauff** received the 2022 Canadian Society of Transplantation Education and Teaching Excellence Award.

Michael Stickland is a co-investigator on a University of Alberta Hospital Foundation/ Alberta Boehringer Ingelheim Collaboration grant with **Ron Damant** for pulmonary rehabilitation research. Dr. Stickland received two other grants from the National Science and Engineering Research Council of Canada, titled “Pulmonary Gas Exchange during Physiological Stress” and “Resting and Exercise Echocardiology.”

Richard Long received funding from the Social Sciences and Humanities Research Council for “Evaluating a Tuberculosis (TB) Surveillance Data Dashboard in Alberta.”

Dr. Lam had two successful Canadian Institutes of Health Research operating grants. The first was for a project called “Impact of COVID-19 on Health Care Access, Utilization, Delivery, and Outcomes for Patients with Pulmonary Diseases in Alberta (INCLUDE Study),” which includes co-primary investigators **Drs. Weatherald** and **Stickland**, and co-investigators **Drs. Mohit Bhutani, Giovanni Ferrara, Angela Lau, and Courtney Heffernan**. The second was for “Deciphering the Impact of Aging and Inflammation on Neurocognitive Impairments in People with Post-acute Sequelae of COVID-19 (PASC).”

Division members published 182 papers in 2022, more than a 100 per cent increase since 2019. Two notable publications by division members were “Evolving Landscape of Pulmonary Arterial Hypertension and Redesigning Pulmonary Arterial Hypertension Clinical Trials Task Force of the 18th Global CardioVascular Clinical Trialists Forum” in *Lancet* by lead author **Dr. Weatherald**; and “Reliability and Validity of the Post COVID-19 Condition Stigma Questionnaire: A Prospective Cohort Study” in *EClinical Medicine* by lead author **Dr. Damant** and contributing authors **Drs. Cheryl Laratta, Stickland, Smith, Lam, Ferrara, Eric Wong, Rhea Varughese, Jacqueline Tay, and Desi Fuhr**.

“In 2023, it’s time to focus more on wellbeing, quality, and real impact in clinical, research, and education, because those are the things that will matter in the end for patient care and for our division as a whole,” says Dr. Ferrara.

Graduate Students 12

Residents 6

Post-doctoral Fellows 2

Clinical Fellows 1

Multidisciplinary Clinics 7

Specialized Clinics 6



InProfile

PULMONARY MEDICINE

RON DAMANT



Professor Ron Damant has won numerous medical education awards, including the Rutherford Award for Excellence in Undergraduate Teaching, and is a former assistant dean, pre-clinical undergraduate medical education. He currently serves as deputy director of the Division of Pulmonary Medicine for the Edmonton Zone, and medical lead, Respiratory Health Section, Medicine Strategic Clinical Network. His clinical/research interests include COPD, end-of-life care, Post COVID-19 Condition (PCC), and health-related stigma. Dr. Damant and the Kaye Edmonton Clinic Post-COVID team developed a survey instrument that demonstrated stigma experienced by people living with PCC. The resulting paper was published in *eClinicalMedicine*.

JASON WEATHERALD



Pulmonologist and Associate Professor Jason Weatherald works in the Lung Transplant and Pulmonary Hypertension programs. Dr. Weatherald's research involves risk assessment methods in pulmonary arterial hypertension, novel methods for clinical trials, and patient-oriented research relating to pulmonary hypertension and COVID-19. He holds research funding from the Canadian Institutes of Health Research and the Heart & Stroke Foundation of Canada. Since 2016, he has authored over 90 publications. He has several ongoing research projects related to COVID-19 and pulmonary hypertension and was co-lead investigator on the multi-centre COVI-PRONE trial, which was published in *JAMA* in 2022.

RHEUMATOLOGY



Division Director Jan Willem Cohen Tervaert

Division Director Jan Willem Cohen Tervaert will be stepping down as director in 2023, and Steven Katz will take on the director position in April of 2023.

“The past five years were remarkable for research and publication output, although COVID did slow things down,” says Dr. Cohen Tervaert. “I’m looking forward to spending more time on research and writing in my research area of vasculitis.”

Dr. Cohen Tervaert describes a new COVID long-haul clinic launched by the division that performs research among patients who fill the diagnostic criteria for chronic fatigue syndrome. “Patients with chronic fatigue syndrome are often regarded as if the disease is in their heads, which is not the case,” he says. “When I came to Edmonton, I wanted to focus on chronic fatigue in rheumatic diseases, but with long COVID, so many patients developed severe fatigue that we decided to focus on that.” The Long COVID clinic has contributed significantly to a long-haul COVID study being submitted for publication in *Nature Immunology*.

The division welcomed Clinical Lecturer **Andrea Johnson** and Assistant Clinical Professor **Sarah Troster** in 2022. Dr. Troster will take over the program directorship of the rheumatology program from **Carrie Ye**. **Joanne Homik**, **Savitri Senaratne**, and **Alexander Yan** retired, and **Omid Niaki** left the division.

Division members’ patient loads grew by about 15 per cent in 2022. In addition, the Northwest Territories medical leadership decided to send all their patients to Edmonton for treatment. “Many of these patients are from rural and remote First Nations communities,” says Dr. Cohen Tervaert. “It’s challenging for them to leave their communities and challenging for us in terms of rheumatology capacity.”

Dr. Cohen Tervaert highlights awards won by several division members. **Mohamed (Mo) Osman** won the Alberta Medical Association Future Leader in Rheumatology Award, the Scleroderma Clinical Trial Consortium Award, and the Paul Davis award. **Alison Clifford** won

the Rheumatology Teaching Award from residents. **Elaine Yacyshyn** received the Educator of the Year from the Alberta Medical Association.

Dr. Katz was awarded the Canadian Association of Medical Education Certificate of Merit and a University of Alberta Mentor Award. **Carrie Ye** received a Young Investigator Award from the American Society for Bone and Mineral Research and an entrance scholarship (Anton Scholarship Award) to begin a master’s degree at Harvard University.

Several division members were lead authors or co-authors of important publications. A collaboration between the Rheumatology and Dermatology Divisions on systemic sclerosis research led to the publication of “Genomic Instability in Early Systemic Sclerosis” in the *Journal of Autoimmunity* by lead authors **Mo Osman** (Rheumatology) and **Robert Gniadecki** (Dermatology) and contributing authors **Desiree Redmond** and **Jan Willem Cohen Tervaert** (Rheumatology) and **Aishwarya Iyer**, **Dylan Hennessey**, and **Sandra O’Keefe** (Dermatology).

Walter Maksymowych was lead author of “MRI Lesions of the Spine in Patients with Axial Spondyloarthritis: An Update of Lesion Definitions and Validation by the ASAS MRI Working Group” in *Annals of the Rheumatic Diseases*. **Dr. Cohen Tervaert** was lead author, with contributing authors **Desiree Redmond**, **Charmaine van Eeden**, **Naima Mohazab**, and **Mo Osman**, of “Breast Implant Illness: Scientific Evidence of Its Existence” in *Expert Review of Clinical Immunology*.

Graduate Students 4

Fellows 4

Trainees 4

Multidisciplinary Clinics 3

Specialized Clinics 6



InProfile

RHEUMATOLOGY

MOHAMED (MO) OSMAN



Assistant Professor Mohamed (Mo) Osman is an award-winning clinician scientist and director of the University of Alberta's systemic sclerosis (SSc) and microvascular clinics. In 2022, Dr. Osman trained in the use of additional point-of-care vascular tools in evaluating patients with SSc at the University Medical Centre Groningen (the Netherlands) as part of the Scleroderma Clinical Trial Consortium Visiting Rheumatologist and Percy Russell Davis Innovation awards. His translational research in SSc was recognized as one of the top 10 innovations in Arthritis Research in Canada in 2022. His research on the pathogenesis of chronic fatigue syndrome in inflammatory diseases aims to develop new therapies.

DESIREE REDMOND



Desiree Redmond has a diploma in biological sciences specializing in laboratory research from NAIT and is research coordinator and lab manager for the Dr. Jan Willem Cohen Tervaert and Dr. Mohamed Osman laboratory. Ms. Redmond's main responsibility in 2022 was to gather consent, administer questionnaires, and collect biological samples from patients with a range of rheumatic conditions, including small vessel vasculitis, breast implant illness or ASIA (autoimmune/inflammatory syndrome induced by adjuvants), scleroderma, and long COVID for research on fatigue. She ensured that patients being recruited were listened to and understood the importance of their participation in research.

A hand holding a syringe and a vial, with a red overlay. The background is a blurred image of a hand holding a syringe and a vial, overlaid with a semi-transparent red filter. The text is positioned in the lower-left quadrant of the image.

Funding & Stats Department Of Medicine

ENDOWED FUNDS AND CHAIRS

FUND NAME	PRINCIPAL VALUE MARCH 31, 2022
AstraZeneca Canada Inc. Chairs in Asthma & Obstructive Lung Disease	\$3,001,204.88
Brown WF Lecture Physical Medicine & Rehabilitation	\$50,681.92
Cars-Rheumatology	\$14,544.05
Dr Geoff Taylor Lectureship	\$37,622.41
Edwards AM Lecture Clinical Education	\$109,552.92
Gastrointestinal Visionary	\$115,962.53
Graduate Research Endowment	\$150,000.00
King EG Memorial Endowment	\$165,526.12
Majumdar S ME2 Legacy Endowment	\$124,366.68
Muttart Chair Clinical Immunology Endowment	\$1,675,398.14
Royal Canadian Legion Kidney Research	\$405,269.24
TOTAL	\$5,850,128.89

OTHER ENDOWMENTS	PRINCIPAL VALUE MARCH 31, 2022
Alberta Health Services Chair in Cardiac Sciences	\$1,500,376.75
Alberta Health Services Translational Research 1	\$ 2,500,485.41
Alberta Health Services Translational Research 2	\$ 2,500,485.41
Dr. Charles A. Allard Chair in Diabetes Research	\$3,000,812.06
GlaxoSmithKline Chair in Airway Inflammation	\$1,393,792.87
Heart & Stroke Foundation of Alberta, NWT & Nunavut Chair in Cardiovascular Research	\$1,562,650.12
Henri M. Toupin Chair in Neurocognitive Disorders	\$2,389,964.97
Henri M. Toupin Chair in Neurological Sciences	\$1,414,281.96
Henri M. Toupin Chair in Neurology	\$2,389,739.91
Kidney Health Research Chair – Translational Research & Health Outcomes	\$8,299,578.15
Nephrology Research Endowment	\$ 2,029,535.18
Spinal Cord Injury Chair	\$3,044,484.67
Tripartite Chair in Occupational Health	\$573,428.50
TOTAL	\$32,599,615.96

2022 CANADA RESEARCH CHAIRS

Dr. Evangelos Michelakis, Cardiology	Tier 1, Chair in Applied Molecular and Mitochondrial Medicine
Dr. Vivian Mushahwar, Physical Medicine & Rehabilitation	Tier 1, Chair in Functional Restoration
Dr. Sangita Sharma, Endocrinology & Metabolism	Tier 1, Chair in Population Health
Dr. Gopinath Sutendra, Cardiology	Tier 2, Chair in Cardio-Oncology and Molecular Medicine
Dr. Jason Plemel, Neurology	Tier 2, Chair in Glial Neuroimmunology
Dr. Gavin Oudit, Cardiology	AIHS Translational Health Chair in Cardio-oncology

AIHS TRANSLATIONAL HEALTH CHAIR

Dr. Gopinath Sutendra, Cardiology	Chair in Cardio-oncology
-----------------------------------	--------------------------

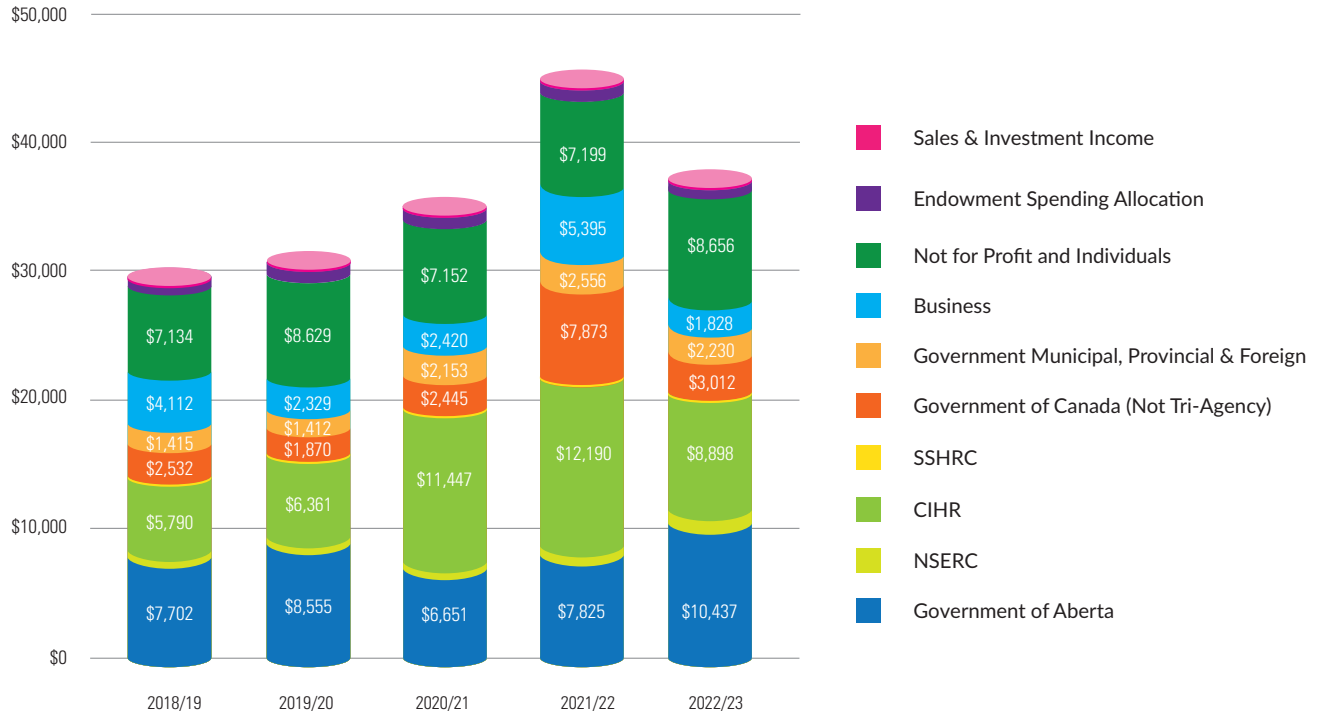
CANADIAN INSTITUTES OF HEALTH RESEARCH CHAIR

Dr. Padma Kaul, Cardiology	CIHR Sex and Gender Science Chair
----------------------------	-----------------------------------

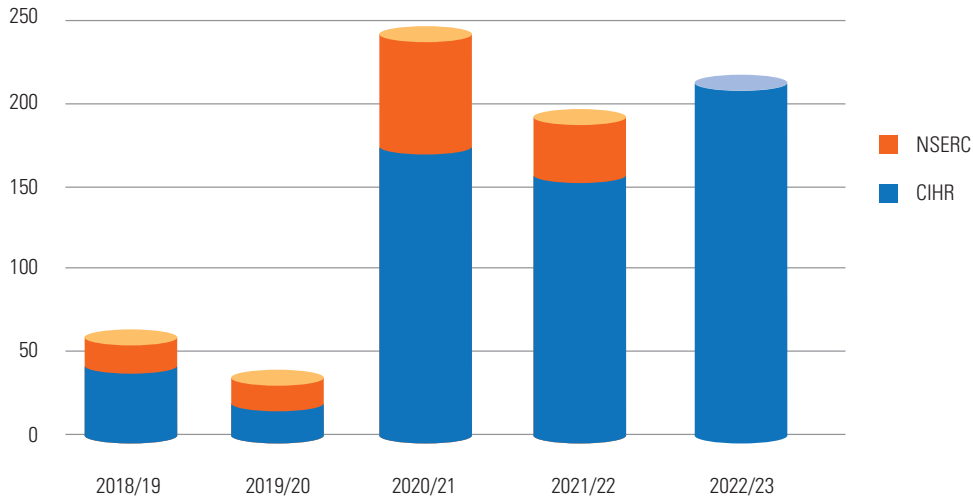
RESEARCH FUNDING

Alberta Health Services
 Alberta Innovates
 Alberta Innovates Bio Solutions/Alberta Alzheimer's Research Program
 Alberta Innovates Bio Solutions/Alberta Prion Research Program
 Alberta Innovates Health Solutions
 Alberta Innovates Health Solutions/Accelerating Innovations into CarE (AICE)
 Alberta Innovates/Partnership for Research and Innovation in the Health System (PRIHS)
 Alberta Innovates/Pfizer Translational Research Fund Opportunity
 Alberta Innovates/Training and Early Career Development
 Alberta Prion Research Institute
 American College of Gastroenterology
 Arthritis Society
 AstraZeneca
 Brain Canada Foundation
 Canadian Stroke Prevention Intervention Network
 Canada Foundation for Innovation
 Canada Research Chairs
 Canadian Association of Gastroenterology
 Canadian Cancer Society
 Canadian Dermatology Foundation
 Canadian Foundation for AIDS Research (CANFAR)
 Canadian Foundation for Pharmacy
 Canadian Geriatrics Society
 Canadian Institutes of Health Research (CIHR)
 Canadian Liver Foundation
 Canadian Nutrition Society
 Canadian Obesity Network
 Canadian PBC Society
 Canadian Pulmonary Fibrosis Foundation
 Canadian Society of Transplantation
 Canadian Urological Association
 Cancer Research Society Inc.
 CHDI Foundation Inc.
 Cleveland Clinic Foundation
 Crohn's and Colitis Canada
 Diabetes Canada
 GlaxoSmithKline
 Government of Alberta/Economic Development & Trade
 Heart & Stroke Foundation Canada
 Hypertension Canada
 International Society of Nephrology
 Leukemia & Lymphoma Society of Canada
 Lung Association Alberta & NWT
 MITACS Inc.
 Multiple Sclerosis Society of Canada
 National Parkinson Foundation
 Network of Centres of Excellence
 National Sciences and Engineering Research Council (NSERC)
 Public Health Agency of Canada
 Social Sciences and Humanities Research Council (SSHRC)
 University Hospital Foundation
 W. Garfield Weston Foundation

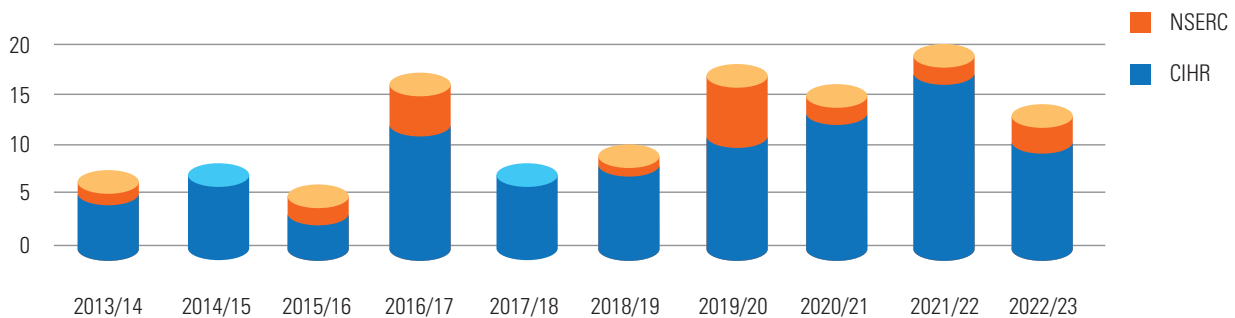
TOTAL DEPARTMENT OF MEDICINE RESEARCH REVENUE (\$THOUSANDS)



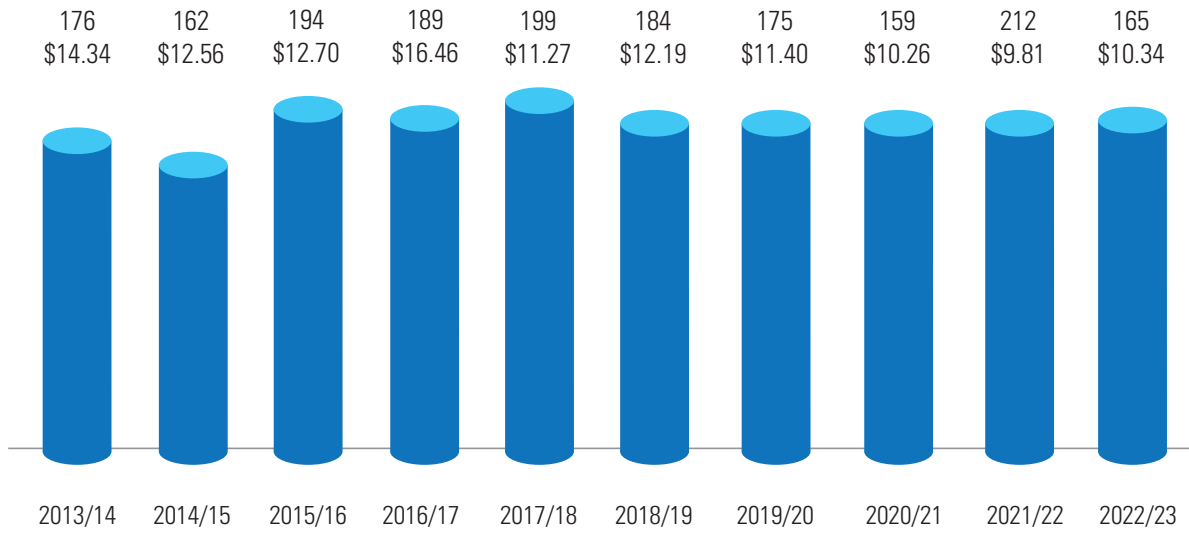
CIHR & NSERC GRADUATE STUDENT SCHOLARSHIPS (\$THOUSANDS)



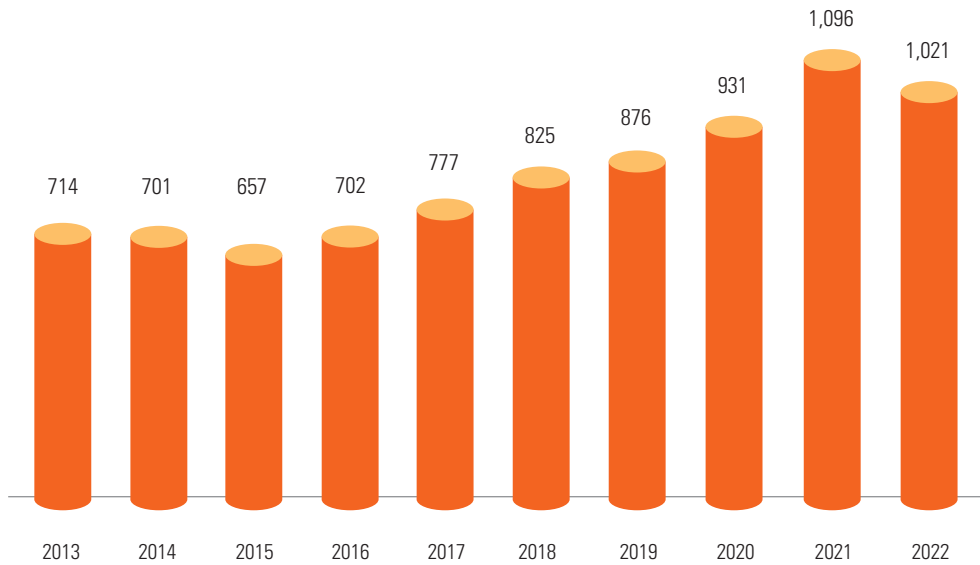
CIHR & NSERC OPERATING GRANTS (NEWLY AWARDED PER FISCAL YEAR)



CLINICAL TRIALS FUNDING (NEW CLINICAL STARTS/YEAR – INCOME/YEAR \$MILLIONS)



PUBLICATIONS



GRADUATE STUDENT SUMMARY

Currently Enrolled	105
MSc Program	58
PhD Program	44
Visiting Graduate Students	2
Qualifying Graduate Students	1
Total Convocated Graduate Students in 2022	16
Active Postdoctoral Fellows	33

RECRUITMENT & ATTRITION SUMMARY

	RECRUITMENT				TOTAL	ATTRITION				TOTAL
	Male		Female			Male		Female		
	AMHSP	FFS	AMHSP	FFS		AMHSP	FFS	AMHSP	FFS	
2010/11	2	6	6	9	23	1	0	0	1	2
2011/12	2	14	1	12	29	5	1	8	4	18
2012/13	3	2	3	1	9	3	4	6	4	17
2013/14	4	0	2	1	7	2	3	3	1	9
2014/15	6	2	4	7	19	10	0	2	0	12
2015/16	9	5	11	8	33	5	3	2	3	13
2016/17	3	11	5	6	25	1	0	1	7	9
2017/18	8	17	3	10	38	2	5	4	6	17
2018/19	4	14	1	6	25	6	0	3	1	10
2019/20	2	13	3	5	23	4	1	4	0	9
2020/21	2	6	2	13	23	4	2	2	1	9
2021/22	3	9	0	9	21	8	2	6	3	19
2022/23	2	13	5	6	26	5	5	0	2	12

NEW TO THE DEPARTMENT IN 2022

Grayson Beecher, Neurology, Assistant Professor
Paula Horsely, Geriatric Medicine, Assistant Professor
Hardeep Kainth, Physical Medicine & Rehabilitation, Assistant Clinical Professor
Mahesh Kate, Neurology, Associate Professor
Angela Lau, Pulmonary Medicine, Assistant Professor
Elena Liew, Hematology, Assistant Clinical Professor
Carlos Moctezuma Velasquez, Gastroenterology, Assistant Professor
Ellen Rafferty, Preventive Medicine, Assistant Professor
Aakash Shetty, Neurology, Assistant Clinical Professor
Alicia Strand, General Internal Medicine, Assistant Clinical Professor
Sarah Troster, Rheumatology, Assistant Clinical Professor
Jason Weatherald, Pulmonary Medicine, Associate Professor

LEFT THE DEPARTMENT IN 2022

Ian Paterson, Cardiology
Daniel Baumgart, Gastroenterology
Shannon Turvey, Infectious Diseases
Ilan Schwartz, Infectious Diseases

RETIREMENTS IN 2022

Barbara Ballermann, Nephrology
Bibiana Cujec, Cardiology
Joanne Homik, Rheumatology
Stan Houston, Infectious Diseases
Lucille Lalonde, Cardiology
Richard Lewanczuk, Endocrinology & Metabolism
Winnie Wong, Gastroenterology

ACADEMIC PROMOTION

ASSOCIATE PROFESSOR WITH TENURE

Alison Clifford, Rheumatology
Maeve Smith, Pulmonary Medicine
Jamie Yu, Physical Medicine & Rehabilitation

PROFESSOR

Aminu Bello, Nephrology
Meena Kalluri, Pulmonary Medicine
Lynora Saxinger, Infectious Diseases
Puneeta Tandon, Gastroenterology
Clarence Wong, Gastroenterology

CLINICAL PROMOTION

ASSISTANT CLINICAL PROFESSOR

Lillian Chan, General Internal Medicine
Ryan Choudhury, General Internal Medicine
Caitlyn Collins, General Internal Medicine
Shannon Fong, General Internal Medicine
Aatif Hussain, Geriatric Medicine
Lorie Kwong, General Internal Medicine
Allen Lim, Gastroenterology
Erin Miller, Endocrinology & Metabolism
Dan Slabu, General Internal Medicine
Alicia Strand, General Internal Medicine

ASSOCIATE CLINICAL PROFESSOR

Leena Amin, General Internal Medicine
Saifal Anwar, General Internal Medicine
Lauren Bolster, Hematology
Sarah Cawsey, Endocrinology & Metabolism
Timothy Chan, General Internal Medicine
Justin Chen, Infectious Diseases
Carol Chung, Pulmonary Medicine
Mona Gill, General Internal Medicine
Jennifer Jin, Gastroenterology
Ada Lam, General Internal Medicine
Rebecca Lee, Geriatric Medicine
Hernando Leon, General Internal Medicine
Mahmod Mohamed, Gastroenterology
Amy Morse, Gastroenterology
Lilia Olaru, Rheumatology
Conar O'Neil, Infectious Diseases
Leah Remington, Infectious Diseases
Sadik Salman, General Internal Medicine
Janek Senaratne, Cardiology
Shannon Turvey, Infectious Diseases
Sheela Vijay, General Internal Medicine
Malcolm Wells, Gastroenterology
Nancy Zhu, Hematology

CLINICAL PROFESSOR

Rajive Jassal, Neurology
Fiona Lawson, Geriatric Medicine
Marcelo Shibata, Cardiology

Promoted effective July 1, 2022

COVER PHOTOS



**UNIVERSITY
OF ALBERTA**

DR. AMINU BELLO

Professor Aminu Bello is in the Nephrology
Division of the Department of Medicine.

Department of Medicine

CHAIR

Department of Medicine Narmin Kassam, MD

Executive Editors

Narmin Kassam, MD
Francois Bouman, Academic Department Manager

Project Manager

Andrea Cliff, Strategic Communications
& Events Team Lead

Managing Editor

Kathleen Thurber, MA
Fridman Thurber Consulting Ltd.
fridmanthurber@gmail.com

Writing

Kathleen Thurber
fridmanthurber@gmail.com

Editing

Leslie Robertson, PhD
hello@helixdesigns.com

Design

Helix Design Communications 2001 Inc.
hello@helixdesigns.com
helixdesigns.com

Photography

Darren Jacknisky
bluefishstudios.ca

Printing

NexGen Grafix Inc.
nexgengrafix.com

ISSN

PRINT 2561-0449 ONLINE 2561-0447

DONATE

Please **CLICK DONATE** to give to the department of Medicine today.
For more information on giving to the Department of Medicine,
please contact Brooke Rose: ber@ualberta.ca



UNIVERSITY
OF ALBERTA



Department of Medicine
2022 ANNUAL REPORT

ISSN 2561-0449 (Print) ISSN 2561-0447 (Online)
www.ualberta.ca/departement-of-medicine