



Department of Medicine
2021 ANNUAL REPORT

COVID RECOVERY





UNIVERSITY
OF ALBERTA

COVID
RECO
VERY

WE ARE **the** Department of Medicine.

Department of Medicine

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

T 780.248.1610 F 780.248.1611

ualberta.ca/departments-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	24	Medical Education
7	Steering Committee 2021	31	Learning Wellness Priorities
8	ZCDEC Committee 2021	38	Divisional Leadership & Profiles
9	Spotlight on Awards & Honours	68	Funding & Stats
11	Clinical Care Insights		
18	Research Ingenuity		



It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.

Charles Darwin

Beginning the path to COVID recovery is the theme of this 2021 Department of Medicine annual report. The stories on these pages are about us, about how we faced and overcame the challenges of the past year and seized the opportunities the pandemic presented with agility, determination, and ingenuity. We are taking the first steps on our path to recovery.

Dr. Narmin Kassam

Professor and Chair, Department of Medicine

CHAIR'S MESSAGE



The daunting clinical demands of multiple waves of COVID in 2021 meant diverting significant resources from our academic and research mission to provide clinical support. Many department members gave their all to provide service—**Saifal Anwar** and **Jaled Yehya** are just two exemplars highlighted by their division directors, and there are so many more. Even when hospitalization admissions broke record highs, our members and trainees helped ensure that in-patient hospital care was delivered at the highest standards.

COVID had huge effects beyond the hospital. People who delayed seeking health care during the pandemic through fear of contracting the virus or because they downplayed their symptoms in comparison to COVID are now much sicker as a consequence.

Justin Ezekowitz talks about delayed care in cardiac patients and how they now require much more intensive and expensive interventions, with decreased chances of recovering their health. **Finlay McAlister's** research into the direct and indirect consequences of COVID includes this care deficit and provides vital data necessary to help inform future health system planning.

In the early days of the pandemic, **Maeve Smith** and **Grace Lam** observed that up to 30 per cent of COVID survivors struggle with long-term, whole-body effects with few treatment options. They rapidly established the first-in-Alberta clinic to treat patients with long COVID, months before the condition was given a name. Two years later, the Edmonton Long COVID Inter-Professional Outpatient Program (IPOP) is part of a provincial research and care program funded by Alberta Health Services offering specialized long COVID treatment five days a week.

Virtual health care became a necessity rather than a choice for patients and physicians during the pandemic, a change that **Jonathan Choy** welcomes. A long-time provincial leader in virtual health, he is seeing the efficiencies resulting from virtual care in hospitals and the equity it creates when specialized care can reach every corner of the province. Care equity is also the focus of the provincial network created by **Chester Ho** to ensure people with spinal cord injury living in rural areas have access to the same care and expertise as urban patients.

While funding agencies pivoted to support COVID-related research, other clinical research languished when in- and out-patient processes were halted to reduce risk. With the support of the clinical research toolkit developed by **Neesh Pannu** and the Clinical Research Initiative working group—the majority of its members from our department—many clinical researchers were able to continue their work virtually, including Dr. Pannu.

The pandemic disruption of in-person learning and bedside teaching in 2021 challenged medical learners and the postgraduate and undergraduate education leads who oversee them at the five Edmonton Zone hospital sites. Undergraduate students put in extra effort to maximize their learning opportunities, and residents stepped up to cover for each other when on-call gaps occurred because of illness or isolation requirements. The Department of Medicine's Internal Medicine Program Director **Steven Katz** provided vital support when call coverage was dangerously low.

The effects of isolation from an education system gone virtual along with fatigue and burnout experienced by medical students are issues that **Cheryl Goldstein** in the Office of Advocacy and Wellbeing deals with to support learners' health. Other systemic issues that learners face are being tackled by our inaugural Director of Equity, Diversity and Inclusion, **Janis Miyasaki**. With input from department members and learners, she and her team are addressing racism, bias, and the social determinants of health, insights that will be implemented into medical education.

The past year illustrated the importance of empathy and compassion for each other as we faced challenges related to the pandemic in both our professional and our personal lives. **Ilan Schwartz** gives us his personal account of COVID. He and his family caught the virus via daycare transmission before vaccines were available. His family recovered unscathed, but Dr. Schwartz was left with a condition that, although minor in comparison to what many others have suffered, affects his quality of life.

It has been a tough year, and the level of professionalism, dedication, and compassion shown by members and learners to help each other out is unparalleled. That is what has gotten us through 2021 and will carry us into recovery.

On a personal level, my tenure as Chair started with the pandemic. The in-person interactions that are so much part of this role have not been possible during the past two years. I am so looking forward to the time when we can share our ideas and celebrate our successes, including COVID recovery, together and in-person once again.

Dr. Narmin Kassam

Professor and Chair, Department of Medicine

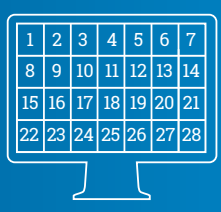
“

One of the deep secrets of life is that all that is really worth doing is what we do for others.

Lewis Carroll

STEERING COMMITTEE 2021

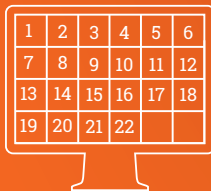
Department of Medicine Steering Committee Members



- | | | |
|---|--|--|
| 1 Narmin Kassam , Chair | 10 Joseph Brandwein , Director, Hematology | 20 Evangelos Michelakis , Associate Chair, Research |
| 2 Paolo Raggi , Interim Director, Cardiology
<i>(until December, 2021)</i> | 11 Karen Doucette , Director, Infectious Diseases | 21 Vijay Daniels , Associate Chair, Education and Faculty Development |
| 3 Michelle Graham , Director, Cardiology
<i>(as of December, 2021)</i> | 12 Branko Braam , Director, Nephrology | 22 Steven Katz , Director, Postgraduate Medical Education |
| 4 Robert Gniadecki , Director, Dermatology | 13 Doug Zochodne , Director, Neurology | 23 Steven Caldwell , Director, Undergraduate Medical Education, <i>(until June, 2021)</i> |
| 5 Jacques Romney Interim Director, Endocrinology & Metabolism | 14 Chester Ho , Director, Physical Medicine & Rehabilitation
<i>(until July, 2021)</i> | 24 Rebecca Lee , Director, Undergraduate Medical Education, <i>(as of July, 2021)</i> |
| 6 Daniel Baumgart , Director, Gastroenterology | 15 Nigel Ashcroft , Co-interim Director, Physical Medicine & Rehabilitation <i>(as of August, 2021)</i> | 25 Gopinath Sutendra , Director, Graduate Education |
| 7 Peter Hamilton , Director, General Internal Medicine
<i>(until March, 2021)</i> | 16 Ming Chan , Co-interim Director, Physical Medicine & Rehabilitation <i>(as of August, 2021)</i> | 26 Fraulein Morales , Director, Clinical Faculty |
| 8 Raj Padwal , Interim Director <i>(as of April, 2021)</i> | 17 Sebastian Straube , Director, Preventive Medicine | 27 Francois Bouman , Academic Department Manager |
| 9 Adrian Wagg , Director, Geriatric Medicine, Deputy Chair, Associate Chair, Finance | 18 Giovanni Ferrara , Director, Pulmonary Medicine | 28 Elaine Yacyshyn , Deputy Department Head |
| | 19 Jan Willem Cohen Tervaert , Director, Rheumatology | |

ZCDEC COMMITTEE 2021

Zone Clinical Department Executive Committee Members



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

SPOTLIGHT ON AWARDS & HONOURS

Department of Medicine Awards

Cromarty, Taylor	University of Alberta Doctoral Recruitment Scholarship
Davison, Sara	Jonathan B. Meddings Clinical Innovation Award
Dziadyk, Vivian	J. Charles "Chuck" Morrison Award
Graham, Michelle	Clinical Investigation Publication Award
Hoang, Holly	Clinical Faculty Research Award
Kamtchum Tatuene, Joseph	Ballermann Translational Research Fellowship Award
Raggi, Paolo	Paul W. Armstrong Excellence in Research Award Translational Research Award
Salopek, Thomas	Thomas J. Marrie Mentorship Award
Yu, Jaime	Medical Education Publication Award
Zhang, Yongneng	Paul Man Award
Edmonton Zone GIM Service	Cooperation, Collaboration and Teamwork Award: Bakshi, Neeja Royal Alexandra Hospital Leon, Hernand Sturgeon Community Hospital Morales, Fraulein University of Alberta Sia, Winnie Royal Alexandra Hospital Slabu, Dan Miseracordia Community Hospital

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

Amin, Leena (General Internal Medicine)	Grey Nuns Community Hospital
Marit, Jordan (General Internal Medicine)	Royal Alexandra Hospital
Strand, Alicia (General Internal Medicine)	University of Alberta Hospital
Troster, Sarah Troster (Rheumatology)	University of Alberta Hospital

Department of Medicine Undergraduate Medical Education Teacher of the Year

Buckle, Patricia	Grey Nuns Community Hospital
Cena, Jonathan	Royal Alexandra Hospital
Carpenter, Thirza	University of Alberta Hospital
Sultanian, Richard	University of Alberta Hospital

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

Birdi, Kam	Grey Nuns Community Hospital
Collins, Caity (General Internal Medicine)	University of Alberta Hospital
Fagarasanu, Andrei (General Internal Medicine)	Royal Alexandra Hospital
Hnatiuk, Mark (Hematology)	Subspecialty
Kachope, John (General Internal Medicine)	Misericordia

Department of Medicine Postgraduate Medical Education Teacher of the Year

Amin, Leena	Grey Nuns Community Hospital
Anwar, Saifal	University of Alberta Hospital
Gill, Manpreet (Mona)	Misericordia Hospital
Sawler, Daniel	Royal Alexandra Hospital
Shah, Nikhil	Nephrology Subspecialty, University of Alberta Hospital

International Research Awards

Kao, Dina Hui-Jen	American Gastroenterological Association's Maria A. Leo-Lieber Scholarship
Montano-Loza, Aldo	Expertscape Recognition as an Expert in Autoimmune Hepatitis
Montano-Loza, Aldo	Expertscape Recognition as an Expert in Sarcopenia
Mushahwar, Vivian	Fellow of the American Institute for Medical and Biological Engineering
Sharma, Sangita	Cochrane Pain, Palliative and Supportive Care (PaPaS) Review Group Cochrane Review reached 5th place in Top Ten 2019 citations

National Research Awards & Honours

Long, Richard	Canadian Academy of Health Sciences (CAHS) Fellowship
Mushahwar, Vivian	Canadian Academy of Health Sciences (CAHS) Fellowship
Oudit, Gavin	Canadian Academy of Health Sciences (CAHS) Fellowship
Tandon, Puneeta	Canadian Association for the Study of the Liver and Canadian Liver Foundation Visiting Professor Award
Senior, Peter	Canadian Academy of Health Sciences Fellowship Canadian Journal of Diabetes Top 10 Reviewer for 2020
Stickland, Michael	Canadian Institutes of Health Research Recognition of Outstanding Distinction in CIHR Peer Review
Stickland, Michael	Canadian Institutes of Health Research CIHR Post-Doctoral Award – Rhys Beaudry
Stickland, Michael	Canadian Respiratory Research Network Graduate Scholarship -Sophie Collins

University of Alberta Research Awards

Ba, Fang	Neuroscience and Mental Health Institute (Mildred I. Olsen Neurology Fellowship)
Braam, Branko	Kidney Health Translation Research Chair – Renewal
Butler, Craig	Cardiology Residents Mentor of the Year
Clifford, Alison	The Arthritis Society of Alberta Anthony Russell Scholarship Fund
Jhamandas, Jack H	University of Alberta Technology Transfer Services 2021 Innovation Award
Jickling, Glen	Henri M. Toupin Chair in Neurology
Kaul, Padma	University of Alberta Heart & Stroke Chair in Cardiovascular Research
Paterson, Ian	U of A Cardiology Training Program: Research Mentor of the Year
Senior, Peter	Office of Professionalism, FOMD, Professionalism Button Accolade

International Teaching Awards

Doroshenko, Alexander	World Health Organization (WHO) Collaborating Center on Children's Environmental Health re-designation
McCombe, Jennifer Ann	American Academy of Neurology AB Baker Teacher Recognition Award

National Teaching Awards & APPOINTMENTS

Boyington, Curtiss	CAME Certificate of Merit for Teaching
Koshman, Sheri Lynn	Canadian Pharmacist Journal CPJ 2020 Best Paper Award
Ma, Mang-Ming	Canadian Liver Meeting 2021 Canadian Association for the Study of the Liver – Education Excellence Award
McMahon, Alan	Canadian Society of Nephrology Clinical Nephrology Teaching Award 2021
McNab, Tammy	Canadian Association for Medical Education CAME Certificate Of Merit for Teaching
Michelakis, Evangelos	Killam Annual Professorship 2021
Montano-Loza, Aldo	Chair of the Canadian Association for the Study of Liver Disease (CASL) Education Committee
Yacyshyn, Elaine	Canadian Rheumatology Association Distinguished Teacher-Educator Award CAME Certificate of Merit for Teaching

University of Alberta Teaching Awards

Ba, Fang	Nominated by the Neurology residents as Teacher of the Year for 2020-2021
Bhanji, Rahima	Division of Gastroenterology, Teacher of the Year Award
Cujec, Bibiana	Cardiology Resident Wellness Champion runner up
Damant, Ronald	FOMD E.N. Skakun Award
Dieleman, Levinus	Faculty of Medicine Faculty Award for contributions to STIR Program
Katz, Steven	Division of Rheumatology Residency Mentoring Award

Kim, Daniel	Overall Cardiology Resident Teacher of the Year – Runner up
Lau, Darren	Division of General Internal Medicine 2020-2021 GIM Scholarly Deliberate Practice Award
Long, Richard	Faculty of Medicine & Dentistry: Tier I Clinical Science Award for Excellence in Mentoring Graduate Students and Postdoctoral Fellows
O'Neill, Blair	Division of Cardiology Teaching Award 2020-2021
Osman, Mohammed	Rheumatology Teacher of the Year
Vonder Muhll, Isabelle	Cardiology Residents Innovation in Teaching, Division of Cardiology (runner up)
Vonder Muhll, Isabelle	Cardiology Residents Lecturer of the year, Division of Cardiology
Yu, Jaime	University of Alberta Medical Students' Association Happiness Award

International Clinical Awards

Gramlich, Leah	Fellow of the American Society for Parenteral and Enteral Nutrition
Tsuyuki, Ross	International Society of Hypertension Fellowship
Wong, Clarence	American Gastroenterological Association Fellow

National Clinical Awards

Ba, Fang	Parkinson Canada Clinical Fellowship Award
Doucette, Karen	Canadian Society of Transplantation 2021 CST Clinician Recognition Award
Ghosh, Monty	Canadian Medication Association Award for Young Leaders

Provincial Clinical Awards

Gonzalez-Abrales, Juan	Professional Association of Resident (PARA) Physicians of Alberta Clinical Teaching Award (Honorable Mention)
Koshman, Sheri Lynn	FOMD Department of Medicine: Best Clinical Paper

Local Clinical Awards

Anwar, Saifal	University of Alberta Hospital 2021 Internal Medicine Dr. Peter Hamilton ACP Staff Award
Wong, Winnie	Dr. Richard Fedorak Memorial Award in Professionalism

National Administration Awards

Chiu, Isabelle	Association of Medical Microbiology & Infectious Diseases (AMMI) Canada Award of Distinction
----------------	--

Provincial Administration Awards

Hussain, Mohammed Wasif	PARA Resident Physician Well-being Award Honourable Mention
Ringrose, Jennifer Susan	Honourable Mention recipient of PARA's Well-being Award
Romney, Jacques	Alberta Medical Association Long Service Award
Svenson, Lawrence	Alberta Government, Premier's Public Service Award - Team Award Nomination

Local Administration Awards

Pauly, Robert	2020–2021 PARA Resident Physician Well-being Award Honourable Mention – University of Alberta
---------------	---

THE PATH TO COVID RECOVERY

Clinical Care Insights

“

They may forget
your name, but they
will never forget how
you made them feel.”

Maya Angelou



**FINLAY MCALISTER
& JUSTIN EZEKOWITZ**



FINLAY MCALISTER & JUSTIN EZEKOWITZ

Delayed cardiac care during COVID

AMONG THE MANY VICTIMS OF THE PANDEMIC ARE PEOPLE WHO DELAYED SEEKING CARE WHEN THEY WERE SICK WITH NON-COVID AILMENTS. FOR PEOPLE WITH PRE-EXISTING HEART DISEASE, THOSE DELAYS COULD HAVE LONG-TERM CONSEQUENCES.

"They are sicker and it's harder for them overall because delayed care means they are dealing with complications and a greater burden of illness," says cardiologist and co-chair of Alberta Health Services' Strategic Clinical Network in Heart Failure/COPD Pathway Justin Ezekowitz.

Dr. Ezekowitz says fear of getting COVID at the hospital, doctor's office, or laboratory was one reason people delayed getting care. Others felt that their illnesses would be a burden on the health system, so they put off seeking help until they had to go to the Emergency Department. People who are marginalized because of socio-economic constraints found that access to care was particularly difficult, creating more delays.

Much of Dr. Ezekowitz's colleague General Internist Finlay McAlister's current research is on COVID outcomes, with a focus on the indirect consequences of the pandemic.

"When COVID patients overwhelm a hospital system, COVID mortality rates go up because of the shortage of ICU resources and staff to look after them," says Dr. McAlister. "Some US data also showed that when there were more COVID hospitalizations, mortality rates for even non-COVID conditions (like stroke and acute coronary syndrome) went up."

The reduction in emergency room volumes early in the pandemic had consequences that are reflected in Dr. McAlister's data. "European and American studies show that there was an increase in out-of-hospital deaths, so people dying at home from heart attacks and stroke because they didn't go to Emergency," he says.

Then there's the issue of the "vanishing patients." "We know there's a surgical backlog because that is what gets a lot of attention on the news," says Dr. McAlister. "But then people assume there's also a waiting list backlog for procedures like cardiac catheterization when emerging data from Ontario suggest there isn't." In fact, he says, wait lists there have shrunk although the patients on the waitlist are sicker and have poorer outcomes than they did in pre-COVID times. "This suggests that there is a care deficit, but the cause is likely not the wait list but that patients are not getting referred at the same disease stage as they used to be," he says.

It's difficult to determine whether referral delays are because patients aren't seeing their primary care physicians or because physicians can't get patients into a specialty clinic since clinic resources have been reassigned to COVID care or because physicians assume there must be a backlog and delay referral. Dr. McAlister's analyses show that delayed referrals mean poorer outcomes for cardiac patients.

While virtual consultations provided continuity of care when in-person visits were not possible, they have also resulted in reductions in patient testing and necessary medication adjustments. "We're seeing lower rates of population screening for cardiovascular and other diseases," says Dr. McAlister. "COVID has caused a large care deficit that we're going to be dealing with for years to come."

Dr. Ezekowitz echoes this concern. "Patients are well cared for if they are in the hospital, but the outpatient resources we used to rely on to care for those patients long-term in the community after discharge have been refocused on acute care," he says. "That means patients are not going to get responses at the right time."

Dr. Justin Ezekowitz is Professor of Medicine, Division of Cardiology in the Faculty of Medicine & Dentistry's Department of Medicine. He is Director of Cardiovascular Research at the University of Alberta and Co-director of the Canadian VIGOUR Centre.

Dr. Finlay McAlister is Professor of Medicine, Division of General Internal Medicine in the Faculty of Medicine & Dentistry's Department of Medicine. He is Scientific Director, Alberta SPOR (Support for Patient Oriented Research) Unit; Past-Chair, Outcomes Research Task Force, Canadian Hypertension Education Program; and Past-President, Canadian Society of Internal Medicine



MAEVE SMITH & GRACE LAM



MAEVE SMITH & GRACE LAM

Long COVID

IN JUNE 2020, THREE MONTHS AFTER COVID BEGAN TO SURGE THROUGH CANADA, THE DIVISION OF PULMONARY MEDICINE AND RESPIROLOGISTS GRACE LAM AND MAEVE SMITH LAUNCHED A NEW POST-COVID CLINIC TO TREAT THE PERSISTENT SYMPTOMS THEY WERE SEEING IN PEOPLE WHO HAD “RECOVERED” FROM THE VIRUS. AT FIRST, THE REFERRAL-ONLY ADULT CLINIC OFFERED A HALF-DAY SERVICE EVERY TWO WEEKS.

More than a year later, successive waves of COVID had resulted in an increasing number of people presenting with what was officially defined as long COVID. Thanks to Alberta Health Services support, the post-COVID clinic was able to expand into the Edmonton Long COVID Inter-Professional Outpatient Program (IPOP), a multidisciplinary care team that offers treatment programs five days a week. “Given that long COVID can have a whole-body effect on patients, from the start we connected very closely with our specialist working group representing all the divisions in the Department of Medicine,” says Dr. Smith.

Among the many symptoms long COVID patients experience, brain fog, fatigue, and shortness of breath are pervasive in all of the patients Drs. Smith and Lam and their colleagues see. “It’s estimated that between 10 and 30 per cent of COVID survivors will develop long COVID,” says Dr. Lam. “Although we’ve seen patients of all ages, it’s a condition that really impacts predominantly female patients in the 40- to 60-year-old range.”

For Drs. Lam and Smith, learning how long COVID affects patients and how to treat them has been challenging, especially because there’s no playbook. “In medicine we’re used to having guidelines or evidence to guide treatment,” says Dr. Lam. “Long COVID is an entirely new entity.”

To cope, they and their colleagues borrowed treatment strategies used in other conditions such as fibromyalgia, myalgic encephalomyelitis, and chronic fatigue syndrome to treat similar symptoms of long COVID.

While treating symptoms has helped many patients, the pathophysiology of long COVID is unknown. That’s why the IPOP clinic is involved in locally and nationally funded research projects to transform patient data into treatment. Patients provide input through a patient advocacy group. “Many of our patients experience long COVID as an evolving condition over a long time,” says Dr. Smith. “We want to be responsive to them and their needs and ensure they have a voice in clinic policies and research.”

Dr. Grace Lam is Assistant Professor and Dr. Maeve Smith is Associate Professor (July 1, 2022) in the Division of Pulmonary Medicine in the Faculty of Medicine & Dentistry’s Division of Medicine.



JONATHAN CHOY



JONATHAN CHOY

Virtual Health

A SELF-DESCRIBED TECHNOPHILE, CARDIOLOGIST JONATHAN CHOY HAS LONG HELD THE VIEW THAT OUR FOCUS SHOULDN'T BE ON TECHNOLOGY FOR ITS OWN SAKE, BUT ON WHAT TECHNOLOGY CAN DO FOR US. AS ALBERTA HEALTH SERVICES' (AHS) SENIOR PROVINCIAL MEDICAL DIRECTOR IN VIRTUAL HEALTH, HE AND HIS TEAM ARE LEVERAGING TECHNOLOGY TO BRIDGE CLINICAL CARE GAPS AND DRIVE THE INTEGRATION OF VIRTUAL CARE—MEDICAL CARE DELIVERED REMOTELY—INTO ALL ASPECTS OF CARE DELIVERY, FROM HOMECARE TO ICU.

Dr. Choy has first-hand knowledge of the benefits of virtual care. Five years ago, when one of his patients was hospitalized with worsening heart failure, Dr. Choy joined the patient's local primary care physician and caregiver team virtually in Westlock during rounds to offer remote input. The patient was treated in his home hospital, saving him a stressful and unnecessary transfer and stay in Edmonton.

When Dr. Choy started with AHS, virtual care was less than 2% of all clinical care. "It was challenging because clinicians are not huge risk takers, even if the rewards are obvious in virtual care," he says. "A mistake made due to limitations of virtual care could lead to patient harm." That risk aversion, along with the then-clunky software that couldn't connect to people in their own homes, issues with patient consent and confidentiality, lack of practice guidelines, and limited compensation for clinicians, meant that the uptake of virtual care languished.

Then came COVID. "Reluctance to use virtual care disappeared overnight," says Dr. Choy. "The need to see patients and the availability of video conferencing software made virtual care, when clinically appropriate, a popular way to provide care to patients anywhere in the province." Today between 25-30 per cent of all ambulatory visits are conducted virtually.

Virtual care has also become the backbone for large projects such the Edmonton Zone Virtual Hospital, and for a multi-disciplinary team at Alberta Children's Hospital in Calgary that provides specialized pediatric support to local community pediatricians and family physicians in the Medicine Hat area.

"Alberta has a unique advantage in Canada because with the implementation of Connect Care, we will have a common electronic medical record system in AHS in a few years," says Dr. Choy. "Right now, in the hospital, I can coordinate with the entire multidisciplinary clinical team within Connect Care, even if they are not physically with me at the patient's bedside."

Dr. Choy's AHS team of 35 people brings physicians and operational people together to co-design and integrate virtual health into care settings. "We promote the harmonization, coordination, transformation and modernization of our system while customizing delivery according to local patient needs," he says.

"That's the vision," Dr. Choy says. "Our tag line is quality virtual care, anytime, anywhere."

Dr. Jonathan Choy is a Clinical Professor, Department of Medicine in the Faculty of Medicine & Dentistry, a Cardiologist with the Mazankowski Heart Institute, and the Senior Medical Director for Virtual Health, AHS. He also serves as Associate Dean, Clinical Faculty where he ensures the clinical members of faculty have a voice, advocacy and standing at the faculty level for their volunteer contributions to the academic mission.

THE PATH TO COVID RECOVERY

Research Ingenuity



“

The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them.

William Lawrence Bragg

A portrait of Neesh Pannu, a woman with short dark hair, smiling broadly. She is wearing a black crew-neck sweater. The background is a solid, vibrant pink color. The name "NEESH PANNU" is printed in large, white, bold, sans-serif capital letters across the bottom of the image.

NEESH PANNU



NEESH PANNU

Pivoting to Virtual Research

CLINICAL RESEARCH HINGES ON SUCCESSFULLY RECRUITING PATIENTS IN HOSPITAL TO TAKE PART IN RESEARCH TRIALS. A RESEARCH TEAM'S COORDINATOR IS OFTEN THE DRIVING FORCE FOR RECRUITMENT BY WORKING DIRECTLY IN HOSPITAL SITES WITH HEALTH CARE WORKERS AND PATIENTS. COVID BROUGHT ALL THAT TO AN ABRUPT HALT. "ONE OF THE OUTCOMES FROM THE URGENT DEMAND FOR CLINICAL CARE DURING COVID WAS RESTRICTIONS ON NON-COVID CLINICAL RESEARCH," SAYS ASSOCIATE DEAN OF CLINICAL RESEARCH PLATFORMS, NEESH PANNU.

In response, Dr. Pannu and the Clinical Research Initiative working group, a faculty-wide, multi-disciplinary group of research coordinators, hosted a webinar in the fall of 2020 and developed a clinical research toolkit. "The toolkit provides guidance to clinical researchers for how they can pivot their research during the pandemic," says Dr. Pannu. "It addresses many of the challenges COVID presented around patient recruitment, patient data collection, and data management." The toolkit, now available on the Faculty of Medicine & Dentistry website, outlines options for virtual recruitment, virtual consenting, and virtual follow-up with patients.

Another challenge—and opportunity—for clinical researchers was the implementation during the pandemic of Connect Care, the new centralized electronic medical record system.

"There is a lot of interest in leveraging Connect Care data for quality improvement research, observational studies, clinical trials, and pragmatic trials," says Dr. Pannu. In fact, much of the work she did in 2021 was focused on understanding researcher needs and co-developing pathways for the design and conduct of pragmatic trials within Connect Care. She also chairs an open university working group that meets regularly with Alberta Health Services (AHS) to look at the barriers for clinical researchers wanting to use Connect Care. That's resulted in several local projects that will pave the way for future research. It's also led to an active collaboration with AHS to identify patients who might want to participate virtually in COVID-related research.

Dr. Pannu's own research in the development and implementation of a patient-centred transition to dialysis has benefited from pivoting to virtual. "We recruited our study coordinators and study manager through Zoom," she says. "Half of them live in Calgary and half in Edmonton, and we've been able to get this research program successfully up and running across the province."

"The pandemic has also shown us we can do things in a better, more patient-centred way," she says. "I can see future research recruitment and data collection transitioning to virtual so that it doesn't involve patients coming to a hospital for a research visit or recruitment when they are facing significant health challenges."

Dr. Neesh Pannu is Professor in the Division of Nephrology in the Faculty of Medicine & Dentistry's Department of Medicine. Dr. Pannu is the Scientific Director of the Kidney Strategic Clinical Network, which has sponsored her incremental dialysis research implementation project.



CHESTER HO



CHESTER HO

Spinal Cord Injury Rehabilitation

“MANY OF OUR RURAL SPINAL CORD INJURY PATIENTS TELL US THAT AFTER THEY LEAVE THE HOSPITAL, THEY FEEL THAT THEY’VE FALLEN OFF A CLIFF,” SAYS CHESTER HO, SENIOR MEDICAL DIRECTOR FOR ALBERTA HEALTH SERVICES’ NEUROSCIENCES, REHABILITATION & VISION STRATEGIC CLINICAL NETWORK (NRV SCN).

People with spinal cord injury (SCI) can face significant paralysis, loss of body function, skin breakdown, and psychological issues, not to mention loss of employment and transportation. Living in rural areas can compound these challenges because of lack of connections and local supports for care, rehabilitation, and equipment. “The result is SCI patients basically use the emergency department or go to the local hospital for admission for potentially preventable complications such as urinary tract infections or pressure injuries at a higher rate,” says Dr. Ho

Addressing that inequity in care is the aim of the CONnecting and Coordinating an Enhanced Network for TRansitions In Care (CONCENTRIC) collaboration, funded by the Canadian Institutes of Health Research (CIHR). The provincial CONCENTRIC team, comprising patients, community stakeholders, and healthcare experts, are identifying the issues faced by rural SCI patients to create and implement a new, consistent model of care throughout Alberta. “Once we build the expertise around the province, the same model can serve other neurological conditions as well,” says Dr. Ho.

Much of his other work emphasizes translating research advances into clinical use. One current research project involves SCI patients using a special bicycle, which electrically stimulates paralyzed muscles. Patients use the bike within several weeks of their spinal cord injuries, because as Dr. Ho says, “animal models show that early exercise training can actually improve neuro-recovery.” Apart from studying its effects on neuro-recovery, he’s working with the University of Alberta Hospital, Royal Alexandra Hospital, and the Glenrose Rehabilitation Hospital to streamline the integration and use of the bicycle in clinical practice.

The pandemic emphasized the pressing need for COVID-related research in rehabilitation. In 2021 the NRV SCN developed a novel framework for screening and streamlining the right level of rehabilitation for patients with long COVID conditions. CIHR funding will help implement and evaluate the framework provincially in 2022. A related research project sponsored by the NRV SCN is surveying 100,000 Albertans to seek input about their experiences with COVID, including information about long-term symptoms. The survey information will be used to plan future health services to treat long COVID.

“My research is very applied, very clinically oriented,” says Dr. Ho. “It’s all about improving the recovery and quality of life of patients by using their experiences and needs to plan care and service delivery.”

Dr. Chester Ho is Professor and former Director of the Division of Physical Medicine & Rehabilitation Medicine. He is Interim Zone Clinical Department Head for Neurosciences and the inaugural University of Alberta endowed Spinal Cord Injury Research Chair.



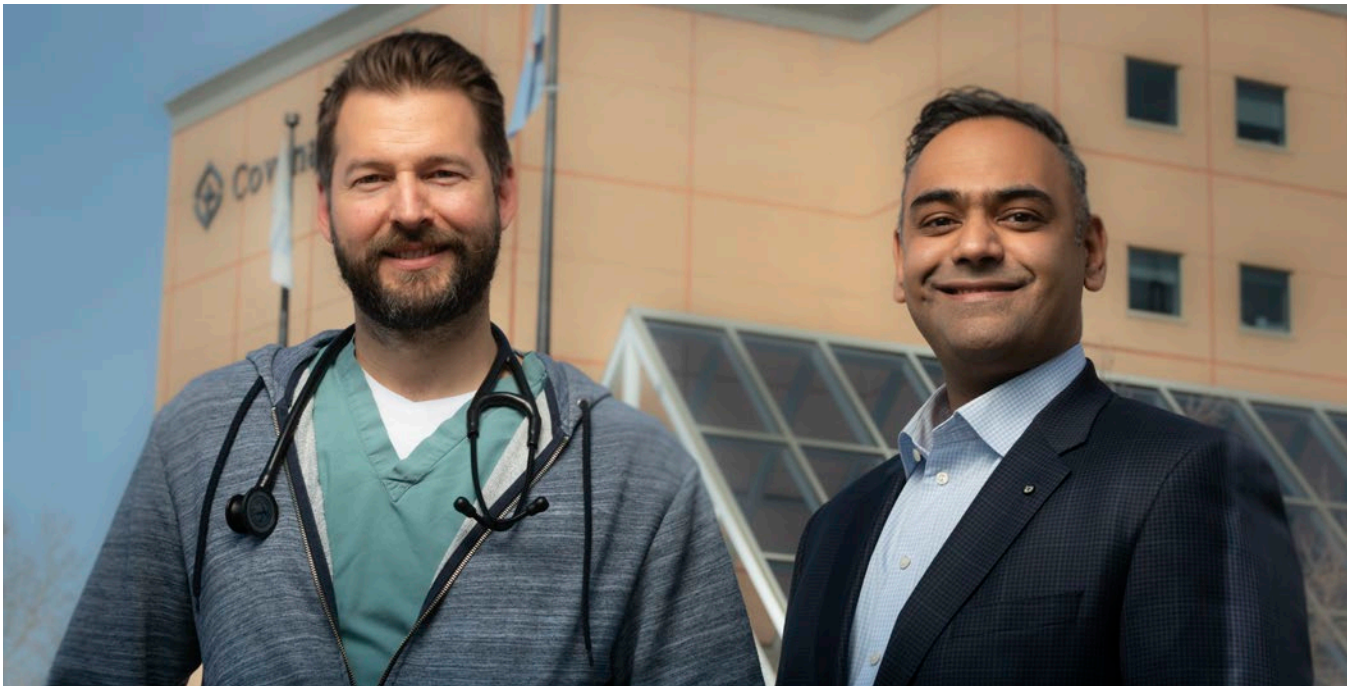
“

Patients don't put their trust in machines or devices. They put their trust in you.

Margaret Hamburg

THE PATH TO COVID RECOVERY

**Medical Education
Edmonton Zone
Hospital Sites**



GREY NUNS

PGME Elliott Sprague and UGME Kam Birdi

Elliott Sprague is the principal teaching physician (PTP) and post graduate medical education (PGME) lead for general internal medicine at the Grey Nuns Community Hospital. For most of 2021, core in-person learning and bedside teaching were cancelled at the site.

The switch to Zoom learning kept education on track, teaching on rounds continued with limited numbers of learners allowed in patient rooms, and Dr. Sprague and his colleagues supplemented bedside teaching with more didactic clinical instruction to make up the difference.

"Residents lost valuable time and experience, and it's only several months later that we are seeing the impact," he says. "We're seeing learners who weren't able to travel to other sites or others who weren't able to come from other provinces, and that takes a toll on experience."

The training systems in place are designed so that learners gain the knowledge they need even in situations like the pandemic. "If it takes residents a little longer to hit their markers, that's just fine," says Dr. Sprague.

He credits the help given by the Department of Medicine's PGME office. "Dr. Katz and the team were just amazing at helping us fill gaps in our call schedule when residents fell ill or had to isolate," he says. "And despite the challenges, the residents did a phenomenal job supporting us."

Kam Birdi has been undergraduate medical education lead (UGME) at the Grey Nuns for a little more than a year. The pandemic created an additional learning curve for undergraduate students on top of their transition from in-class learning to clinical application of knowledge. "For learners, not being able to see patients when we are trying to teach them clinical medicine is just such a huge disadvantage," Dr. Birdi says. "Then, when they were allowed back on ward, keeping them safe from COVID exposure was another challenge."

Students had to make up lost clinical rotation time usually by foregoing their elective time. "They plan their rotations based on what they want to do in the future," says Dr. Birdi. "COVID meant that they could only do rotations in their primary focus area." He cites examples of current first-year surgery residents who had their internal medicine rotations cut short in their final undergraduate year by the pandemic. "They are having to work really hard to make up that knowledge as residents."

Like Dr. Sprague, he isn't worried about learners not reaching program goals. "These are very highly motivated individuals who are driven to succeed," says Dr. Birdi. "They've been put at a disadvantage, but they're figuring out ways to make up the time and get where they need to be."

General Internal Medicine Division (GIM) Assistant Clinical Professor Elliott Sprague is principal teaching professor and PGME lead at the Grey Nuns Community Hospital.

GIM Division Clinical Lecturer Kam Birdi is UGME lead at the Grey Nuns Community Hospital.



MISERICORDIA

Dan Slabu

Misericordia Hospital Internal Medicine Site Chief **Dan Slabu** is also the lead for medical education for general internal medicine (GIM) at the hospital. The Postgraduate Medical Education program (PGME) at the University of Alberta helps coordinate clinical teaching of residents, who act as junior attending physicians, at the Misericordia.

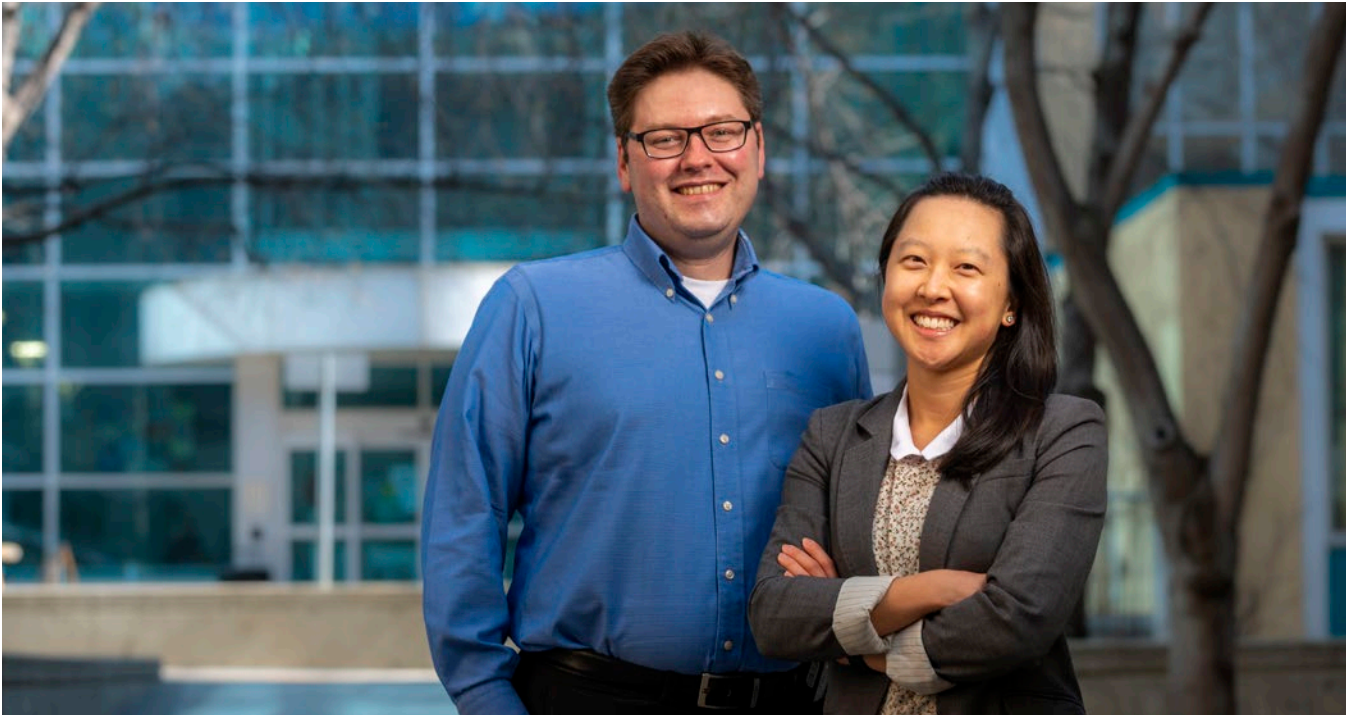
When the pandemic first hit in 2020, all undergraduate medical students were pulled from clinical learning in Edmonton area hospitals. At the Misericordia, residents were also removed from the wards. As Dr. Slabu says, “My mantra was ‘we don’t understand this disease, and I don’t want residents to get it.’” By 2021, with so much more knowledge and understanding of COVID, and with vaccines, personal protective equipment, and COVID protocols in place, residents were back on Edmonton hospital wards, including the COVID wards. But the halt in on-site clinical experience affected learners who were on a high-pressure learning track.

In an effort to continue teaching opportunities at the Misericordia, Dr. Slabu collaborated with Dr. Jay Varghese, associate program director for Internal Medicine at the University of Alberta, on a pilot program to include the Misericordia as a training site for senior GIM residents, those in their fourth year of training.

“The senior residents are already qualified,” Dr. Slabu says. “This project exposes them to an urban community site and helps them learn how to function as fully qualified and independent physicians.”

The rotations program has proven to be popular with residents, giving them needed clinical experience the year before they qualify as specialist physicians. Dr. Slabu has also been approached by medical students who want to shadow clinical staff physicians. Students would not be involved in hands-on clinical care but would observe and learn bedside skills. While he has approved the shadowing, students need approval from program directors and medical affairs. “These opportunities are not part of the required structured learning programs,” says Dr. Slabu. “They are opportunities that have arisen because of the pandemic and learners’ need to gain experience.”

Dr. Dan Slabu is Assistant Clinical Professor (July 1, 2022) with the Division of General Internal Medicine in the Department of Medicine.



ROYAL ALEXANDRA

UGME Lillian Chan and PGME Vasile Captan

Lillian Chan took over as Undergraduate Medical Education (UGME) lead at the Royal Alexandra Hospital (RAH) in July 2021, with specific oversight of third-year students in the core internal medicine rotation.

“The major challenges were changes in learning and reduced clinical opportunities,” says Dr. Chan. Cessation of in-person physical exams and interactions with real patients, coupled with a temporary reduction in students’ rotation times and absenteeism because of COVID, added up to significant loss of clinical experience and internal medicine learning—up to 25%—for students.

Dr. Chan is most proud of the resilience and adaptability of learners. “Many adjusted their learning strategies and sought out clinical learning opportunities,” she says. Virtual learning promoted attendance for students who rotate between different sites. For in-person learning, larger, well-ventilated rooms allowed for physical distancing, and learners wore N-95 masks.

“The pandemic exposed the prevalence and impact of mental health issues and burnout,” says Dr. Chan. “That’s now more openly discussed between learners and supervisors, which is a truly positive outcome from the year.”

Vasile Captan has had the role of principal teaching physician for Postgraduate Medical Education (PGME) at RAH for four years. Dr. Captan says the big fear when COVID first hit was that it would overwhelm hospitals and the health system and that those impacts would affect learners at RAH.

“We rely on learner support to keep the internal medicine services going and to be able to function,” says Dr. Captan. “Senior residents in particular see patients in Emergency 24/7, and they are often the first point of contact for patients being admitted.”

Successive waves of COVID created a stop-and-go effect on residents’ bedside learning and on coverage of internal medicine. In the fall of 2021, the third wave of COVID resulted in many residents testing positive and having to step away from rotations. “We had to do a lot of scrambling to fill call coverage gaps,” says Dr. Captan. “Steven Katz [head of the core internal medicine program] was fantastic, helping us cover very short notice call deficiencies so that the impact on patients was minimal.”

Certain team building traditions of learning such as residents grabbing coffee and discussing rounds together are no longer allowed on wards. Yet, Dr. Captan is optimistic. “As the pandemic moves on, we’ve adapted and have gotten used to doing things in new ways.”

General Internal Medicine (GIM) Division Assistant Clinical Professor (July 1, 2022) Lillian Chan

GIM Division Assistant Clinical Professor Vasile Captan is PGME lead at the Royal Alexandra Hospital.



STURGEON

Ryan Choudhury

Medical education at the Sturgeon Community Hospital is focused on residents and physician assistants, so the effects of the pandemic on learning were not as deeply felt as they were at urban hospitals where undergraduate students were not allowed on wards for several weeks. “With limited bedside teaching at times, we had to do things differently and come up with other ways of guiding them along and giving them that core experience,” says **Ryan Choudhury**, who has been core internal medicine education lead at the Sturgeon for four years.

Providing that core experience was easier since just one or two residents are on site at a time per rotation. “I find residents get a lot more independence,” Dr. Choudhury says. “They get the chance to work one-on-one with our staff and, depending on their clinical and management skills, can have opportunities to act as an attending physician on the team.”

Dr. Choudhury appreciated how learners rotating among the different hospital sites provided an information conduit. “It was good to share information with them about how different sites were managing COVID-related medical issues,” he says. “One example was how anticoagulation was managed in COVID patients as there were no guidelines.”

Dr. Choudhury also oversees learners in the first-ever general internal medicine physician assistant program at the Sturgeon. “Education-wise, physician assistants learn with us on daily rounds, receive one-on-one attention from us, and help care for patients with us, just as residents do,” he says. “Once their training is finished and they find a job with us, they stay permanently on our medical team.”

Dr. Choudhury notes that residents, learners, and staff were experiencing increased burnout in the second year of the pandemic. “There was a change in patients’ attitudes as well, pre- and post-vaccine, that affected us,” he says. “And every wave of COVID was slightly different, so there was a new learning experience with each one.”

General Internal Medicine Division Assistant Clinical Professor (July 1, 2022) Dr. Ryan Choudhury is education lead at the Sturgeon Community Hospital.



UNIVERSITY OF ALBERTA

UGME Lindsay Bridgland and PGME Caity Collins

Pandemic disruptions to the Undergraduate Medical Education (UGME) program continued in 2021, says Lindsay Bridgland, principal teaching physician for UGME at the University of Alberta Hospital (UAH). “Successive pandemic waves meant that there was limited teaching space as teaching rooms became supply rooms, teaching schedules were rearranged multiple times, and scheduling virtual teaching sessions that worked for everyone was difficult,” says Dr. Bridgland. “In-person bedside training was curtailed to reduce the risk of virus exposure for both learners and patients, and student rotations were reduced by two weeks.”

Yet the structure of the UGME General Internal Medicine (GIM) rotation meant that learners continued to receive necessary instruction. Long-standing Friday afternoon sessions helped students learn theory and gave them the opportunity to practise doing physical exams on each other. Paper rounds, where learners reviewed and discussed patient cases, took on

more significance in the absence of in-person bedside rounds.

“The Objective Structured Clinical Examination (OSCE) assesses learners’ physical examination skills at the end of every rotation,” says Dr. Bridgland. “During COVID, the OSCE went virtual.” Pre-pandemic, the OSCE exam was completely in-person, with five to six of the exam stations focusing on physical examination of patients. All physical exam stations were removed from the virtual OSCE, limiting assessment of students’ physical exam abilities. During the first part of 2021, students conducted only two in-person physical exams with patients on the ward during their GIM rotation.

In-person teaching is paramount in medical education, says Dr. Bridgland. “So much learning occurs without us even realizing we are teaching, for example, when we have team discussions at the bedside,” she says. “Teaching is also about communicating how we’re teaching, what our expectations are, and how we are adapting, to make sure student education is a priority.”

By the end of 2021, UGME learner education was back on somewhat of a normal track, thanks to the extra efforts by learners and accommodations by teachers and assessors for the extraordinary circumstances.

Dr. Bridgland’s UAH counterpart for Postgraduate Medical Education (PGME), Caity Collins, supervises years one to three residents in the core GIM program. Many of the 90 residents in the GIM program have experienced their entire residencies during COVID, with much of their learning virtual.

“A positive is that it’s easier for residents to attend teaching sessions virtually when they are post-call or are between rotations,” says Dr. Collins. “The drawback is that we don’t have that face-to-face interaction.”

Throughout the pandemic, medical residents continued to do rotations and see COVID patients in the Emergency Department, with senior residents permitted to work on the COVID wards and provide nighttime coverage. “Despite everything, residents got the training they needed,” says Dr. Collins. “Patient volumes were really high, we were seeing full wards, and there was never any shortage of internal medicine patients coming in.”

GIM Division Associate Clinical Professor Dr. Lindsay Bridgland is principal teaching physician for the UGME at the UAH. She is program director for the General Internal Medicine Residency Program at the University of Alberta.

GIM Division Assistant Clinical Professor (July 1, 2022) Dr. Caity Collins is interim PGME lead, replacing Dr. Clarissa Augusto who is on maternity leave.

A woman in light blue medical scrubs is sitting on the floor, leaning against a wall. She has her head buried in her hands, looking down with a distressed expression. Her hair is tied back in a ponytail. The background is a blurred indoor setting, possibly a hospital hallway. The entire image has a semi-transparent red overlay.

THE PATH TO COVID RECOVERY

Learning & Wellness Priorities

“

Those burdens are what make medicine holy and wholly impossible: in taking up another's cross, one must sometimes get crushed by the weight.

Paul Kalinithi



CHERYL GOLDSTEIN



CHERYL GOLDSTEIN

Learner Wellness

“PART OF THE REASON MEDICAL LEARNERS EXPERIENCE BURNOUT, DEPRESSION AND EVEN SUICIDE IS BECAUSE OF THE CULTURE OF MEDICINE,” SAYS CHERYL GOLDSTEIN, ASSOCIATE DEAN AT THE OFFICE OF ADVOCACY AND WELLNESS. “IT PROMOTES MYTHS THAT WE ARE UNABLE TO BE VULNERABLE OR TO REACH OUT FOR HELP AND THAT WE ARE SUPPOSED TO BE TOUGH AND STRONG,” SHE SAYS.

Dr. Goldstein sees the consequences of that culture when learners at all levels come to the Office of Advocacy and Wellbeing (OAW) seeking support. The OAW operates at arms’-length from any program and provides a safe, confidential space for learners to share academic, medical, mental health, financial and other concerns.

Earlier in her career, as associate program director for internal medicine, she referred medical residents who needed help to the Learner Advocacy and Wellbeing (LAW) Office. Dr. Goldstein was so impressed by LAW that when a position opened for an Assistant Dean, Undergraduate in 2017, she successfully applied for it.

Dr. Goldstein credits her predecessor Melanie Lewis for developing LAW into a robust support program for undergraduate and postgraduate learners, encompassing all five programs within the Faculty of Medicine & Dentistry (FoMD): medicine, dentistry, dental hygiene, radiation therapy, and medical lab science. Dr. Lewis hired a psychologist—there are now two—and added an assistant deanship position to support graduate students in the FoMD as well.

Despite the name change from LAW to OAW in 2019, the principles have remained the same. “Our goal is to remove any barrier for our learners that would prevent them from being their best selves,” says Dr. Goldstein. “We are a national leader because of our independent reporting structure and the range of learners we support.”

COVID only increased the need for support. “The switch to online learning created social isolation and prevented opportunities to socialize and share experiences for learners,” says Dr. Goldstein. During 2021, appointments to see the Office’s staff increased by 400 from the year before, with a total of 5600 visits.

“It’s been really important to have wellness promoted at the Dean and Chair levels,” says Dr. Goldstein. “We are all impacted by the stressors of the job, particularly now during COVID, so that leadership is super important and valued.”

Dr. Goldstein plans to develop the office’s resource portfolio with the addition of career advisors and by undertaking research projects on such topics as the culture of medicine, imposter syndrome, goal setting, and issues pertaining to learner wellbeing in medical education. “I’m so grateful to have this position and the privilege to collaborate and learn from the OAW team, learners, and faculty,” she says.

Dr. Cheryl Goldstein is Associate Professor in the Division of General Internal Medicine in the Faculty of Medicine & Dentistry’s Department of Medicine.



JANIS MIYASAKI



JANIS MIYASAKI

Addressing Inequity

AFTER COMPLETING HER MEDICAL AND MASTER'S DEGREES—THE LATTER IN INEQUITIES FACED BY WOMEN IN ACADEMIC MEDICINE—JANIS MIYASAKI JOINED THE MEDICAL FACULTY AT THE UNIVERSITY OF TORONTO. DURING HER RECRUITMENT IN 2014 TO THE UNIVERSITY OF ALBERTA, SHE DISCOVERED THAT THE POST-GRADUATE FELLOW SHE SUPERVISED AT THE UNIVERSITY OF TORONTO WAS BEING PAID EXACTLY WHAT SHE WAS BEING PAID BY THE SAME INSTITUTION. IT WAS HIS FIRST JOB WHILE SHE HAD BEEN ON FACULTY FOR 20 YEARS.

A major focus of Dr. Miyasaki's career is professional inequity. She has undertaken several projects to address inequity through her two-decades-long association with the American Academy of Neurology (AAN). One project examined the higher rate of burnout among female neurologists than among their male colleagues, largely because women are more often given undervalued, underrecognized, and unpaid tasks in the workplace. Her efforts contributed to the AAN's development of leadership and promotion initiatives for women.

In 2021, Dr. Miyasaki became the AAN's vice-president. She is the first Canadian and first female of colour to be in the presidential line.

Closer to home, in 2021 she was appointed the inaugural director of Equity, Diversity and Inclusion (EDI) for the Department of Medicine. Dr. Miyasaki and the EDI committee are developing guiding principles for the department for the next five years, based on input from department members and learners. "As this process unfolds, my goal is that all people will feel included and seen and heard," she says.

Another important project is a survey of department members—faculty, researchers, trainees, support staff—about their demographics and any experiences they have had with racism and bias in their work.

"All of these personal experiences, as well as research, have emphasized to me the importance of being aware of the systemic issues that face many of our colleagues and, in response, developing education and intentional programs," says Dr. Miyasaki.

It's a response she aims to implement in the department, by weaving EDI and the social determinants of health into the education of trainees, starting at the faculty level. "When faculty are conversant in the terms, the philosophy, and the issues, they can model the behaviour that helps learners incorporate what they have learned," she says.

Dr. Miyasaki and her EDI team reflect a diversity of membership in the divisions they represent, their job descriptions, and their hospital base. "I hope that people will see this is not a top-down effort but is being developed by the people who are often impacted," she says.

Professor Dr. Janis Miyasaki is Director, Division of Neurology; Director of the Parkinson and Movement Disorders Program, a Parkinson Foundation Centre of Excellence; and the Co-Director and Founder of Neuropalliative and Advanced Symptoms Clinic at the University of Alberta Hospital.

A close-up portrait of a man with dark hair, smiling broadly. He is wearing a light blue collared shirt under a dark, textured blazer. The background is a solid, vibrant pink color.

ILAN SCHWARTZ



ILAN SCHWARTZ

Personal Experience of COVID

INFECTIOUS DISEASE SPECIALIST ILAN SCHWARTZ HAD BEEN IN THE FRONT LINES CARING FOR PATIENTS IN THE COVID WARDS FOR SIX MONTHS WHEN HE CAUGHT THE VIRUS IN NOVEMBER 2020. HE DIDN'T CATCH IT FROM THE HOSPITAL, HOWEVER. INSTEAD COVID SWEEPED THROUGH HIS YOUNGEST DAUGHTER'S DAYCARE AND, WITHIN DAYS, 22 OUT OF 23 CHILDREN HAD IT AND SPREAD IT TO THEIR FAMILIES. THE SCHWARTZ HOUSEHOLD WAS ONE OF THOSE FAMILIES.

"We all got sick a few months before the vaccine was available," says Dr. Schwartz. "The infection was very mild in my children and their symptoms lasted just a few days." For him and his wife, the disease initially felt like a mild flu with fever, cough, muscle aches, and tiredness. Both are physically active, and it took several months before they were back at their pre-COVID levels of activity and exercise tolerance.

There was another lingering effect for Dr. Schwartz: tinnitus. "I noticed a ringing in my ears about five days into the infection and initially thought it would improve," he says. "Unfortunately, more than 15 months later, I've resigned myself to the fact that this may be with me for the rest of my life."

Tinnitus is extremely common and can come from not only COVID but other viral respiratory infections or even from medications. In other cases, it comes out of the blue. "Pre-COVID, if I'd had a patient who mentioned having tinnitus, I didn't fully appreciate just how irritating it is, how it interferes with reading and thinking and hearing," Dr. Schwartz says. "I have trouble just trying to hear my children when they're speaking quietly or wearing a mask."

Dr. Schwartz doesn't want to dwell on his tinnitus after witnessing so many deaths from COVID and seeing just how badly it has affected other people, especially immune-compromised patients. As a clinical specialist in transplant organ infections and a researcher and clinician in fungal infections, he knows that his patients are fully vaccinated but still vulnerable because of the immunosuppressive medication that they're on.

"I've become very involved in advocacy around COVID policy," Dr. Schwartz says. "That's informed partly by my experience as a patient and primarily by my encounters with patients who remain vulnerable not only to COVID but to the whims of society whom they rely upon for protection."

On the home front, the Schwartz family is fully vaccinated. "But there are still a lot of unknowns, including the risks of long-term effects with long COVID or with COVID in general in children," Dr. Schwartz says. "We're trying to balance caution with our need for some semblance of normalcy, so we can function and thrive as individuals and as a family."

Dr. Ilan Schwartz is a clinician-scientist and Assistant Professor with the Division of Infectious Diseases in the University of Alberta's Faculty of Medicine & Dentistry. He is interested in digital scholarship and his Twitter name is @GermHunterMD

“

In our job, you will never go home at the end of the day thinking that you haven't done something valuable and important.

Suneel Dhand

DIVISION DIRECTORS Department of Medicine

DEPARTMENT OF MEDICINE

2021 DIVISIONAL LEADERSHIP



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

- Paolo Raggi**, Cardiology (*Interim*) (*until December 2021*)
- Michelle Graham**, Cardiology (*as of December 2021*)
- Robert Gniadecki**, Dermatology
- Jacques Romney**, Endocrinology & Metabolism (*Interim*)
- Daniel Baumgart**, Gastroenterology
- Clarence Wong**, Zone Section Chief, Gastroenterology
- Peter Hamilton**, General Internal Medicine (*until March, 2021*)
- Raj Padwal**, General Internal Medicine (*Interim*) (*as of April 2021*)
- Brian Wirzba**, Zone Section Chief, General Internal Medicine (*Interim*)
- Adrian Wagg**, Geriatric Medicine
- Joseph Brandwein**, Hematology
- Karen Doucette**, Infectious Diseases
- Branko Braam**, Nephrology
- Douglas Zochodne**, Neurology
- Chester Ho**, Physical Medicine & Rehabilitation (*until July 2021*)
- Ming Chan**, Physical Medicine & Rehabilitation (*co-Interim*) (*as of August 2021*)
- Nigel Ashcroft**, Physical Medicine & Rehabilitation (*co-Interim*) (*as of August 2021*)
- Sebastian Straube**, Preventive Medicine
- Giovanni Ferrara**, Pulmonary Medicine
- Jan Willem Cohen Tervaert**, Rheumatology

CARDIOLOGY



Interim Director **Paolo Raggi**
Director **Michelle Graham**

A highlight for Interim Division Director **Paolo Raggi** in 2021 was the unusually high number of publications in highly ranked journals by division members—over 150—despite the intense demands of COVID-19.

Adjunct Professor **Eliano Navarese** was lead author, and **Paolo Raggi** a contributing author, on “Cardiac Mortality in Patients Randomised to Elective Coronary Revascularisation Plus Medical Therapy or Medical Therapy Alone: A Systematic Review and Meta-analysis” in the *European Heart Journal*; Dr. Raggi was a contributing author on “Impaired Peripheral Microvascular Function and Risk of Major Adverse Cardiovascular Events in Patients With Coronary Artery Disease” in *Arteriosclerosis, Thrombosis and Vascular Biology*; and **Justin Ezekowitz** was a contributing author on “Health-Related Quality of Life and Mortality in Heart Failure: The Global Congestive Heart Failure Study of 23 000 Patients From 40 Countries” in *Circulation*.

The three publications have far-ranging implications, from quelling a decades-old debate about the benefits of coronary revascularization to focusing attention on microvascular impairment, a condition often seen in women as a predictor of serious heart disease, to improving quality of life for patients with the most common coronary condition, congestive heart failure.

Miriam Shanks left the division in 2021.

One of the effects of COVID-19 is cardiomyopathy, an inflammatory condition of the heart muscle that has received wide media attention. “We received ethics approval to collect information on our U of A Cardiomyopathy Clinic patients as part of a national registry,” says Dr. Raggi. “As well, we studied 200 patients with recovered COVID-19, which led to the development of a clinic to treat people suffering cardiac issues because of long COVID.”

The Adult Congenital Heart Disease (ACHD) program was awarded a Mazankowski Innovation Fund award to develop a psychosocial support program for cardiac patients. “We added full-time fellowship training in ACHD this year and are in the process of becoming an accredited centre for ACHD training,” says Dr. Raggi. “Much of this success is due to **Isabelle Vonder Muhll** [see *cameo*], who was on the committee that developed the standards of training, and **Dylan Taylor**. Together they have created a comprehensive program to treat and support patients with ACHD.” **Evangelos Michelakis** was awarded the 2021 Killam Annual Professorship

In late December, **Michelle Graham** was appointed division director. An interventional cardiologist and researcher, Dr. Graham is active at the Canadian Cardiovascular Society and was awarded the 2021 Women in Cardiovascular Medicine/Science Mentorship Award. She also won the Department of Medicine’s Clinical Investigation Publication Award in 2021. Looking ahead in 2022, she wants to support recovery from COVID-19 and strengthen and grow the excellent teams in the division through clinical innovation, research, and recruitment.

Residents 9

Clinical Fellows 13

Specialized Clinics 8



InProfile

CARDIOLOGY

ISABELLE VONDER MUHLL



Associate Professor Isabelle Vonder Muhll directs the Northern Alberta Adult Congenital Heart (NAACH) program at the Mazankowski Alberta Heart Institute. NAACH group members are leaders in performing the latest surgical techniques and are active in clinical care, research, and education to help adults with congenital heart disease. During the pandemic, NAACH continued to receive referrals from across western Canada of adult congenital heart patients with complex problems, with more than 1500 patients admitted to the program. Mazankowski Alberta Heart Institute Innovation Fund support is helping NAACH develop programs to address psychosocial needs of cardiac outpatients.

DR. IAN PATERSON



Cardiologist and researcher Ian Paterson led two initiatives in 2021 to improve the care of patients following COVID-19 illness. He conducted a CIHR-funded observational study (Multi-Organ Imaging with Serial Testing) of over 200 Albertans three to six months after COVID-19 illness to characterize organ injury on MRI and to identify potential associations with functional impairment. Dr. Paterson was also lead author on a Canadian Cardiovascular Society position paper providing guidance on the cardiovascular care of patients with long COVID, a condition affecting up to 30% of patients with prior infection.

DERMATOLOGY



Director Robert Gniadecki

“Being able to accommodate 80–90 per cent of our full patient load while maintaining the strictest precautions during this second year of COVID was an achievement,” says Division Director **Robert Gniadecki**. “If we had reduced consultations in our nine high-volume clinics, then many of our patients would have ended up in Emergency with very long wait times and the potential for catching COVID.”

Opening the new Psychodermatology Skin Health Clinic under the leadership of **Marlene Dyto**c was another achievement. “This clinic sees a small subset of very difficult-to-treat patients with mental illnesses where they believe they have parasites living under their skin,” says Dr. Gniadecki. Dr. Dyto works with a psychiatrist to manage patients’ care. If left untreated, some of these patients can pick at their skin all the way to the bone in their attempts to dig out the parasites, leading to infection or worse.

The Psychodermatology Clinic is one example of why medical dermatology is vital for ensuring clinical expertise and research activity to treat and advance knowledge of skin diseases. One of Dr. Gniadecki’s ongoing concerns is maintaining if not increasing that expertise in the division. He also relies on dermatologists in private practice to teach and contribute to the division’s expertise. One such dermatologist is **Gordon Searles**. “Dr. Searles has given a lot to the division and is a wonderful example of a dermatologist who maintains both a private practice and his strong affiliations to academic medicine,” says Dr. Gniadecki. Dr. Searles was awarded the Canadian Dermatology Association’s 2021 Award of Merit [see *cameo*].

Publications by Dermatology Division members cover topics from novel approaches to treating cancer to the first systematic review of biologics to guide the treatment of psoriasis.

Maggie Xiao was lead author and **Dylan Hennessey, Aishwarya Iyer, Sandra O’Keefe, F. Zhang, Arunima Sivanand, and Robert Gniadecki** were contributing authors on “Transcriptomic Changes during Stage Progression of Mycosis Fungoides” in *The British Journal of Dermatology*; **Ahmed Mourad** and **Dr. Gniadecki** were co-authors on “Biologic Drug Survival in Psoriasis: A Systematic Review & Comparative Meta-Analysis” in *Frontiers of Medicine*; and **Philip Surmanowicz, Arunima Sivanand, Amy Du, Muhammad Mahmoud, and Robert Gniadecki** were authors on “Muffin Technique Micrographic Surgery for Non-melanoma Skin Cancer” in *Frontiers of Medicine*.

In 2022, Dr. Gniadecki is looking to make improvements in the residency program to encourage residents to stay in medical dermatology. “Our mandate in the university is to see patients who need special help because there aren’t a lot of options for them in community practices that mainly focus on cosmetic dermatology,” he says. “Medical dermatology is life and death for some patients, and we need more good people to provide that important care.”

Graduate Students 2

Residents 15

Post-doctoral Fellows 1

Multidisciplinary Clinics 5

Specialized Clinics 4



InProfile

DERMATOLOGY

RACHEL DOUCET



Nurse Rachel Doucet has worked in Alberta Health Services for 35 years. Early in her career she found her passions were general medicine and oncology patients, so Dermatology was the perfect fit. Despite COVID, people with serious skin diseases and skin cancers needed optimal care, and Ms. Doucet was there to ensure patients felt safe coming for in-person visits. She remembers 2021 for diligent screening, personal protective equipment, staff shortages, and teams coming together and supporting each other. Ms. Doucet is retiring in 2022, “thankful and proud” of her 15 years with the Dermatology team.

GORDON SEARLES



Clinical Professor Gordon Searles is a community-based dermatologist who has made major contributions to his discipline and to the Division of Dermatology. He is president of the Canadian Dermatology Foundation and a current member of the Residency Program Committee for Dermatology. His history of leadership includes being former program director in Dermatology for Alberta, past president of both the Canadian and the Pacific Dermatology Associations, and co-founder of Campe Liberte, a summer camp for children with skin conditions. In 2021, Dr. Searles received the Canadian Dermatology Association’s Award of Merit for the excellence of his leadership and contributions to the field.

ENDOCRINOLOGY & METABOLISM



Interim Director **Jacques Romney**

“We continued to provide a high volume of excellent virtual care during the pandemic,” says Interim Division Director **Jacques Romney**. “We’re not seeing that many significant effects of the virus or the vaccinations on endocrine conditions *per se*; however, some patients with endocrine diseases were worried about the vaccine,” Dr. Romney says. “Our group still played a role in counselling patients regarding vaccination and ensuring they have trustworthy sources of information.”

Virtual care made it challenging to pursue clinical research. “For example, we often recruit patients for clinical trials in diabetes research in face-to-face consults or with posters in the diabetes clinic,” he says. “But recruiting patients and then running studies virtually is a challenge. Additionally, virtual care, while convenient for patients, is conducted without nursing staff support so it takes more physician time.”

The division has maintained its teaching of all levels of learners. One pandemic-inspired initiative, *Endocrinologists in Cars Getting Coffee*, is in its second year and continues to be a favourite of first year medical students during Endocrine Block. **Drs. Romney, Liz Rosolowsky** (pediatric endocrinologist and DMED 513 course coordinator), **Tammy McNab**, and **Andrea Ogenorth** channeled their inner Jerry Seinfeld for an episode on osteoporosis.

Division members contributed to many articles published in 2021. Lead author publications included **Peter Senior** for “Glucose as a Modifiable Cause of Atherosclerotic Cardiovascular Disease: Insights from Type 1 Diabetes and Transplantation” in *Atherosclerosis*; **Rose Yeung** for “Management of Mitochondrial Diabetes in the Era of Novel Therapies” in *Journal of Diabetes and its Complications*; Anna Lam for “A Little Help from Residual β cells Has Long-lasting Clinical Benefits” in the *Journal of Clinical Investigation*; and **Sangita Sharma** for “Dietary Adequacy among Multi-Ethnic Urban Youth in Edmonton: Findings from the Wellness and Health in Youth—Aboriginal and All Communities in Transition NOW (WHY ACT NOW) Project” in *Journal of the American College of Nutrition*.

Dr. Senior was named the director of the Alberta Diabetes Institute and the Dr. Charles A. Allard Chair in Diabetes Research in July 2021. **Jessica Marciano**, a fifth-year endocrine subspecialty resident, received the **Dr. John Dupré** Award from the Canadian Society of Endocrinology and Metabolism for her research paper/poster presentation “Longterm Follow-up of Med with Macroprolactinomas Managed with or without Surgery.”

“In 2022 we’ll be managing with support staff reductions and university-wide resource constraints even as the pandemic continues,” says Dr. Romney. “We are a small, 12-person academic staff division with a reputation for excellence in clinical care, teaching, and research. Our goal is to maintain that excellence, plan for post-pandemic clinical care and teaching, and ensure research is supported.”

Graduate Students 1

Residents 4

Post-doctoral Fellows 2

Clinical Fellows 1

Multidisciplinary Clinics 1

Specialized Clinics 3



InProfile

ENDOCRINOLOGY & METABOLISM

RICHARD LEWANCZUK



Senior Medical Director for Alberta Health Services' (AHS) Enhancing Care in the Community/Health System Integration, Richard Lewanczuk leads efforts to shift to and to support care in the community with a particular focus on the social determinants of health. In 2021 he led government and AHS initiatives to address health and social needs of seniors, ethnocultural communities, and disadvantaged groups highlighted as a result of COVID. Recognizing the role of social determinants in health and medical care, and with the support of the Chair, Dr. Lewanczuk and Dr. Karen Lee established the Department of Medicine's Social Determinants of Health Committee.

REBECCA MITCHELL



Endocrinologist Rebecca Mitchell balances her practice in general endocrinology and pituitary medicine with her commitment to medical education. Dr. Mitchell is director of Learning Support for the MD Program, part of the Faculty of Medicine & Dentistry's Academic Affairs team, providing medical students who are experiencing academic difficulties with mentorship, coaching, and support. She is Chair of a weekly Endocrine Case Conference, a discussion forum for interesting and challenging diagnostic and management dilemmas that also promotes residents as teachers. In conjunction with Neurosurgery, Dr. Mitchell conducts a weekly triage of pituitary patients to expedite assessment and treatment for pituitary disease.

GASTROENTEROLOGY



Director **Daniel C. Baumgart**

“Thanks to a concerted focus on research, collaboration between clinical and research members, and hard work, our division was ranked the top academic unit of the University of Alberta and number two in gastroenterology and hepatology in Canada,” says Division Director **Daniel C. Baumgart**. The rankings report, published in late 2021 by *U.S. News & World Report*, places the Gastroenterology Division’s academic standing as 28th globally.

The focus on research resulted in a restructuring of the division into six expertise areas. “We’ve created an environment so that our expertise areas can grow and be successful,” says Dr. Baumgart, pointing to a doubling of clinical trials research to 41 in 2021. “We’ve expanded advanced fellowships for every area of expertise, and we are increasingly looking for trainees who come here not only for clinical expertise but for greater engagement with research.” The division saw an increase of 21 graduate students since 2020 for a total of 83 graduate trainees.

Several noteworthy publications added to the division’s success. **Karen Madsen** was lead author along with co-author **Dina Kao** on “Fecal Microbial Transplantation and Fiber Supplementation in Patients with Severe Obesity and Metabolic Syndrome: A Randomized Double-blind, Placebo-controlled Phase 2 Trial” in *Nature Medicine*. **Juan Gonzalez Abrales** was lead author on “Impact of the COVID-19 Pandemic on Hospitalizations for Alcoholic Hepatitis or Cirrhosis in Alberta, Canada” in *Clinical Gastroenterology and Hepatology*, and **Daniel C. Baumgart** was co-author on “Newer Biologic and Small-Molecule Therapies for Inflammatory Bowel Disease” in *The New England Journal of Medicine*.

Many division members were honoured with awards and accolades in 2021. In the area of education, **Juan Gonzalez Abrales** won the Professional Association of Resident Physicians in Alberta (PARA) Clinical Teaching Honorable Mention Award; **Aldo J. Montano-Loza** was recognized as an Expertscape World Expert in sarcopenia; **Mang Ma** was awarded the Canadian Association for the Study of the Liver (CASL) Educational Excellence Award; **Puneeta Tandon** won the CASL-CLF Visiting Professor Award and the Internal Medicine Resident Award for Best Academic Half Day Postgraduate Medical Education; **Adriana Lazarescu** received the Alberta Society of Gastroenterology Distinguished Educator Award; and **Richard Sultanian** won the Department of Medicine’s Undergraduate Medical Education award.

In the research realm, **Frank Hoentjen** was recruited from the Netherlands and received a University Hospital Foundation research grant. **Karen Madsen** won Crohn’s and Colitis Foundation (CCFC) funding for IBD research. **Aldo Montano-Loza** received the Alberta Society of Gastroenterology Distinguished Researcher Award and was appointed the new Director of Clinical Research of the Gastroenterology Division.

In recognition of their academic and leadership contributions, **Dina Kao** was awarded the American Gastroenterological Association Maria A. Leo-Lieber Scholarship recognizing female leaders in academic research in gastroenterology, **Leah Gramlich** was appointed an American Society for Parenteral and Enteral Nutrition ASPEN Fellow, **Winnie Wong** won the Richard Fedorak Memorial Award in Professionalism, and **Lana Bistriz** was appointed assistant dean, Curriculum, MD Program at Faculty of Medicine and Dentistry.

In 2021, the division saw the departure of **Winnie Wong** and **Klaus Gutfreund**. Looking ahead, Dr. Baumgart hopes to continue building out the division's strengths—neural gastroenterology, motility, and nutrition are targeted areas—with recruitment as a crucial tool.

“Although the clinical demands of the pandemic have taken a toll on members, and we have an overall shortage of academic person power, we’ve been able to produce more research, garner more funding and, in addition to delivering COVID care, fully staff two inpatient wards,” says Dr. Baumgart. “That makes our successes all the more remarkable.”

Graduate Students 83

Residents 67

Specialized/Multidisciplinary Clinics 31



InProfile

GASTROENTEROLOGY

ALDO J. MONTANO-LOZA



In 2021, Professor Aldo J. Montano-Loza was appointed the Division's new Director of Clinical Research, named Chair of the Canadian Association for the Study of the Liver (CASL) Education Committee, and received the Alberta Society of Gastroenterology Distinguished Researcher award. A widely published researcher, Dr. Montano-Loza published the largest and most comprehensive international cohort of transplanted patients with autoimmune hepatitis in the *Journal of Hepatology*. The publication is the official journal of The European Association for the Study of the Liver, with a 25.08 impact factor and a ranking of 2 out of 92 in gastroenterology and hepatology.

KAREN MADSEN



Obesity and metabolic syndrome are implicated in a raft of health issues—from cardiovascular conditions to diabetes. In 2021, Karen Madsen, a pioneer in the field of gut biome research, and Dina Kao co-published a landmark study in *Nature Medicine*. The study involved patients with severe obesity and metabolic syndrome who were receiving drug therapy but whose conditions could not be improved further. Study participants received fecal microbial transplants and dietary fiber supplementation, which altered their gut microbiome and improved their metabolic condition. Dr. Madsen aims to expand this therapy to more obesity and metabolic syndrome patients through further studies.

GENERAL INTERNAL MEDICINE



Interim Director Raj Padwal

The Division of General Internal Medicine (GIM) was heavily involved in, and a key contributor to, the pandemic response. “There are so many people who quietly plugged away and did their work, stepping up at every turn, covering calls when people were sick,” says Interim Division Director **Raj Padwal**. “Everything else was put aside—research, teaching, administration—so that patients could be cared for in this crisis.”

One of the people Dr. Padwal highlights for his willingness to step up time and again is **Saifal Anwar** [see *cameo*]. “He is a tireless worker and instrumental in our division’s COVID response work—he was there all the time on the ward, doing all of the frontline work, plus helping to lead and plan clinical care delivery.”

Even with the intense concentration on COVID care, division members produced noteworthy publications. **Finlay McAlister** was lead author on “Which Adults Presenting for Severe Acute Respiratory Syndrome Coronavirus 2 Testing Are Most Likely to Produce a Positive Swab Result?: A Population-Based Cohort of 15,132 Adults From Alberta, Canada” in *Chest*; **Peter Hwang** was lead author on “Dilated Cardiomyopathy Mutations and Phosphorylation Disrupt the Active Orientation of Cardiac Troponin C” in *Journal of Molecular Biology*; and **Darren Lau** was first author on “Foregone Opportunities? Time-to-treatment Intensification among Adults with Type 2 Diabetes and Elevated HbA1c on Metformin Monotherapy, 2009-2018” in *Canadian Journal of Diabetes*.

The division welcomed Professor **Ross Mitchell**, recruited from the H. Lee Moffitt Cancer Center and Research Institute in Tampa, Florida. Dr. Mitchell is Adjunct Professor in Computer Science and the inaugural Senior Program Director, Artificial Intelligence Adoption—Alberta Health Services.

Several GIM members were honoured with awards. **Neil Gibson** received a Mastership from the American College of Physicians; **Saifal Anwar** won the GIM Mentorship Award; **Darren Lau** won the GIM Scholarly Deliberate Practice Award; **Kelvin Tran** won the GIM Excellence in Teaching—R4 Resident Award; **Jesse Basnak** won the GIM Excellence in Teaching—R5 Resident Award; **Lindsay Bridgland** was awarded the Laureate Award by the Alberta Chapter of American College of Physicians; **Luke Hughson** won the Bruce Fisher Award of Merit; and **Nazia Sharfuddin** won the GIM Game Changer Award for Innovation and the GIM Leadership and Advocacy Award.

Looking at 2022 and beyond, Dr. Padwal highlights the impact the aging population will have on General Internal Medicine. “As the baby boomers get into their later years, there is going to be a tremendous number becoming frail and needing care,” he says. “We’re looking at meeting what will be an incredible surge in demand for GIM services. Certainly, we’ll need to train more GIM specialists because of their expertise in acute care medicine, complex frailty, and multisystem disease.”

“Because people with chronic conditions haven’t really looked after themselves during the pandemic and or sought medical care because of lockdowns, we’re expecting a big wave of untreated chronic disease,” Dr. Padwal says. “GIM will be one of the divisions that will need to rise to the challenge of treating these individuals in the next few years.”

Graduate Students 2

Residents 10

Specialized Clinics 3



InProfile

GENERAL INTERNAL MEDICINE

JENNIFER RINGROSE & RAJ PADWAL



Supported by local “investor angels,” Jennifer Ringrose and Raj Padwal founded mmHg, a digital health company specializing in medical software development, remote patient monitoring, and cloud-based ambulatory blood pressure monitoring. mmHg’s software is used throughout North America and brings patient data to clinicians in real time. For communities where distance is a barrier to continuity of care, including First Nations communities in Alberta, remote patient monitoring is improving people’s health management. mmHg partners with the First Nations Technical Services Advisory Group (TSAG) and is funded by the National Research Council of Canada and Alberta Innovates.

SAIFAL ANWAR



Associate Clinical Professor (July 1, 2022)
Saifal Anwar is Clinical Department Facility Chief, Director of Vibe Medical Specialists multispecialty clinic, and Provincial Clinical Knowledge Lead for Connect Care. Dr. Anwar is an award-winning teacher and mentor who has received the Teacher of the Year and the William Osler awards. His special interest is metabolic syndrome, and he holds certification in the American Board of Obesity Medicine. Described as inspirational by Division Director Raj Padwal for his unflagging willingness and dedication to delivering frontline COVID care during 2021, Dr. Anwar also leads the inpatient COVID-19 immunization team.

GERIATRIC MEDICINE



Director **Adrian Wagg**

“In 2021 we established a unit dedicated to caring for people in hospital who were going to go into a nursing home as if they were already in a nursing home,” says Division Director **Adrian Wagg**. “We brought them all together in one place where they were looked after by a geriatrician and a nurse practitioner, rather than having them in multiple units looked after by multiple staff.” The streamlined process improved the care quality of patients and reduced costs to the health system.

Another highlight was the success of the Healthy Aging webinar series, especially an episode on sexuality and seniors that was viewed multiple times by older adults across the country.

Division members’ noteworthy publications include “Temporal Trends in Obstetric Anal Sphincter Injury from the First Vaginal Delivery in Austria, Canada, Norway, and Sweden” in *Acta Obstetrica et Gynecologica Scandinavica* with **Adrian Wagg** and colleague **Jane Schulz** (Department of Obstetrics and Gynecology) as contributing authors. **Darryl Rolfson** was a contributing author for “Edmonton Frail Scale Predicts Mortality in Older Patients with Cancer Undergoing Radiotherapy: A Prospective Observational Study” in *Journal of Geriatric Oncology*, and **William Gibson** was first author on “Urinary Urgency Acts as a Source of Divided Attention Leading to Changes in Gait in Older Adults with Overactive Bladder” in *PLOS ONE*. “Developing a Decision-Making Capacity Assessment Clinical Pathway for Use in Primary Care: A Qualitative Exploratory Case Study,” with contributing author **Frances Carr**, appeared in the *Canadian Geriatrics Journal*.

Dr. Wagg notes that several PhD students are pursuing studies highly relevant to aging in contemporary society. **Michelle Knox**’s study of medical assistance in dying (MAID) includes gathering people’s experiences with MAID and contrasting participating and non-participating institutions and the social determinants of health that influence their application to MAID. **Saima Rajabali** is investigating the ability of older adults to deliver healthy aging behaviour change education to other older adults along with assessing the effectiveness of a “train the trainer” approach and virtual delivery of the program. **Muyibat Omotunde** is studying nursing home care aides’ attitudes to and adoption of technological solutions to improve the quality of urinary continence care. **Olawunmi Olagundoye**, who won a University of Alberta Graduate Recruitment Scholarship, is researching a community-based intervention for self-management of urinary incontinence in men.

Future plans include building on the division’s successful clinical Alternative Relationship Plan and academic program, which allows for the development of specialized geriatric care across the Edmonton Zone. The division will also develop a service offering perioperative care for older persons, based on research conducted a few years ago, at the University of Alberta and Royal Alexandra Hospitals. “Our research showed that when you involve a specialist doctor in the surgical team to make sure functional issues are sorted and specific care is given, you can shorten the length of stay, improve outcomes, and reduce the likelihood of readmissions,” says Dr. Wagg.

Graduate Students 4

Post-doctoral Fellows: 1

Specialized/Multidisciplinary Clinics 9



InProfile

GERIATRIC MEDICINE

ANGELA JUBY



Professor Angela Juby is a founding member (with Dr. Janet McElhane) of the University of Alberta Hospital's (UAH) inpatient Geriatric Assessment Team. She is also Site Lead for the Fracture Liaison Service (FLS), which identifies, investigates, and initiates treatment in all hip fragility fracture patients over age 50 admitted to the UAH. In 2021, the UAH FLS expanded beyond Edmonton to ensure osteoporosis care equity across the province. Dr. Juby is pursuing a PhD in the University of Alberta's Faculty of Agriculture, Food and Nutrition Sciences with research in nutritional and lifestyle interventions for mitigating dementia and sarcopenia.

DARRYL ROLFSON



Associate Dean Darryl Rolfson has led the MD program since the second wave of the pandemic. In addition to putting classes fully online, the program has responded with new policies and procedures, new methods to deliver curriculum and exams, and advocacy for the health and wellbeing of medical students and the populations they serve. During 2021, Dr. Rolfson oversaw changes in the program's governance structure, completed strategic planning, prepared for mock accreditation for 2022, and responded to university restructuring, resulting, in Dr. Rolfson's view, in a stronger program that is well prepared for future innovation.

HEMATOLOGY



Director **Joseph Brandwein**

In 2021, the Hematology Division introduced a new leukemia consultation service at the University of Alberta, the only site in the northern part of the province providing acute leukemia care. Rapid work-up and diagnostic testing, often on an outpatient basis, are performed within two working days for approximately 100 patients a year with these aggressive diseases. “Three leukemia consultants provide consultation expertise to attending physicians to determine the most appropriate treatments,” says Division Director **Joseph Brandwein**. He adds that the division hopes to recruit a fourth specialist who would also work in stem cell transplantation.

A major achievement was the introduction of CAR T-Cell Therapy for malignant hematology. This is a type of immunotherapy where the body’s own T-cells are harvested, primed to fight cancer cells, and infused back into the patient. “It has proven to be a very powerful treatment for certain types of lymphomas and acute leukemias, even when other treatments have failed” says Dr. Brandwein. “In 2021 it became available in Alberta for the first time, thanks to a clinical trial implemented by **Michael Chu**, a hematologist-oncologist [see cameo] with an adjunct appointment in our division.”

Top publications in the division were “Incidence of Bleeding and Thromboembolism and Impact on Overall Survival in Adult Patients with Hemophagocytic Lymphohistiocytosis: A 20-year Provincial Retrospective Cohort Study” with co-authors **Minakshi Taparia** and **Linda Sun** in *Journal of Thrombosis and Haemostasis*; “All-cause Mortality and Causes of Death in Persons with Haemophilia: A Systematic Review and Meta-analysis” with co-authors **Cynthia Wu** and **Linda Sun** in *Haemophilia*; and “An Evaluation of No-Treatment Decisions in Patients with Newly Diagnosed Acute Myeloid Leukemia” with lead author **Joseph Brandwein** and co-authors **Nancy Zhu**, **Marlene Hamilton**, **Jeff Patterson**, **Minakshi Taparia**, **Cynthia Wu**, and **Aniket Bankar** in *American Journal of Hematology*.

The Marshall Eliuk Fund for Clinical Innovation and Exemplary Care in Hematology supports accelerating research and innovation into clinical care. Seven division members received Eliuk Fund support: **Peng Wang** (acute myeloid leukemia), **Nadia Jahroudi** (clotting factors in COVID-19), **Linda Sun** and **Cynthia Wu** (bleeding disorders), **Anthea Peters** (chronic lymphocytic leukemia), and **Joseph Brandwein** and **Iyare Izebaye** (acute myeloid leukemia). “In addition to Dr. Jahroudi, **Drs. Wu** and **Wang** were involved in COVID-19 clinical research related to blood clotting complications of the virus and the efficacy of vaccinations in our immunocompromised patients,” says Dr. Brandwein.

Daniel Sawler received the Post Graduate Medical Education (PGME) Teacher of the Year at the Royal Alexandra Hospital, and **Andrei Fagarasanu** received PGME Teacher of the Year Honourable Mention. **Mark Hnatiuk** was named PGME Teacher of the Year (Subspecialty). **Loree Larratt** retired from the Division in 2021. **Peng Wang** joined the Division as a Clinician Scientist, and **Michael Wong** joined as a Clinical Hematologist.

“We’ve had to make a lot of adjustments to provide the needed clinical care in the pandemic,” says Dr. Brandwein. “It is an ongoing challenge in striving to deliver timely and high-quality care for our hematology patients.”

Graduate Students 6

Residents 6

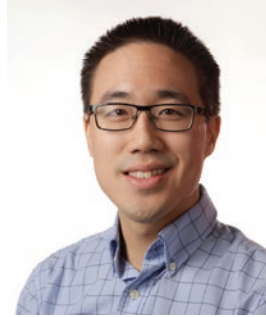
Specialized/Multidisciplinary Clinics 9



InProfile

HEMATOLOGY

MICHAEL CHU



Michael Chu is a clinician scientist at the Cross Cancer Institute whose research focuses on hematologic malignancies and novel approaches to immunotherapy. Dr. Chu collaborates with colleagues in the Division of Hematology, where he holds an adjunct appointment. He is leading a provincial clinical trial—the first of its kind in Alberta and the second in Canada—of locally produced chimeric antigen receptor (CAR T-cell) therapy to treat patients with relapsed acute lymphoblastic leukemia and aggressive non-Hodgkin's lymphoma. To date, of seven evaluable patients, five showed positive responses and four of the five are in long-term remission.

PENG WANG



Peng Wang's care for complex leukemia patients includes using new therapies such as CAR T-cell therapy for acute lymphoblastic leukemia (through the provincial clinical trial led by Dr. Michael Chu) and new molecular targeting therapies for acute myeloblastic leukemia. As a result, patients are experiencing improved quality of life and extended survival. Dr. Wang and his team received the Marshall Eliuk Fund for Clinical Innovation funding for their research on the mechanisms that make leukemia cells resistant to therapies. The team also received COVID-19 Immunity Task Force funding to study SARS-CoV-2 vaccination immune response in patients with blood diseases.

LINDA SUN



Linda Sun is medical lead of the multidisciplinary bleeding disorders clinic. Dr. Sun's clinical and research focus is the epidemiology of and outcomes in rare blood disorders, with a special interest in quality improvement opportunities. Her recent work includes identification of disparities in quality of care in immune thrombocytopenia and obstetric hematology. Using provincial administrative data, her team found high rates of obstetric bleeding in bleeding disorders. The team also found suboptimal screening and management of iron deficiency during pregnancy, despite its high prevalence. Dr. Sun serves as a member of the Royal College Hematology Examination Committee and Canadian Hematology Society board.

INFECTIOUS DISEASES



Director **Karen Doucette**

“We’ve maintained our clinics but have seen referral volumes go down for some conditions, which reflects interrupted care for a variety of reasons in the community during the pandemic,” says Division Director **Karen Doucette**. “This has disproportionately impacted marginalized and racialized populations with decreased testing and referral, for example, to the Viral Hepatitis Clinic.”

Dr. Doucette notes the success of the Northern Alberta HIV Program headed by **Shannon Turvey** [see *cameo*] in developing both a geriatric referral pathway and an anal cancer screening pathway to care for persons living with HIV.

Several division members won awards and honours: **Curtiss Boyington** (CAME Certificate of Merit), **Karen Doucette** (Canadian Society of Transplantation Clinician Recognition Award), **Robyn Harrison** (appointed Vice-Chair, National Advisory Committee on Immunization), and **Stephanie Smith** (National Co-Chair, Canadian Hospital Epidemiology Committee and Canadian Nosocomial Infection Surveillance Program).

Division members contributing to noteworthy publications include **Stan Houston** and **Ryan Cooper** for “Epidemiological and Clinical Characteristics of Alveolar Echinococcosis: An Emerging Infectious Disease in Alberta, Canada” in *The American Journal of Tropical Medicine and Hygiene*; **Ashlesha Sonpar**, **Lynora Saxinger**, and **Ilan S. Schwartz** for “Histoplasmosis Acquired in Alberta, Canada: An Epidemiological and Genomic Study” in *The Lancet Microbe*; and **Ryan Cooper** for “Local Transmission Plays No Important Role in the Occurrence of Multidrug-Resistant Tuberculosis in Immigrants to Canada: An In-depth Epidemiologic Analysis” in *The Journal of Infectious Diseases*.

The division welcomed new recruit **Vanessa Meier-Stephenson** [see *cameo*]. **Nelson Lee** left the division in 2021.

Many members of the division continued to dedicate a significant proportion of their time to clinical, administrative, research, and education activities related to COVID. “This pulled many away from their primary clinical and academic focus, and we hope to return focus to other priorities again in 2022,” says Dr. Doucette. “Nonetheless, this has been important work, and in 2021 multiple division members contributed their expertise to provincial and national COVID policy recommendations and development.”

Plans for 2022 include a new clinic for non-tuberculosis mycobacteria with **Ryan Cooper** as medical lead and the structured enhancement of virtual care in infectious diseases provincially. The division’s infectious diseases residency program is up for internal review, which will be led by the program director **Isabelle Chiu**. “We’re also in the preparation stages for our competence by design transition for 2024,” says Dr. Doucette. “We’re looking forward to ongoing recruitment efforts and faculty renewal to strengthen research productivity and the division’s national/international profile.”

Graduate Trainees 6

Residents 5

Post-doctoral Fellows 1

Clinical Fellows 3

Specialized Clinics 4



InProfile

INFECTIOUS DISEASES

VANESSA MEIER-STEPHENSON



Clinician scientist Vanessa Meier-Stephenson was recruited to the division in 2021. In addition to her infectious disease specialization, Dr. Meier-Stephenson has a PhD in computational chemistry/medicinal chemistry and is adjunct to the Department of Medical Microbiology and Immunology. She uses a combination of biophysics and virology to investigate knot-like structures in DNA that may lead to the creation of new therapies to treat viral hepatitis. Dr. Meier-Stephenson is growing her research laboratory with the addition of new personnel and is involved in organizing the Canadian Society of Virology conference taking place in Edmonton in 2022.

SHANNON TURVEY



Associate Clinical Professor (July 1, 2022) Shannon Turvey is medical director of Alberta Health Services' Northern Alberta HIV Program, overseeing care delivery to people living with HIV in Northern Alberta and some in the Northwest Territories. In 2021, Dr. Turvey partnered with surgeon colleagues to develop an algorithm for managing anal cancer screening in HIV patients; the anoscopy clinic, with a centralized referral pathway, launched in 2022. In response to the aging of the HIV population, Dr. Turvey collaborated with a geriatric medicine specialist to launch a monthly geriatrics clinic in 2022 with direct referral for frail and elderly people living with HIV.

NEPHROLOGY



Director **Branko Braam**

A highlight for the Nephrology Division in 2021 was the success of the restructured Living Donor Kidney Program workup, the process used to investigate and prepare a living kidney donor to safely donate a kidney. This resulted, despite the pressures of COVID, in 49 living donor transplantations, the highest number ever. “Before the restructuring, we had lag times between patient workups, testing, and follow-up, which meant up to 18 months of waiting,” says Division Director **Branko Braam**.

“We now have continuity of coordination so that the wait time from assessment to donation is four months.” **Dr. Braam** and **Sita Gourishankar** [see *cameo*], together with the living donation team, designed and implemented the program’s successful changes.

Branko Braam and **Scott Klarenbach** worked with division members to develop a Most Responsible Physician Model so that hemodialysis patients are getting one assigned physician to turn to for questions and concerns throughout their dialysis journey. This model is now being rolled out in the Edmonton hemodialysis units under the care of the nephrologist at the University of Alberta.

Another highlight for the division was the incremental dialysis model project, led by **Neesh Pannu** and her team, to develop and implement an incremental dialysis program. Incremental dialysis refers to the transition of a patient with end-stage kidney disease to dialysis that is tailor-made to fit the patient’s needs at any given time. Dr. Pannu was able to concurrently conduct research on the topic.

Publications by division members included: **David Collister**’s first authorship of an opinion paper “Mineralocorticoid Receptor Antagonists in CKD: In Need of a Few Large Trials” in the influential *American Journal of Kidney Diseases*; **Branko Braam**’s senior authorship of “Tubuloglomerular Feedback Synchronization in Nephrovascular Networks” in *Journal of the American Society of Nephrology*; and **Robert Pauly**’s co-authorship of “Contextualizing the FHN Nocturnal Trial a Decade Later: How Nocturnal Home Hemodialysis Is Performed Matters to Outcomes” in *Clinical Journal of the American Society of Nephrology*.

Nikhil Shah won the Core Internal Medicine Residency Program’s Sub-Specialty Teacher of the Year Award for the UAH.

In addition to the incremental dialysis program, the division has seven other quality improvement projects underway for 2022. Projects include the development of a cardiovascular risk assessment tool for use by nurses in the division’s outpatient clinic, an initiative for a new referral approach for family doctors, telemonitoring for blood pressure control, the development of a polycystic kidney disease clinic, frailty assessment in dialysis patients, a transitional care unit for starting hemodialysis patients, and an improvement project of peritoneal dialysis catheters. “The goal is that these start out as quality improvement projects but with the clear intention to make them part of our future standard of care,” says Dr. Braam.

“COVID affected all of us in so many ways, from the loss of in-person interaction to the personal challenges each division member experienced juggling family needs and COVID and nephrology clinical responsibilities,” says Dr. Braam. “When I think of the efforts that division members have made to keep things going, while managing everything in their lives, I am very humbled to work with these fantastic people.”

“Because there’s such a tremendous emphasis on clinical care, it is difficult to push the research agenda,” says Dr. Braam. “We hope that changes in the near future.”

Graduate Trainees 6

Residents 5

Post-doctoral Fellows 1

Clinical Fellows 3

Specialized Clinics 4



InProfile

NEPHROLOGY

DAVID COLLISTER



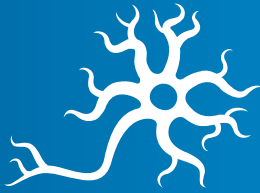
Recruited to the division in 2021, David Collister has a PhD in health research methodology from McMaster University. His doctoral subjects were run-in period meta-epidemiology and design as well as a clinical trial of pharmacological therapies for restless legs syndrome in hemodialysis. Dr. Collister’s patient-oriented research program focuses on kidney disease symptom management, including cannabinoid pharmacokinetics, clinical trials of oral and topical cannabinoids, symptom responsiveness to the initiation dialysis, and the metabolomics/proteomics of uremic symptoms. He has research funding from the Canadian Institutes of Health Research, Kidney Foundation of Canada, and the Michael G. DeGroot Centre for Medicinal Cannabis Research.

SITA GOURISHANKAR



Professor Sita Gourishankar is acting medical director of the Kidney Transplant Program and director of the Living Kidney Donor Program. Kidney transplantation is the treatment of choice for end-stage kidney failure patients, providing enhanced quality of life and patient survival. Living donor kidney transplantation is critical because of the scarcity of deceased donor organs. Dr. Gourishankar led the transformation of the Living Kidney Donor program through quality improvement measures. Streamlined processes, including reduced donor evaluation wait times, meant that in 2021 the program transplanted 49 living donor kidneys—the highest number yet—equivalent to a full dialysis unit of patients.

NEUROLOGY



Director Douglas Zochodne with Incoming Director **Janis Miyasaki**

“I am so proud that our division pulled together to help out colleagues who were isolating or had COVID,” says Incoming Division Director **Janis Miyasaki**. She adds that division staff volunteered to take first calls from the Emergency Department when residents were experiencing stress. “That made a huge difference to them feeling appreciated and heard by the faculty,” she says.

“Patient numbers increased during the pandemic, and we moved to virtual health fairly quickly,” Dr. Miyasaki says. “This was particularly successful for our Movement Disorders clinic and led to a publication, ‘Perceived Impact of COVID-19 Confinement in Patients with Parkinson’s Disease,’ that compared virtual delivery of movement disorders care in Alberta and Quebec.” Numerous quality improvement measures were put in place in the Movement Disorders clinic, resulting in first-ever funding from the US Parkinson Foundation.

Several division members were honoured with major awards. **Sanjay Kalra** was awarded the Henri M. Toupin Chair in Neurological Sciences. Dr. Kalra leads the CAPTURE ALS team which received a \$2.85 million Brain Canada Platform Support Grant to advance ALS research. The Henri M. Toupin Chair in Neurocognitive Disorders was awarded to **Chris Power**. **Jason Plemel** was appointed Canada Research Chair (tier 2) in Glial Neuroimmunology. The Government of Alberta’s Research Capacity Program awarded \$3.9 million to **David Westaway** for research infrastructure upgrades to further the development of new treatments for Alzheimer’s and Parkinson disease.

The division welcomed new members **Asif Butt** and **Mar Irida Lloret-Villas**. Dr. Butt and Dr. Lloret-Villas join three other recently recruited stroke neurologists: **Mahesh Kate**, **Sibi Thirunavukkarasu**, and **Sachin Mishra**.

Dr. Miyasaki highlights three outstanding publications by division members: “Protective eEffect of Mimosine Functionalized Gold Nanoparticles on Alberta Aggregation and Neuronal Toxicity” with contributing author **Satya Kar** in *Bioactive Materials*; “Effect of Implantable vs Prolonged External Electrocardiographic Monitoring on Atrial Fibrillation Detection in Patients with Ischemic Stroke: The PER DIEM Randomized Clinical Trial” in *JAMA* with lead author **Brian Buck** and contributing authors **Ken Butcher**, **Muzaffar Siddiqui**, **Thomas Jeerakathil**, **Khurshid Khan**, **Glen Jickling**, **Ashfaq Shuaib**, **Paige Fairall**, and **Lori Piquette**; and “My Brother,” a personal account by **Kaylynn Purdy** in the *Canadian Medical Association Journal*.

Dr. Purdy, a fourth-year resident, told the story of her oldest brother’s struggles with schizophrenia and housing insecurity and his death from an opioid overdose. “I wanted to honour his life by encouraging a dialogue about the intersection of mental health and social policies,” says Dr. Purdy. She is pursuing a Master of Health Policy degree at Stanford University on the subject of improving access to neurological care for those who have been systemically disadvantaged. “Division members were moved by Dr. Purdy sharing her pain and then letting it fuel her desire to help many people through public policy,” says Dr. Miyasaki.

Dr. Miyasaki was appointed division director in late 2021, replacing **Douglas Zochodne**, who stepped down after eight years. Plans for the future include growing the division to maintain and expand strengths, says Dr. Miyasaki, adding, "I want to ensure every member feels appreciated and respected and feel that they are truly achieving and reaching their potential."

Graduate Trainees 10

Residents 22

Post-doctoral Fellows 7

Clinical Fellows 10

Multidisciplinary Clinics 3

Specialized Clinics 8



InProfile

NEUROLOGY

BRIAN BUCK



Associate Professor Brian Buck was recruited to Edmonton in 2017 after completing stroke training at the University of California at Los Angeles and at Toronto's Sunnybrook Health Sciences Centre. Dr. Buck has led several clinical stroke trials at the University of Alberta Hospital and was the principal investigator for the recently completed PerDiem study, which examined atrial fibrillation detection strategies after stroke. He is co-investigator on the Canadian Institutes of Health Research-funded ACT trial comparing acute stroke clot-busting drugs. His other research includes working with members of the Neuroscience and Mental Health Institute to develop a novel EEG-based strategy to improve the pre-hospital detection of stroke.

JASON PLEMEL



Jason Plemel investigates the essential role of microglia in injured white matter and in inducing injury to white matter during different disease conditions. Dr. Plemel received several major research grants in 2021, including from the Canada Foundation for Innovation, the Department of Defence, the National Multiple Sclerosis (MS) Society, Glyconet, and the University Hospital Foundation. He is the Neuroscience and Mental Health seminar chair and a member of the provincial MS steering committee, the MS Society Alberta Council, and the Americas School of Neuroimmunology seminar committee. In 2021, Dr. Plemel was awarded a Canada Research Chair (tier 2) in Glial Neuroimmunology.

PHYSICAL MEDICINE & REHABILITATION



Co-interim Division Directors **Ming Chan & Nigel Ashworth**

In 2021, Division Director **Chester Ho** stepped down to take on the role of Interim Zone Clinical Department Head for Neurosciences. **Ming Chan and Nigel Ashworth** are currently co-interim division directors.

“In 2021 notable successes were made in prosthetics development, spinal cord injury research, and provincial multidisciplinary spinal cord injury network development to help patients ease back into their communities,” says Dr. Chan “This reflects the calibre of spinal cord injury work at the University of Alberta.”

Division members’ publications demonstrate translational research achievements. **Jacqueline Hebert** [see *cameo*] and **Patrick Pilarski** were co-authors of a publication on the use of artificial intelligence in prosthetic technology development. “Machine Learning for the Control of Prosthetic Arms” in *IEEE Signal Processing Magazine* was written with trainees **Ahmed Shehata** and **Heather Williams** as leading authors. Dr. Hebert and her team continue to advance methods for improved control and sensory feedback within prosthetic systems. In addition to advancing prosthetic control and sensory feedback systems, Dr. Hebert and her team pioneered Edmonton’s first osseointegration program to improve prosthetic attachment.

Ming Chan was lead author on “Recovering the Regenerative Potential in Chronically Injured Nerves Using Conditioning Electrical Stimulation” in the *Journal of Neurosurgery*. In it, the authors assess a particular stimulator that has promise for effective nerve regrowth after spinal cord injury.

Vivian Mushahwar [see *cameo*] was lead author on “Comparative Neuroanatomy of the Lumbosacral Spinal Cord of the Rat, Cat, Pig, Monkey, and Human” in *Scientific Reports*. This research provides a road map for spinal cord surgeons to identify where control centres for nerves are in the spinal cord. In 2021, Dr. Mushahwar was made a Fellow of the American Institute of Medical and Biological Engineering.

Dr. Chan also notes the development of the Glenrose Dynamic Shoulder Brace that came out of the Peripheral Nerve Injury Clinic and was funded by long time supporter, the Glenrose Foundation. “When someone has had nerve injuries in the shoulder and neck, it’s really difficult for them to raise and lower their arms,” says Dr. Chan. “The brace supports them when they have to do overhead activities.”

Division members who received major funding include **Ming Chan** (University Hospital Foundation; Neurosciences, Rehabilitation and Vision Strategic Clinical Network, Campus Alberta Neurosciences, Glenrose Foundation); **Vivian Mushahwar** (Canadian Institutes of Health Research, Western Economic Diversification, Craig H. Neilson Foundation, US Department of Defense); **Chester Ho** (Craig H. Neilson Foundation, Canadian Institutes of Health Research, Praxis Spinal Cord Institute); **Jacqueline Hebert** (National Sciences and Engineering Research Council, University Hospital Foundation, Glenrose Foundation); and **Beto Loyola Sanchez** (Praxis Spinal Cord Institute).

In 2022, Dr. Chan wants to focus on building capacity to foster collaboration between care centres in Edmonton. “We’re intent on improving rehabilitation outcomes for spinal cord injury patients by closing gaps and delays in patient referrals,” he says. “At the provincial level, **Chester Ho** is leading a major spinal cord injury collaboration to speed up transition for patients from hospital to rehabilitation.”

Graduate Students 19

Clinical Fellows 1

Residents 14

Specialized Clinics 5

Post-doctoral Fellows 4



InProfile

PHYSICAL MEDICINE & REHABILITATION

JACQUELINE HEBERT



Professor Jacqueline Hebert leads the BLINC lab, which researches and develops sensory-motor prostheses that integrate machine learning intelligent control. In 2021 Dr. Hebert was awarded a Natural Sciences and Engineering Research Council (NSERC) training grant in Sensory-Motor Adaptive Rehabilitation Technologies (SMART). The Collaborative Research and Training Experience (CREATE) for graduate students is a \$1.6 million multi-faculty award to train graduate students to be job-ready and competitive in industries related to rehabilitation technologies. The goal is to develop technologies of the future to help those with disabilities live more productive and connected lives.

VIVIAN MUSHAHWAR



Professor Vivian Mushahwar's research and innovations in the field of micro-stimulation for spinal cord injuries have earned her international acclaim including, in 2021, her induction as a fellow into the American Institute of Medical and Biological Engineering and into the Canadian Academy of Health Sciences. Dr. Mushahwar secured more than \$4.7 million in funding in 2021, published eight papers, and gave keynote addresses at several national and international conferences and institutions. She is primary supervisor to 16 trainees—ranging from undergraduate students to post-doctoral fellows—and taught the popular "The Art of Grant Writing" course for the twelfth year.

PREVENTIVE MEDICINE



Division Director **Sebastian Straube**

“Our continued academic productivity despite the ongoing pandemic is perhaps our most noteworthy achievement in 2021,” says Division Director **Sebastian Straube**. “It is remarkable how well our faculty and support staff have coped with the new work reality and pandemic-related challenges to keep everything running smoothly.”

The ongoing success of the Foundation Course in Occupational Medicine, developed by division members and offered across Canada to physicians in community practice, is also noteworthy. “We’re continuously refining and updating the course, and we are very pleased about the continued interest from community physicians,” says Dr. Straube. In 2021, the course was delivered entirely virtually—from tutorials to workshops.

Another highlight for the division was the recognition received by the team involved in the Children’s Environmental Health Clinic (ChEHC) through the re-designation of the clinic as the WHO Collaborating Center on Children’s Environmental Health.

Academic publications by division members reflect the focus on major issues, including **Alexander Doroshenko’s** “The Combined Effect of Vaccination and Nonpharmaceutical Public Health Interventions; Ending the COVID-19 Pandemic” in *JAMA Netw Open*; **Quentin Durand-Moreau’s** lead authorship, with contributing author **Sebastian Straube**, on “Twitter Analytics to Inform Provisional Guidance for COVID-19 Challenges in the Meatpacking Industry” in *Annals of Work Exposure and Health*; and **Nicola Cherry’s** “Respiratory Outcomes of Firefighter Exposures in the Fort McMurray Fire: A Cohort Study From Alberta Canada” in *Journal of Occupational and Environmental Medicine*.

“In Occupational Medicine, our patients typically present with questions about fitness to work or occupational causation of diseases,” says Dr. Straube. “During COVID, we’re continuing virtual consultations along with less frequent in-person visits.”

Dr. Straube looks towards expansion of the Foundation Course in Occupational Medicine as a future goal. Another course part is being developed. An additional medium-term goal is recruitment. “We would like to increase the workforce in both Occupational Medicine and Public Health by one physician each when opportunities for such expansion arise,” he says. “The pandemic has shown us that staff absence could have a major disruptive effect on various aspects of our work, especially as we are a relatively small division.”

Graduate Students 8

Post-graduate Students 5

Residents 9

Specialized Clinics 3



InProfile

PREVENTIVE MEDICINE

KAREN LEE



Associate Professor Karen Lee is the author of the book *Fit Cities* and director of Housing for Health (H4H). In 2021, H4H worked with more than 100 multi-sector partners in six provinces to start developing Healthy Community Guidelines for improving neighborhoods and buildings for healthy living and social connections. H4H launched the Fit Cities Fit Towns Canada Annual Conference, sharing national/international innovations for healthier community environments. With COVID-19 demonstrating how important chronic illnesses like diabetes and cardiovascular disease are as risks for severe infection, improving communities to prevent and manage our large burdens of chronic diseases is more critical than ever.

QUENTIN DURAND-MOREAU



In 2021, Assistant Professor Quentin Durand-Moreau contributed to a major international project, the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury, with a systematic review of the link between long working hours and depression. The review results were published in 2021 in *Environment International* (Impact factor 9.6). Dr. Durand-Moreau's other publications include studies on the mental health of funeral service workers at the beginning of the pandemic and on provisional guidance for COVID-19 in the meatpacking industry. He led the division's work to revamp post-graduate programs in Occupational Medicine.

PULMONARY MEDICINE



Division Director **Giovanni Ferrara**

Division Director **Giovanni Ferrara** highlights that despite the intense focus on COVID clinical care, the division kept its momentum. “We succeeded in keeping good levels of care, especially in top programs like Transplant, Cystic Fibrosis, Sleep Disorders, and ambulatory care, despite the constraints of the pandemic,” he says.

The division welcomed new recruits **Cheryl Laratta** (sleep medicine), **Paul Forsythe** (Astra Zeneca Chair in Asthma and Obstructive Lung Disease), **Chrystal Chan** (locum in interventional pulmonary medicine), **Jacqueline Tay** (pulmonary and post-COVID), and **Alia Daoud** (pulmonary oncology). **Ali Kapasi** left the division for a new assignment at UBC, after 12 years of honourable service.

Several division members and learners were awarded funding: **Alim Hirji** (Kay Fund and a Research and Innovation Seed Grant from the Respiratory Health-Medicine Strategic Clinical Network), **Harissios Vliagoftis** (five-year Canadian Institutes of Health Research (CIHR) grant), **Angela Lau** (Research and Innovation Seed Grant from the Respiratory Health-Medicine Strategic Clinical Network), **Kieran Halloran** (Mendez National Institute of Transplantation in the US), **Grace Lam** (Canadian Lung Association), **Sophie Collins** (PhD scholarship from the Canadian Respiratory Research Network), and **Rhys Beaudry** (three-year CIHR post-doctoral fellowship).

The Edmonton TB Clinic and the TB Program Evaluation and Research Unit at the U of A received more than \$1 million in funding from the Centers for Disease Control (CDC) in Atlanta, GA, to join CDC’s international Tuberculosis Trials Consortium. **Richard Long** is the team’s principal investigator, and pulmonary team members are **Giovanni Ferrara**, **Angela Lau**, **Vivek Dhawan**, **Anu Parhar**, and **Courtney Heffernan**.

Three research groups were awarded funding under CIHR’s Emerging COVID-19 Research Gaps and Priorities Funding Opportunity: **Giovanni Ferrara**, **Grace Lam**, **Maeve Smith**, and **Michael Stickland** for “The Canadian Respiratory Research Network Long COVID-19 Study”; **Drs. Stickland, Smith, and Lam** for “Pulmonary Vascular Disease in Long COVID”; and **Dr. Lam** as co-Principal Investigator for “Exploring Rehabilitation Needs and Improving Access to Services Post-COVID-19: An Observational Study of Initiatives in Alberta.”

Several people were recognized for their contributions to education, research and clinical care: **Ron Damant** (the 2021 E.N. Skakun Award for Service in Education), **Richard Long** (Faculty of Medicine & Dentistry’s Tier I Clinical Science Award for Excellence and Fellow of the Canadian Academy of Health Sciences appointment), **Paige Lacey** (CIHR Outstanding Distinction in Peer Review), **Michael Stickland** (CIHR Outstanding Distinction in Peer Review), **Dean Befus** (Allergen Lifetime Achievement Mentorship Award), and **Ling Ling** (Young Leaders Award from Edmonton Zone Medical Association).

More than 28 papers were published by division members, including “The Incidence and Significance of Venous Thromboembolism in Critically Ill Pulmonary Tuberculosis Patients” with lead author **Angela Lau** in *European Respiratory Journal* and “Buccal Hydromorphone Syrup for Managing Dyspnea in Idiopathic Pulmonary Fibrosis” with co-authors **Janice Richman-Eisenstat** and **Meena Kalluri** in *American Journal of Hospice and Palliative Care*.

The division completed an internal review of main programs to strengthen the standardization of operations and the governance of its multidisciplinary clinics. Also, it responded to the pandemic with an innovative clinical service. “The development of the long COVID clinic and integrating research into the clinic was a milestone in 2021,” says Dr. Ferrara.

“During the pandemic, we really came together and built our teamwork and team spirit. We launched initiatives such as ‘Research in Progress’ meetings where junior and senior faculty present their projects,” says Dr. Ferrara. “I’m looking forward to 2022 because I believe we will see the results of becoming a stronger group with very good publications and international recognition for our members.”

Graduate Students 16

Residents 10

Post-doctoral Fellows 1

Specialized/Multidisciplinary Clinics 12



InProfile

PULMONARY MEDICINE

ASHLEY GILLSON



Associate Clinical Professor Ashley Gillson is physician co-lead of the Alberta Thoracic Oncology Program and director of the University of Alberta Hospital Bronchoscopy suite, the Interventional Pulmonary Medicine program, and the Edmonton Zone Pleural Effusion Clinic. Dr. Gillson’s work in bronchoscopy led to the development of the Edmonton Zone Bronchoscopy Working Group, where she is now the lead physician in Bronchoscopy in the Edmonton Zone. In this role, she helped implement an organized and collaborative approach to the delivery of bronchoscopy in the Edmonton Zone that is aligned provincially to ensure consistent care across Alberta.

JALED YEHYA



Associate Clinical Professor Jaled Yehya is pulmonary physician lead at Sturgeon Community Hospital, medical director at Alliance Respiratory Consultants private clinic, lead for the Chronic Cough Clinic, and part of the Asthma Clinic physician group. His primary interest is acute care management and comprehensive care delivery in hospital settings. He served unstintingly on COVID wards and was involved in every aspect of patient care. He says he could write a book about his COVID experiences, noting that each wave of the pandemic created different stressors, from not having effective treatments at the pandemic’s beginning to unvaccinated patients two years later.

RHEUMATOLOGY



Division Director **Jan Willem Cohen Tervaert**

“One of the major achievements for the division in 2021 was the successful collaboration between **Mo Osman** and molecular and cellular immunologist **Shokrollah Elahi** in the School of Dentistry’s Division of Foundational Science,” says Division Director **Jan Willem Cohen Tervaert**. “They are studying the immunological implications of COVID-19 as well as hypoxia in COVID-19 patients.”

Dr. Elahi, Dr. Osman, and Dr. Cohen Tervaert are also collaborating on a long COVID research project to understand the mechanisms of the condition. “We have a long research history in chronic fatigue research, and chronic fatigue is one of the debilitating symptoms of long COVID,” says Dr. Cohen Tervaert.

The collaborations between **Dr. Osman** and **Dr. Elahi** have resulted in three high-impact publications. Other division members with notable publications include **Dr. Cohen Tervaert’s** lead authorship of “ASIA (Shoenfeld’s syndrome) due to Hysteroscopic Essure Sterilization” in *Autoimmunity Reviews*; **Walter Maksymowych’s** lead authorship of “Data-driven Definitions for Active and Structural MRI Lesions in the Sacroiliac Joint in Spondyloarthritis and Their Predictive Utility” in *Rheumatology (Oxford)*; and **Carrie Ye’s** lead authorship of “Gout Presenting as a Chronic Inflammatory Arthritis from Immune Checkpoint Inhibitors: Case Series” in *Rheumatology (Oxford)*.

Several division members received awards and honours. **Elaine Yacyshyn** won the Distinguished Teacher-Educator Award from the Canadian Rheumatology Association. **Mo Osman** was awarded a Stars Career Development Award from the Arthritis Society for a project titled “Not All Types of Early Systemic Sclerosis (SSc) Are the Same: Deciphering the Molecular Mechanisms Driving Rapidly Progressive SSc.” **Carrie Ye** was awarded an Alberta Cancer Foundation IIT grant for a clinical trial involving cancer patients who developed inflammatory arthritis after immunotherapy. **Dr. Ye** also received a University Hospital grant for a pilot study to use computed tomography to scan for bone density in cancer patients. **Steven Katz** was named the Division of Rheumatology’s Residency Program Mentor of the Year, and **Dr. Osman** was named teacher of the year.

“We received many more referrals to our specialty during COVID than pre-pandemic,” says Dr. Cohen Tervaert. Consequently, more patients were treated at the division’s clinics through a combination of about 60 per cent virtual and 40 per cent in-person care delivery. “During COVID, virtual training for residents remained challenging, although we have champions such as **Anna Oswald**, who is an expert in medical education and teaching,” Dr. Cohen Tervaert says.

Dr. Cohen Tervaert looks forward in 2022 to continued research successes in the division, particularly given the starring role of the immune system in COVID 19 infection. The division will also continue delivering care to patients in the Northwest Territories, with newly graduated rheumatologist **Andrea Johnson** taking on the role.

Graduate Students 1

Post-doctoral Fellows 2

Residents 4

Multidisciplinary Clinics 3

Specialized Clinics 6



InProfile

RHEUMATOLOGY

STEPHEN AARON



Stephen Aaron's forty-year clinical and teaching career reflects his dedication to excellence in learning through a number of leadership roles and medical education achievements at the University of Alberta. He is a dedicated clinician to his patients and is committed to advancing arthritis care in First Nations communities and Nepal. Dr. Aaron has been honoured with many awards for excellence in teaching, the most recent being the Canadian Rheumatology Association's Educator of the Year Award in 2022. As he nears retirement, he says he is grateful for all he has learned and thanks his wife Hannah for supporting him throughout his career.

JOANNE HOMIK



Joanne Homik joined the Department of Medicine as clinical assistant professor in 1998, after completing her Master of Science in Epidemiology at the University of Alberta. Her clinical training was undertaken at the University of Manitoba, the University of Toronto, and Massachusetts General Hospital in Boston. Over the last 24 years, Dr. Homik has focussed her career on improving clinical outcomes in rheumatoid arthritis, teaching and producing systematic reviews, and providing leadership at divisional, provincial, and national levels. Dr. Homik says, "I am honoured to have gone from student to professor at this outstanding university and to embrace the principle of lifelong learning."



FUNDING & STATS

Department of Medicine

ENDOWED FUNDS AND CHAIRS

FUND NAME	PRINCIPAL VALUE MARCH 31, 2022
AstraZeneca Chair in Asthma Research	\$3,001,204.88
Brown WF Lecture Physical Medicine & Rehabilitation	\$50,681.92
Cars-Rheumatology	\$14,544.05
Dr Geoff Taylor Lectureship	\$24,013.95
Edwards AM Lecture Clinical Education	\$109,552.92
Gastrointestinal Visionary	\$115,962.53
Graduate Research Endowment	\$150,000
King EG Memorial Endowment	\$165,274.58
Majumdar S ME2 Legacy Endowment	\$123,766.68
Muttart Chair Clinical Immunology Endowment	\$1,675,398.14
Royal Canadian Legion Kidney Research	\$405,269.24
TOTAL	\$5,835,668.89

OTHER ENDOWMENTS	PRINCIPAL VALUE MARCH 31, 2022
Alberta Health Services Chair in Aboriginal Health	\$3,000,615.75
Alberta Health Services Chair in Cardiac Health Outcomes	\$1,501,281.66
Alberta Health Services Chair in Cardiac Sciences	\$1,500,376.75
Alberta Health Services Chair in Healthy Aging Research	\$3,001,118.10
Alberta Health Services Translational Research 1	\$2,500,485.41
Alberta Health Services Translational Research 2	\$2,500,485.41
Atkin, Barrhead/Ft. Assiniboine, Warren & Catz MS Research Endowment	\$2,936,132.41
Dr. Charles A. Allard Chair in Diabetes Research	\$3,000,812.06
GlaxoSmithKline/RxD/CIHR Chair in Airway Inflammation	\$1,393,792.87
Heart & Stroke 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
<i>*No chair affiliated with this endowment</i>	
Spinal Cord Injury Chair	\$3,044,484.67
Tripartite Chair in Occupational Health	\$573,428.50
TOTAL	\$43,038,763.88

2021 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. David Westaway, Neurology	Tier 1, Chair in Prion Disease
Dr. Joel Dacks, Infectious Diseases	Tier 2, Chair in Evolutionary Cell Biology
Dr. Glen Jickling, Neurology	Tier 2, Chair in Genomics and Genetics of Stroke
Dr. Gavin Oudit, Cardiology	Tier 2, Chair in Heart Failure
Dr. Patrick Pilarski, Physical Medicine & Rehabilitation	Tier 2, Chair in Machine Intelligence for Rehabilitation

AIHS TRANSLATIONAL HEALTH CHAIR

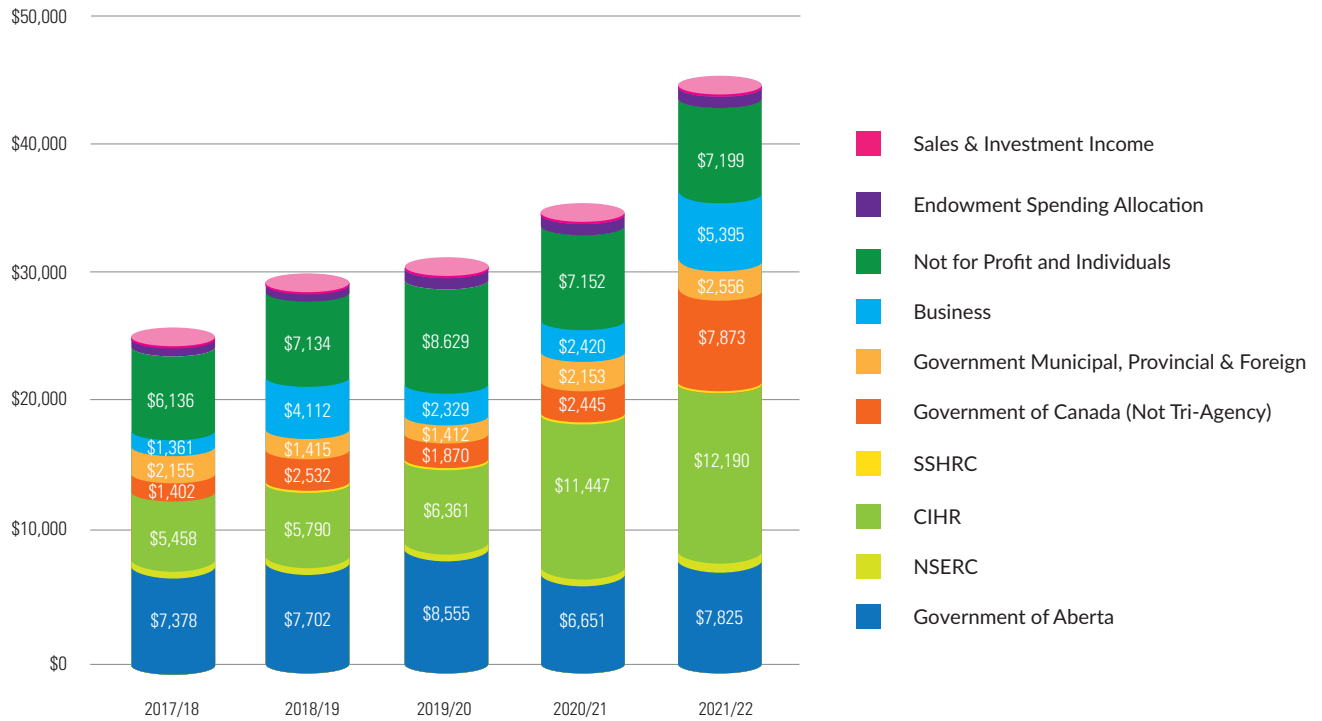
Dr. Gopinath Sutendra, Cardiology	Chair in Cardio-oncology
-----------------------------------	--------------------------

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

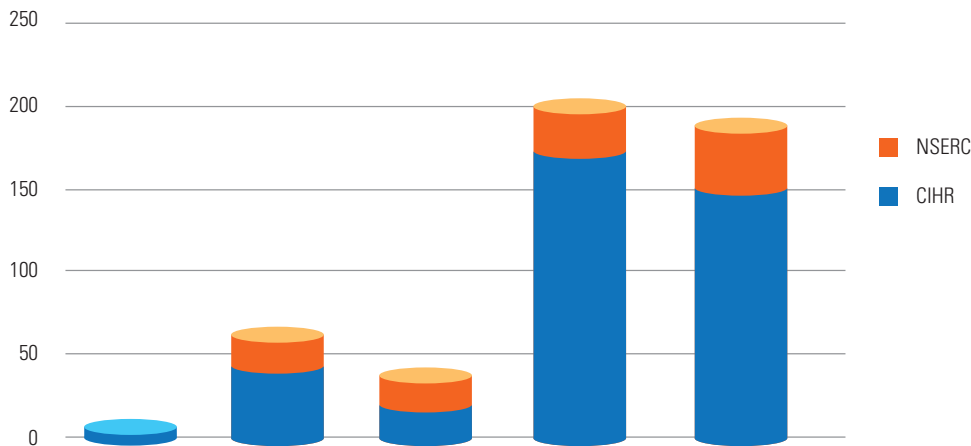
RESEARCH FUNDING

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
 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
 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

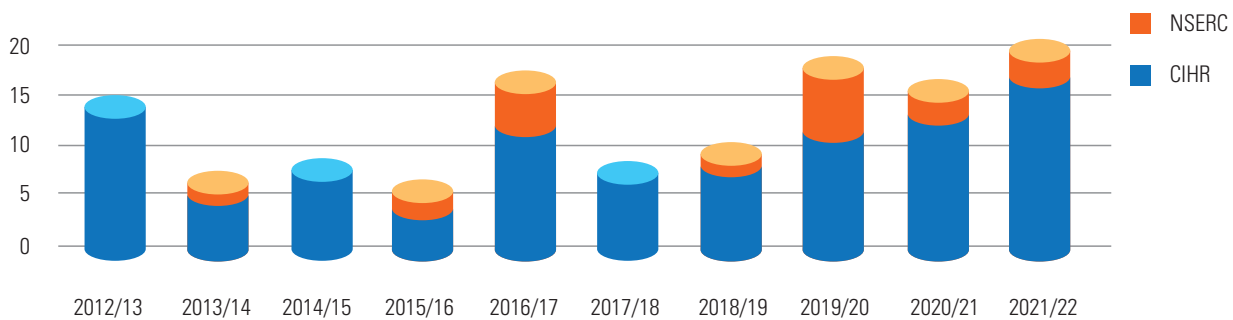
TOTAL DEPARTMENT OF MEDICINE RESEARCH REVENUE (\$THOUSANDS)



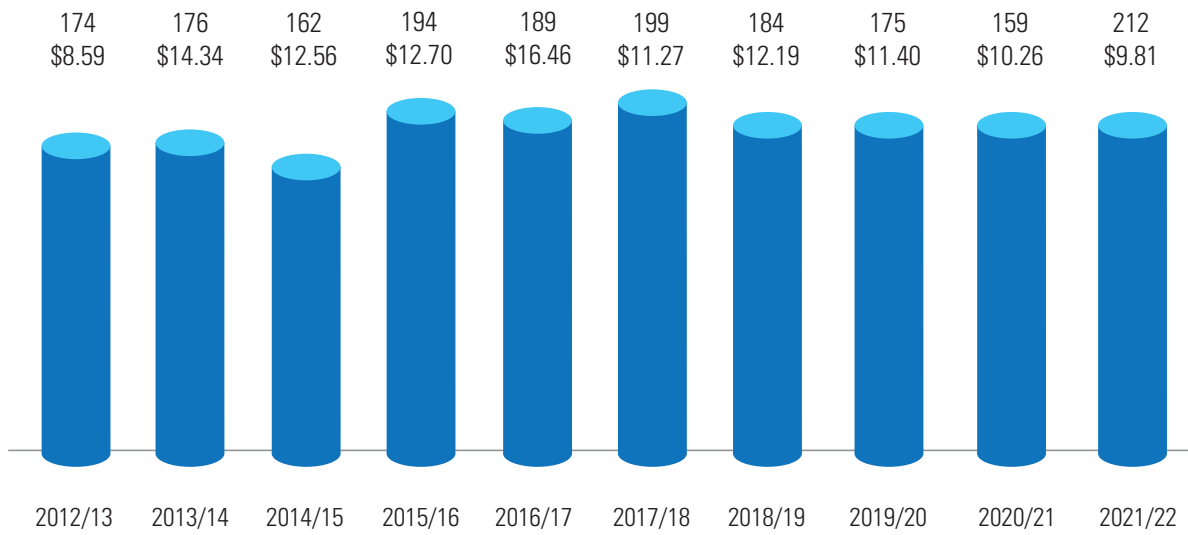
CIHR & NSERC GRADUATE STUDENT SCHOLARSHIPS – PAST 5 YEARS (\$THOUSANDS)



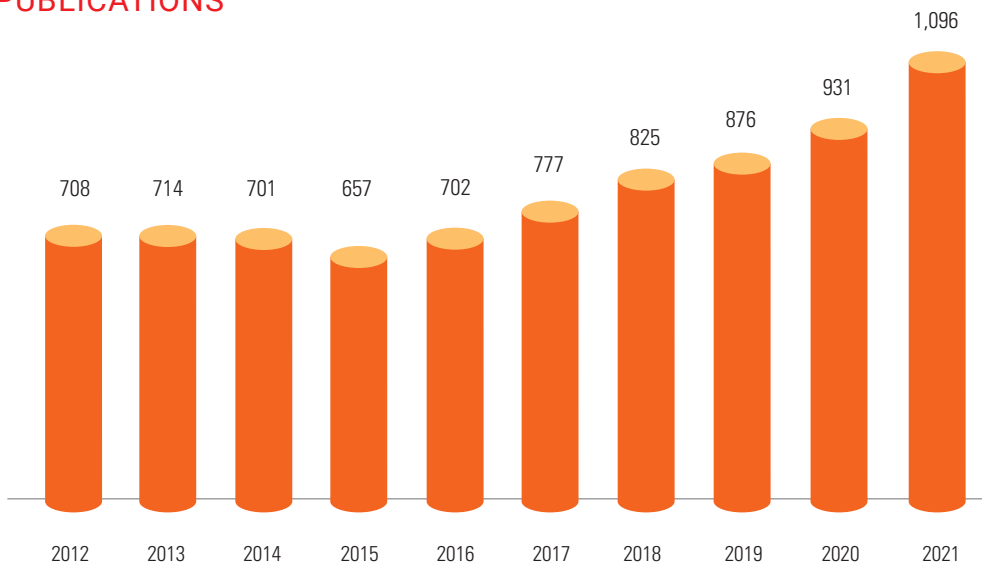
CIHR & NSERC OPERATING GRANTS (NEWLY AWARDED PER FISCAL YEAR)



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



PUBLICATIONS



GRADUATE STUDENT SUMMARY

Currently Enrolled	99
MSc Program	54
PhD Program	45
Visiting Students	1
Total Students (including graduated)	104
Active Postdoctoral Fellows	32

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
2020/2021	2	6	2	13	23	4	2	2	1	9

NEW TO THE DEPARTMENT IN 2021

Lauren Bolster, Hematology Assistant Professor
Francis Carr, Geriatric Medicine, Associate Professor w/o Tenure
David Collister, Nephrology, Assistant Professor
Paul Forsythe, Pulmonary, Associate Professor w/o Tenure
Monty Ghosh, GIM, Assistant Professor
Frank Hoentjen, Gastroenterology, Associate Professor w/o Tenure
Dima Kabbani, Infectious Diseases, Assistant Professor
Cheryl Laratta, Pulmonary, Assistant Clinical Professor
Vanessa Meier-Stephenson, Infectious Diseases, Assistant Professor
Ross Mitchell, GIM, Professor
Tomasz Nowacki, Neurology, Assistant Clinical Professor
Peng Wang, Hematology, Assistant Professor
Jonathan Windram, Cardiology, Associate Professor
Carrie Ye, Rheumatology, Assistant Professor

LEFT THE DEPARTMENT IN 2021

Aniket Bankar, Hematology, Assistant Professor
Ali Kapasi, Pulmonary, Associate Professor
Nelson Lee, Infectious Diseases, Professor
Miriam Shanks, Cardiology, Associate Professor

RETIREMENTS IN 2021

Loree Larratt, Hematology, Professor
Klaus Gutfreund, Gastroenterology, Associate Professor
Arya Sharma, Endocrinology & Metabolism, Professor
Winnie Wong, Gastroenterology

ACADEMIC PROMOTION

ASSOCIATE PROFESSOR WITH TENURE

Fang Ba, Neurology
Kieran Halloran, Pulmonary Medicine
Ainslie Hildebrand, Nephrology
Alim Hirji, Pulmonary Medicine
Karen Lee, Preventive Medicine
Soroush Shojai, Nephrology

PROFESSOR

Sita Gourishankar, Nephrology
Dina Kao, Gastroenterology
Allan Murray, Nephrology
Dhiren Naidu, Physical Medicine & Rehabilitation

CLINICAL PROMOTION

ASSISTANT CLINICAL PROFESSOR

Daniel Sawler, Hematology
Hardeep Kainth, Physical Medicine & Rehabilitation
Tyler Lamb, Cardiology
Angela Lau, Pulmonary Medicine
Alexandra McFarlane, Infectious Diseases
Rahul Mehta, General Internal Medicine
Ashlesha Sonpar, Infectious Diseases
David Waldner, Infectious Diseases

ASSOCIATE CLINICAL PROFESSOR

Frances Carr, Geriatric Medicine
Ashley Gillson, Pulmonary Medicine
Abraam Isaac, Infectious Diseases
Jennifer Jacquier, Endocrinology & Metabolism
Heather Lindstrom, Physical Medicine & Rehabilitation
Charles (Chuck) Lortie, Dermatology
Kenneth Makus, Neurology
Rebecca Mitchell, Endocrinology & Metabolism
Diana Rucker, Geriatric Medicine
Zaki Taher, Dermatology
Jay Varghese, General Internal Medicine

CLINICAL PROFESSOR

Naji Alhulaimi, Cardiology
John Bradley, Nephrology
Gregory Hrynchyshyn, General Internal Medicine
Ted Roberts, Neurology

Promoted effective July 1, 2021

COVER PHOTOS



DR. MAEVE SMITH

Associate Professor (July 1, 2022) Maeve Smith is in the Pulmonary Medicine Division of the Department of Medicine.



DR. GRACE LAM

Assistant Professor Grace Lam is in the Pulmonary Medicine Division of the Department of Medicine.



UNIVERSITY
OF ALBERTA

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