

2020/2021 ANNUAL REPORT



Helping more than 6 million
Canadians triumph over arthritis.

MISSION STATEMENT

To transform the lives of people living with arthritis through research and engagement.

VISION STATEMENT

A future where research-based services, tools and knowledge empower people living with arthritis to triumph over pain and disability.



Leading research. Finding answers. Saving lives.



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MESSAGE FROM THE SCIENTIFIC DIRECTOR

Dr. Diane Lacaille

As I reflect on my first year as Scientific Director, I am amazed at all that we accomplished under difficult circumstances. This has been a year like no other. While navigating ever-changing COVID-19 restrictions and working remotely, our scientific team has successfully continued to advance arthritis research and respond to the call for answering COVID-19 research questions that matter to people living with arthritis. For example, are they more likely to get COVID-19, or have more severe disease? Are the vaccines safe and effective for them? How has the pandemic affected their access to quality care? What about their mental health and well-being? These are difficult, yet important, questions that our scientists are tackling.

The COVID-19 pandemic has taken a toll on everyone. Thank you to our research scientists, trainees, staff and patient partners for ploughing through with your usual dedication. Despite challenges, we have achieved remarkable successes. The numbers speak for themselves. Our scientific team obtained \$12 million in competitive grants for this year's arthritis research and published over 300 articles in high-ranking journals. We have garnered \$950K in awards to support 39 trainees across our five affiliated universities, which shows our commitment to training the next generation of scientists.

The past year has also been one marked by deplorable social injustices, shocking acts of hate and racism, and an awakening to the devastating effects of colonialism on Indigenous peoples. At Arthritis Research Canada, we are committed to equity, diversity and inclusion, to fighting racism, and to the Truth and Reconciliation process. Our research seeks to reduce health inequities for all people living with arthritis, including Indigenous peoples.

Now that our headquarters has moved into its permanent home, we are excited to work in-person again, re-establishing those personal connections and hallway discussions that foster cohesion and creativity.

Finally, I want to express my gratitude to our donors who make our research possible. Thank you for allowing us to improve the lives of people with arthritis.

MESSAGE FROM THE EXECUTIVE DIRECTOR



Rob Appleton

It has been a busy and exciting year for Arthritis Research Canada/Arthrite-recherche Canada.

Assuming the role of Executive Director during a global pandemic has been an extraordinary experience. I am proud of how our entire team has worked together to ensure our organization stayed focused and continued to provide vital research for millions of Canadians living with arthritis.

I want to acknowledge the important leadership provided to our organization by Jocelyn Cruickshank. As a member of our Board for the past six years, with the last four as Board Chair, Jocelyn's dedication and vision have been instrumental in ensuring Arthritis Research Canada has continued to grow and flourish as a world-class arthritis research institution. With Jocelyn's term as Board Chair concluding, I express my sincere appreciation for her stellar commitment and governance.

I also want to acknowledge my predecessor, Shauneen Kellner. Her detailed and critical work in helping guide this organization over 16 years is especially valued.

This has been a momentous year for Arthritis Research Canada as we underwent a search and procurement of a new home. The purchase of our new space, in the heart of British Columbia's medical and research community, is significant to providing stability to the organization for years to come. Our forever home permits us to focus on life-changing research. We are additionally gratified that this purchase was able to happen without using donor dollars, but with funds designated for this purpose. We are excited to welcome you to our new home, as it becomes safe to do so.

We are looking forward to the research and discovery this coming year will bring and we will continue to work collaboratively with our patient partners, who are instrumental in conducting our research.

Arthritis Research Canada/Arthrite-recherche Canada's success is only possible through the generosity of individuals, businesses, community organizations and foundations, government, and funding partners. Thank you for investing in our work and for helping make arthritis research a priority.



MESSAGE FROM THE BOARD CHAIR

Jocelyn Cruickshank

Partner and Managing Director
KPMG Corporate Finance Inc.

As I write my final message as Board Chair, I reflect on the incredible passion and leadership of current and former board members alike who have led Arthritis Research Canada/Arthrite-recherche Canada to become a world-class research centre.

This includes the vision of our current Board to secure the future of the organization by providing a permanent location and purchasing space. With our future protected, our scientific team can focus solely on life-changing arthritis research. Thank you everyone who contributed to this momentous step.

I extend my sincere appreciation to all Board members for their commitment during the last year. A special thank you to departing Board member Lianne Gulka who, as the patient advisory liaison to the Board, contributed greatly during her term. Lianne, you will be missed.

This past year saw a full change in our organization's leadership. Dr. Diane Lacaille, a leading rheumatologist and scientist, was appointed Scientific Director. Dr. Lacaille has been with Arthritis Research Canada since its beginning - progressing from trainee to her current position. In January 2021, Rob Appleton was appointed Executive Director, bringing with him over 20 years of experience as a non-profit executive. With a seamless transition complete, I am confident that the organization has the necessary leadership to continue to succeed.

I also want to acknowledge Shauneen Kellner who retired from her position as Executive Director this past December. Her commitment and strong management over the past 16 years is unsurpassed. Enjoy retirement Shauneen, it is well deserved.

In my time as Board Chair, I have learned a great deal about arthritis and the incredible difference research can make for people living with this disease. I am in awe of how much has been accomplished in what is a relatively short period of time. To everyone involved - board, scientists, patient advisors, donors, volunteers and staff - keep up the amazing work!

Thank you.

BOARD OF DIRECTORS



Jocelyn Cruickshank

Partner and Managing Director
KPMG Corporate Finance Inc.

CHAIR



Jim Dales

Retired
MEMBER



Don Elkington

Owner
Elkington Investments

VICE CHAIR



Rahim Esmail

Senior Counsel
TELUS

MEMBER



Lianne Gulka

Patient Advisory
Board Liaison

MEMBER



Pauline Hadley-Beauregard

Partner, Strategic Clarity
Crux

MEMBER



Jordan Langlois

Partner
Kornfeld LLP

MEMBER



Rodrigue Lussier

Vice President & Investment Counsellor
Corporation Fiera Capital

FINANCE CHAIR



Joy MacPhail

Owner
OUTtv

MEMBER



Naz Panahi

Vice President
Pan City Enterprises Inc.

MEMBER



Stephen Schwartz

Partner
Burns Fitzpatrick LLP

MEMBER

ARTHRITIS PATIENT ADVISORY BOARD



The Arthritis Patient Advisory Board is comprised of patients with different types of arthritis. These individuals are key members of Arthritis Research Canada's research teams. They ensure we are addressing the most pressing issues for people living with arthritis.

It has been a busy year for the 20-member board, led by co-chairs, Jon Collins and Samantha Rogers. Despite the challenges of the pandemic, the three-year strategic plan has kept its momentum with all areas either completed or progressing on time and on budget. In the coming year, the plan will undergo a review process to ensure continued alignment with Arthritis Research Canada's strategic plan.

In addition to overseeing plain language summaries that explain our research for the general public, the Arthritis Patient Advisory Board contributes to the quarterly Arthritis eNewsletter, an important resource for the arthritis community, offered in French and English.



Their Arthritis Wellness Conversations have continued to develop a healthy following and cover a broad range of important topics such as: navigating COVID-19 with arthritis, fatigue, pregnancy, parenting and arthritis and preparing for medical appointments. There are currently 12 recorded conversations available on our website. The Arthritis Research Education Series has produced further episodes that take an in-depth look at areas of research, including cardiovascular disease and arthritis and most recently, quality of care.

We are proud to partner and collaborate with Patient Advisory Board members from the planning stages of research projects to the dissemination of results. The level of patient involvement in our research is unique to Arthritis Research Canada and is tremendously valued.

PATIENTS INTÉRESSÉS PAR LA RECHERCHE SUR L'ARTHRITE

As the pandemic persists, members of Patients intéressés par la recherche sur l'arthrite members have continued to conduct their meetings by Zoom and build awareness about arthritis research virtually. This has also meant that their main fundraiser, the annual walk at Université Laval has been deferred until it is considered safe to gather again.

The team created a plan to continue to raise funds through digital storytelling, by sharing personal stories about living with arthritis and inviting donations for arthritis research.

Guided by Senior Scientist, Dr. Paul Fortin, our Quebec-based patient group has initiated further recruitment efforts to grow their team by actively reaching out to people with arthritis. Patients intéressés par la recherche sur l'arthrite has met with their counterparts in British Columbia to discuss ways in which they can strategically work together to achieve even greater results. The group regularly contributes to the quarterly eNewsletter distributed by Arthritis Research Canada/Arthrite-recherche Canada.

Alors que la pandémie persiste, les Patients intéressés par la recherche sur l'arthrite (PIRA) ont continué à tenir leurs réunions par Zoom et à sensibiliser les gens à la recherche sur l'arthrite de façon virtuelle. La pandémie signifie également que leur principale campagne de collecte de fonds, la Marche annuelle à l'Université Laval, a été reportée jusqu'à ce que ce genre d'évènement soit considéré comme sûr.

L'équipe a élaboré un plan pour continuer à recueillir des fonds en offrant des histoires en format virtuel, partageant des expériences personnelles sur la vie avec l'arthrite et invitant les gens à faire des dons pour la recherche sur l'arthrite.

Sous la direction du Dr Paul Fortin, un chercheur scientifique principal chez Arthrite-recherche Canada, l'équipe Patients intéressés par la recherche sur l'arthrite a entrepris de recruter de nouveaux membres pour étoffer son équipe et a activement pris contact avec de nombreuses personnes atteintes d'arthrite. Les membres de l'équipe ont également rencontré leurs homologues de la Colombie-Britannique pour explorer des possibilités de collaboration stratégique, afin d'obtenir des résultats encore meilleurs. Les Patients intéressés par la recherche sur l'arthrite contribuent régulièrement au bulletin électronique trimestriel distribué par Arthrite-recherche Canada.



SCIENTIFIC TEAM

Diane Lacaille - *MDCM, MHSc, FRCPC*
Scientific Director

APPOINTMENTS

Mary Pack Chair in Rheumatology Research

Professor, Division of Rheumatology, Department of Medicine, University of British Columbia

John M. Esdaile - *MD, MPH, FRCPC, FCAHS, MACR*
Scientific Director Emeritus

APPOINTMENTS

Professor, Division of Rheumatology, Department of Medicine, University of British Columbia

Adjunct Professor of Medicine, University of Calgary

Michal Abrahamowicz - *PhD*
Research Scientist, Biostatistics

APPOINTMENTS

James McGill Professor of Biostatistics, Department of Epidemiology, Biostatistics and Occupational Health, Faculty of Medicine, McGill University

Medical Scientist, Division of Clinical Epidemiology, Research Institute, McGill University Health Centre

Aslam H. Anis - *PhD, FCAHS*
Senior Scientist, Health Economics

APPOINTMENTS

Professor and Director *pro tem*, School of Population and Public Health, University of British Columbia

Director, Centre for Health Evaluation and Outcome Sciences (CHÉOS), Providence Health Care Research Institute

National Director, CIHR Canadian HIV Trials Network (CTN)

J. Antonio Aviña-Zubieta - *MD, MSc, PhD, FRCPC*
Senior Scientist, Rheumatology

APPOINTMENTS

Associate Professor of Medicine, Division of Rheumatology, Department of Medicine, University of British Columbia

BC Lupus Society Research Scholar

Walter & Marilyn Booth Research Scholar

Catherine Backman - *PhD, FCAOT*
Senior Scientist, Rehabilitation

APPOINTMENTS

Professor, Department of Occupational Science & Occupational Therapy, University of British Columbia

Affiliated Researcher, Vancouver Coastal Health Research Institute

Nick Bansback - *MSc, PhD*
Research Scientist, Health Economics

APPOINTMENTS

Associate Professor, School of Population and Public Health, University of British Columbia

Scientist, Centre for Health Evaluation and Outcome Sciences (CHÉOS), Providence Health Care Research

Institute Co Lead, BC SUPPORT Unit Health Economics and Simulation Methods Cluster

Claire Barber - *MD, PhD, FRCPC*
Research Scientist, Rheumatology

APPOINTMENTS

Associate Professor, Division of Rheumatology,

Department of Medicine and Department of Community Health Sciences, Cumming School of Medicine, University of Calgary

Cheryl Barnabe - *MD, MSc, FRCPC*
Senior Scientist, Rheumatology

APPOINTMENTS

Deputy Director, McCaig Institute for Bone and Joint Health, University of Calgary

Professor, Division of Rheumatology, Department of Medicine and Department of Community Health Sciences, Cumming School of Medicine, University of Calgary

Canada Research Chair, Rheumatoid Arthritis and Autoimmune Diseases

Susan J. Bartlett - *PhD*
Research Scientist, Psychology

APPOINTMENTS

Professor, Department of Medicine, Faculty of Medicine, McGill University

Senior Scientist, Research Institute, McGill University Health Centre

Adjunct Professor of Medicine, Johns Hopkins Medicine

Susanne Benseler – MD, PhD
Research Scientist, Pediatric Rheumatology

APPOINTMENTS

Director, Alberta Children's Hospital Research Institute
Professor, Department of Pediatrics, Cumming School of Medicine, University of Calgary
Husky Energy Chair in Child and Maternal Health
Alberta Children's Hospital Foundation Chair in Pediatric Research

Hyon K. Choi – MD, DrPH, FRCPC
Research Scientist, Rheumatology

APPOINTMENTS

Professor of Medicine, Harvard Medical School
Adjunct Professor of Medicine, University of British Columbia
Director, Clinical Epidemiology and Health Outcomes, Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Massachusetts General Hospital
Director, Gout and Crystal Arthropathy Center, Department of Medicine, Massachusetts General Hospital

May Y. Choi – MD, MPH, FRCPC
Research Scientist, Rheumatology

APPOINTMENTS

Gary S. Gilkeson Lupus Fellow, Brigham and Women's Hospital
Assistant Professor, Division of Rheumatology, Department of Medicine, Cumming School of Medicine, University of Calgary

Jolanda Cibere – MD, PhD, FRCPC
Senior Scientist, Rheumatology

APPOINTMENTS

Associate Professor, Division of Rheumatology, Department of Medicine, University of British Columbia

Ann Clarke – MD, MSc, FRCPC
Research Scientist, Immunology

APPOINTMENTS

Arthritis Society, Chair in Rheumatic Diseases
Professor, Division of Rheumatology, Department of Medicine, University of Calgary
Professor, Department of Community Health Sciences, University of Calgary
Immediate Past Chair of the Systemic Lupus International Collaborating Clinics (SLICC)

Inés Colmegna – MD
Research Scientist, Rheumatology

APPOINTMENTS

Associate Professor, Division of Rheumatology, Department of Medicine, McGill University
Scientist, Research Institute, McGill University Health Sciences, Infectious Diseases and Immunity in Global Health Program Centre for Translational Biology

Deborah Da Costa – PhD
Research Scientist, Psychology

APPOINTMENTS

Associate Professor, Department of Medicine, Faculty of Medicine, McGill University
Scientist, Research Institute, McGill University Health Centre, Metabolic Disorders and Complications Program, Centre for Outcomes Research and Evaluation

Mary De Vera – MSc, PhD
Research Scientist, Pharmacoepidemiology

APPOINTMENTS

Associate Professor, Faculty of Pharmaceutical Sciences, University of British Columbia
Associate Director Education, Collaboration for Outcomes Research and Evaluation
Canada Research Chair, Medication Adherence, Utilization, and Outcomes
Scientist, Centre for Health Evaluation & Outcome Sciences (CHÉOS)

Paul Fortin – MD, MPH, FRCPC
Senior Scientist, Rheumatology

APPOINTMENTS

Professor, Division of Rheumatology, Department of Medicine, Université Laval
Canada Research Chair on Systemic Autoimmune Rheumatic Diseases
Clinician-Scientist, Axe Maladies Infectieuses et Immunitaires, Centre de recherche du CHU de Québec-Université Laval

Donald Garbuz – MD, MHSc, FRCSC
Research Scientist, Orthopaedics

APPOINTMENTS

Professor, Department of Orthopaedics Surgery, University of British Columbia

Nelson Greidanus – MD, MPH, FRCSC
Research Scientist, Orthopaedics

APPOINTMENTS

Assistant Professor, Orthopaedic Surgery, Department of Orthopaedic Surgery, University of British Columbia

SCIENTIFIC TEAM

Glen Hazlewood - MD, PhD, FRCPC
Research Scientist, Rheumatology

APPOINTMENTS

Associate Professor, Division of Rheumatology,
Department of Medicine and Department of Community
Health Sciences, Cumming School of Medicine,
University of Calgary

Marie Hudson - MD, MPH, FRCPC
Research Scientist, Rheumatology

APPOINTMENTS

Clinician-Scientist, Jewish General Hospital and
Lady Davis Institute

Associate Professor, Department of Medicine,
McGill University

Jacek Kopec - MD, MSc, PhD
Senior Scientist, Epidemiology

APPOINTMENTS

Professor, School of Population and Public Health,
University of British Columbia

Matthew Liang - MD, MPH
Professor Emeritus, Rheumatology

APPOINTMENTS

Professor of Medicine, Harvard School of Medicine

Professor, Department of Health Policy and
Management, Harvard School of Public Health

Linda Li - BSc(PT), MSc, PhD, FCAHS
Senior Scientist, Clinical Epidemiology

APPOINTMENTS

Professor, Department of Physical Therapy,
University of British Columbia

Harold Robinson Chair/Arthritis Society Chair
in Arthritic Diseases

Canada Research Chair, Patient-oriented
Knowledge Translation

Carlo Marra - BSc (Pharm), PharmD, PhD
Research Scientist, Pharmacoepidemiology

APPOINTMENTS

Professor and Dean, School of Pharmacy,
University of Otago, Dunedin, New Zealand

Deborah A. Marshall - PhD
Senior Scientist, Health Services Research
and Health Economics

APPOINTMENTS

Professor, Department of Community Health Sciences,
Cumming School of Medicine, University of Calgary

Arthur J.E. Child Chair, Rheumatology Outcomes
Research

Laëtitia Michou - MD, PhD
Research Scientist, Rheumatology

APPOINTMENTS

Associate Professor, Division of Rheumatology,
Department of Medicine, Université Laval

Clinician Scientist, Endocrinology and Nephrology Axis,
Centre de recherche du CHU de Québec-Université
Laval

Kamran Shojania - MD, FRCPC
Clinical Trialist, Rheumatology

APPOINTMENTS

Clinical Professor and Head, University of British
Columbia, St. Paul's and Vancouver General Hospital
Divisions of Rheumatology

Medical Director, Mary Pack Arthritis Program

Ian Tsang - MD, FRCPC
Scientist Emeritus, Director of Traditional Chinese
Medicine Research

APPOINTMENTS

Clinical Professor (Retired), Division of Rheumatology,
Department of Medicine, University of British Columbia

Jackie Whittaker - BScPT, PhD
Research Scientist, Musculoskeletal Rehabilitation

APPOINTMENTS

Assistant Professor, Department of Physical Therapy,
Faculty of Medicine, University of British Columbia

Adjunct Assistant Professor, Sport Injury Prevention
Research Centre, University of Calgary

Adjunct Assistant Professor, Faculty of Rehabilitation
Medicine, University of Alberta

Hui Xie – *BSc, MS, PhD*
Research Scientist, Biostatistics

APPOINTMENTS

Professor, Faculty of Health Sciences,
Simon Fraser University

Milan and Maureen Ilich/Merck Chair in Statistics
for Arthritis and Musculoskeletal Diseases

AFFILIATE KNOWLEDGE BROKER

Alison Hoens – *MSc, BScPT*
Knowledge Broker

APPOINTMENTS

Knowledge Broker and Clinical Professor,
Department of Physical Therapy, Faculty of Medicine,
University of British Columbia

Knowledge Translation Lead, School of Population &
Public Health, Centre for Clinical Epidemiology &
Evaluation, University of British Columbia

Research Associate, Centre for Health Evaluation
& Outcomes Sciences (CHÉOS), University of
British Columbia

AFFILIATE SCIENTISTS

Jan Dutz – *MD, FRCPC*
Affiliate Scientist, Dermatology and Immunology

APPOINTMENTS

Professor and Head, Department of Dermatology
and Skin Science, Faculty of Medicine,
University of British Columbia

Scientist, Children and Family Research Institute

Allyson Jones – *PT, PhD*
Affiliate Scientist, Rehabilitation Sciences

APPOINTMENTS

Professor, Department of Physical Therapy,
Faculty of Rehabilitation, University of Alberta

Adjunct Professor, School of Public Health,
University of Alberta

Mark Harrison – *MSc, PhD*
Affiliate Scientist, Health Economics

APPOINTMENTS

Associate Professor, Faculty of Pharmaceutical
Sciences, University of British Columbia

Scientist, Centre for Health Evaluation and Outcome
Sciences (CHÉOS), Providence Health Care Research
Institute

Anne Townsend – *MA, PhD*
Affiliate Scientist, Bioethics

APPOINTMENTS

Senior Research Associate, Liverpool and Lancaster
Collaboration for Public Health Research, Division of
Health Research, Health Innovation One, Lancaster
University, UK

Michael A. Hunt – *PhD, PT*
Affiliate Scientist, Rehabilitation Sciences

APPOINTMENTS

Associate Professor, Department of Physical Therapy,
University of British Columbia

Director, Motion Analysis and Biofeedback Laboratory,
University of British Columbia

CLINICIAN INVESTIGATORS

Mollie Carruthers – MD, FRCPC
Clinician Investigator

APPOINTMENTS

Clinical Associate Professor, Division of Rheumatology,
Department of Medicine, University of British Columbia,
Rheumatologist, Artus Health Centre Vancouver

Jonathan Chan – MD, FRCPC
Clinician Investigator

APPOINTMENTS

Clinical Assistant Professor, Division of Rheumatology,
Department of Medicine, University of British Columbia,
Rheumatologist, Artus Health Centre Vancouver

Shahin Jamal – MD, FRCPC, MSc
Clinician Investigator

APPOINTMENTS

Clinical Associate Professor, Division of Rheumatology,
Department of Medicine, University of British Columbia,
Rheumatologist, Diamond Health Care Centre,
Vancouver

LEADING RESEARCH ACROSS CANADA

WE DO ARTHRITIS RESEARCH LIKE NO ONE ELSE.

Arthritis affects over 6 million Canadians of all ages. Our scientists focus on research that helps people with arthritis overcome the challenges caused by their disease so that they can live life to the fullest.

WHAT DOES ARTHRITIS RESEARCH LOOK LIKE IN ACTION?



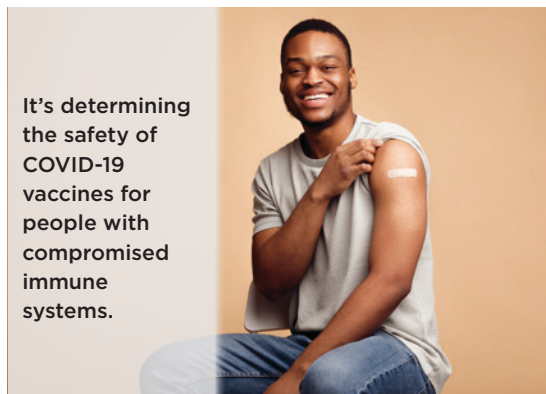
It's creating a program to help people diagnosed with inflammatory arthritis stay employed.



It's finding ways to prevent serious, life-threatening complications like heart attacks and strokes.



It's developing a program to stop osteoarthritis from happening after a sports injury.



It's determining the safety of COVID-19 vaccines for people with compromised immune systems.

Arthritis Research is all of this and more.

4
CENTRES

5
MAJOR UNIVERSITIES

100+
RESEARCH STUDIES



RESEARCH IN BRITISH COLUMBIA

Falls have a tremendous impact on the health of older adults and are a major problem for the health care system. They account for half of injury-related hospital admissions, 40% of nursing home admissions, and a 10% increase in home care services. Preventing falls is important, especially for older adults who are also dealing with mobility challenges due to arthritis.

There is strong evidence that the Otago Exercise Program is effective at preventing falls in older adults, by providing strength and balance training from a physiotherapist. However keeping it up is a challenge, with only a quarter of the people who start the program continuing with it over time. **Senior Scientist, Dr. Linda Li**, and her team are testing the Otago program in older adults with arthritis and are using technology and personalized coaching to help people continue with the program over time. The goal: to reduce falls and injury and improve overall quality of life.

Arthritis is the most common health reason why Canadians stop working. One in five people with rheumatoid arthritis leave the workforce within five years of receiving their diagnosis. Developed by **Scientific Director, Dr. Diane Lacaille**, and her team, the **Making it Work™** online program is unique in the world and fills an important gap in health care services for arthritis. Employment issues were identified by patients, both in surveys and qualitative studies, as one of their most pressing, unmet needs.

The inability to work has a tremendous impact on people's financial, social, and emotional well-being. Sick leave, work disability, and reduced productivity due to arthritis, also represent large costs to companies, benefit plans and society. Dr. Lacaille's randomized trial across Canada proved that Making it Work™, which is now available in both official languages, is effective at improving productivity at work, reducing days missed from work, and preventing short-term sick leave in workers with arthritis. The trial is ongoing to see if the program prevents long-term work disability.

Hats off to **Research Scientist, Dr. Jackie Whittaker** and **Affiliate Knowledge Broker, Alison Hoens**. They were awarded **Canadian Physiotherapy Association's Centenary Medals of Distinction**. These medals recognize leaders, role models, and innovators who have had an impact on the physiotherapy profession. Both were honoured for "going above and beyond" – Dr. Whittaker for her research contributions and teaching innovative content in physiotherapy programs and Alison Hoens for her stand-out role as a knowledge broker.



RESEARCH IN ALBERTA



Arthritis researchers play an important role in improving quality of care for patients behind the scenes. For example, the COVID-19 pandemic has caused a significant rise in the use of virtual care. We don't know how this delivery of care is impacting arthritis patients. **Research Scientist, Dr. Claire Barber**, reviewed available research on the topic and determined virtual care has the potential to be a useful tool, but that more research is needed to determine the long-term impact. How does virtual care affect our health systems? Are we achieving the best long-term outcomes for patients? Are some patients underserved through virtual care? When should patients be seen in person? It is important to continue to evaluate this new way of delivering care – especially as the pandemic persists.

Further to this focus on quality of care, clinical trial results show that COVID-19 vaccines are safe and effective, preventing 70% to 95% of symptomatic COVID-19 infections in people who get two doses. However, people with autoimmune rheumatic diseases were not part of these trials. Therefore, how effective vaccines are in people taking medications that suppress the immune system is unknown. To help people navigate vaccine decisions, **Research Scientist, Dr. Glen Hazlewood**, in partnership with the Canadian Rheumatology Association (CRA) and the Canadian Arthritis Patient Alliance (CAPA), developed a decision aid tool. The tool is for people with rheumatic diseases who are deciding if they should get one of the COVID-19 vaccines.



The decision aid provides up-to-date information about the vaccines and the potential risks and benefits and is meant to be used in discussions with health care providers.

This past year, Arthritis Research Canada welcomed **Research Scientist Dr. May Choi, to our University of Calgary team**. Dr. Choi joined us after completing clinical training in lupus and a Masters in Epidemiology at Harvard University. She brings an expertise in the discovery and testing of auto-antibody and other markers in the blood that improve our ability to accurately diagnose auto-immune diseases and predict, at the time of presentation, which patients are likely to have more severe outcomes and require additional treatment. Welcome Dr. Choi.

Congratulations to **Senior Scientist, Dr. Deborah Marshall**, inducted as a **Fellow of the Canadian Academy of Health Sciences**, one of the highest honours for a scientist! Dr. Marshall is a champion of assessing health care systems, a rigorous approach that uses evidence to inform health policy development. And kudos to **Senior Scientist, Dr. Cheryl Barnabe**, awarded an **Equity, Diversity and Inclusion Award**, from the Department of Medicine, University of Calgary/Alberta Health Services, celebrating individuals who have made outstanding contributions towards creating an equitable, welcoming and inclusive environment at the University of Calgary.

RESEARCH IN QUEBEC



As the leading clinical arthritis research organization in the country, Arthritis Research Canada's scientific team responded quickly to the COVID-19 pandemic by designing studies to gain a better understanding of how the disease could affect people with arthritis.

Arthritis Research Canada **Research Scientist, Dr. Inés Colmegna (McGill University) and Senior Scientist, Dr. Paul Fortin (Université Laval)**, and their teams, are working collaboratively to lead research on the effectiveness and safety of the Moderna COVID-19 vaccine on people with auto-immune diseases, such as rheumatoid arthritis, who take medications that suppress the immune system or have impaired immune responses resulting from the disease itself. This is important information for arthritis patients across Canada and beyond, who raised questions about receiving the COVID-19 vaccine.

This research has been initiated at the request of the ministry of health in Quebec, which recognizes our team as leaders in studying both arthritis and vaccines. It was critical for this research to begin monitoring arthritis patients prior to their first dose of the COVID-19 vaccine.

By taking blood samples before and after vaccine doses, we will be able to properly measure whether people get a good immune response to the vaccine, how long the response lasts, whether people experience any side effects, and whether it prevents COVID infections without causing arthritis flares. This research will inform how people with arthritis receive vaccines in the future and will drive public health policy.

Congratulations to Arthritis Research Canada **Research Scientist, Dr. Laetitia Michou, (Université Laval)** as the recipient of the **2021 Jeffrey Shiroky Award**. This honour was presented to Dr. Michou at the 51st annual Laurentian Conference of Rheumatology in recognition of her contributions to research in arthritis and in Paget's disease of the bones.

Bravo to **Dr. Michal Abrahamowicz**, the **James McGill Professor of Biostatistics** and a **Research Scientist** at Arthritis Research Canada. Dr. Abrahamowicz received the extreme honour of being **inducted as an Honorary Lifetime Member of the International Society of Clinical Biostatistics**, one of the two supreme bodies for Biostatistics in the world. In the more than two decades that this award has existed, he is only the 11th to receive it and the first Canadian. Biostatisticians are essential to the proper analysis of the huge datasets evaluated by scientists at Arthritis Research Canada. Without them, the great leaps forward in arthritis research could not take place.

OUR NEXT GENERATION OF SCIENTISTS

As the leading clinical arthritis research organization in North America, mentoring and inspiring our next generation of arthritis scientists is a core value of Arthritis Research Canada/Arthrite-recherche Canada. We are honoured to supervise these bright stars during their masters, PhD and post-doctoral studies and to highlight just a few of our trainees and their accomplishments.

Vivienne Yuetong Zhou, is studying at Simon Fraser University under the supervision of **Research Scientist, Dr. Hui Xie**. Her research revealed that total hip and knee replacement surgeries decreased dramatically in people diagnosed with rheumatoid arthritis after the introduction of biologics. From 2019 to 2020, 63,496 hip replacements and 75,073 knee replacements were performed in Canada, costing more than \$1.4 billion. Reducing the need for joint replacement not only prevents serious surgeries for patients, but saves precious health care dollars.

Valerie Umaefulam is a postdoctoral scholar at the University of Calgary under the supervision of **Senior Scientist, Dr. Cheryl Barnabe**. She is developing shared decision-making strategies with Indigenous peoples to aid in narrowing health equity gaps. Previous research by Dr. Barnabe has shown that Indigenous people have higher rates of arthritis and worse health

outcomes. New ways of delivering care to Indigenous peoples are needed to reduce health inequities. This approach provides Indigenous-related information about arthritis treatment benefits and risks, and discusses how to integrate traditional healing practices in arthritis care, to provide individual support and guidance in making treatment decisions.

Alyssa Howren is a doctoral student at the University of British Columbia under the supervision of **Research Scientist, Dr. Mary De Vera**. She is investigating the treatment of depression and anxiety in individuals with inflammatory arthritis. People with arthritis are more likely to report needing mental health services. Yet, they do not access these services at a higher rate than people without arthritis. Understanding people's needs and use of mental healthcare in the form of medications and professional services, is key to improving quality of care for individuals with arthritis who are struggling with their mental health.

Viviane Ta is a master's student in the Counselling Psychology program at McGill University under the supervision of **Research Scientist, Dr. Susan Bartlett**. Her research uses data from the Canadian Early Arthritis Cohort (CATCH) to examine sociodemographic and psychological factors related to medication beliefs in patients with a recent diagnosis of rheumatoid arthritis.



WITH GRATITUDE

Arthritis Research Canada is honoured to recognize and thank our Fellows Circle donors for their generosity and leadership. With your support, our team of world-class research scientists are finding answers and providing life-changing solutions. You make ground-breaking research possible!



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The background of the page features large, flowing, wavy lines in a light gray color, creating a sense of movement and elegance. These lines sweep across the top and bottom of the page, framing the central text.

OUR THANKS

On May 27, the 8th annual Arthritis Research Canada/Arthrite-recherche Canada ARThritis Soirée went virtual and raised more than \$325,000 to benefit arthritis research.

We were excited to welcome guests from across Canada and beyond for the first time. The jam-packed event highlighted important and innovative research, shared stories from people living with arthritis, and entertained with performances by award-winning Canadian artists, Bill Henderson of Chilliwack, Josh Ramsay of Marianas Trench, Neil Osborne of 54-40 and Rosemary Siemens and Eli Bennett of SaxAndViolin. Special thank you to Coleen Christie of Global BC and Mike Reno of Loverboy who did a fantastic job as hosts.

Much gratitude to everyone who made the evening a success - our guests, donors, and volunteers. We are proud to acknowledge the many companies who joined us as event sponsors and whose valued support, during this time of continued uncertainty, has ensured vital arthritis research continues!

ARThritis SOIRÉE 2021

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ARTHRITIS RESEARCH CANADA'S FOREVER HOME

Through the incredible generosity of the Milan & Maureen Ilich Foundation, Arthritis Research Canada benefited from rent-free space at the Progressive Construction building in Richmond, British Columbia for the past nine years.

With that site slated for redevelopment, an intensive search was initiated to locate a new space to meet Arthritis Research Canada's immediate needs and to ensure capacity for future growth as the leading clinical arthritis research organization in North America.

In the summer of 2020, with the drop in real estate prices and low interest rates, Arthritis Research Canada was in a position to consider purchasing a new space. Through sound financial research and diligence, that included a thorough variance analysis and mortgage stress test, it was clear that owning space was a more practical and financially viable option than leasing. Additionally, as a charity owning property in Vancouver, Arthritis Research Canada is exempt from paying property tax.

We are proud that this purchase was made without using donor dollars. The principal of this investment was earmarked for Arthritis Research Canada's future location needs. The decision to purchase is already saving us money.

Arthritis Research Canada officially moved to its forever home in August 2021. We are now located at 230 - 2238 Yukon Street in Vancouver at the heart of British Columbia's medical and research centres of excellence. We are close to affiliated institutions and collaborators and easily accessible via major traffic corridors and transit. Our rheumatologists can also continue to see their patients, as the new location includes clinic space.

This move protects Arthritis Research Canada's future and creates an environment that will foster collaboration and ground-breaking arthritis research now and in the future.

**ARTHRITIS IS SERIOUS.
RESEARCH IS THE ONLY WAY TO FIND ANSWERS AND SAVE LIVES.**

ARTHRITIS RESEARCH EDUCATION SERIES

The Arthritis Research Education Series was created in 2019 as a way to share important arthritis research with the general public. It is a multimedia initiative that includes videos, research, FAQs, resources and an interactive webinar.

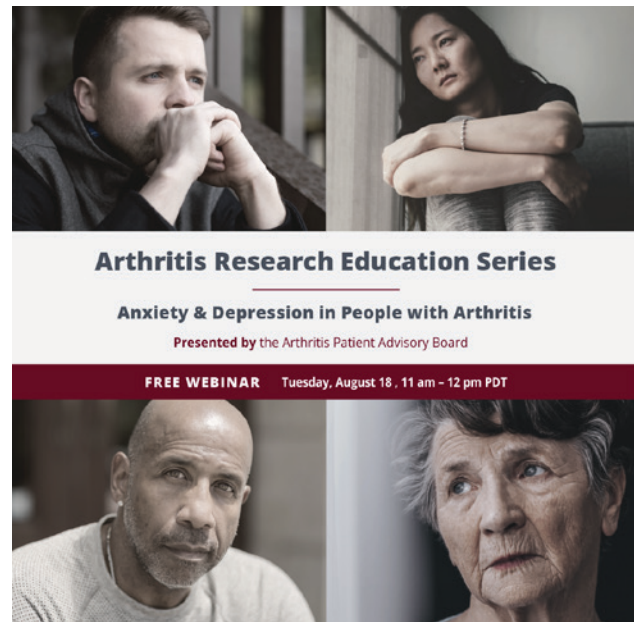
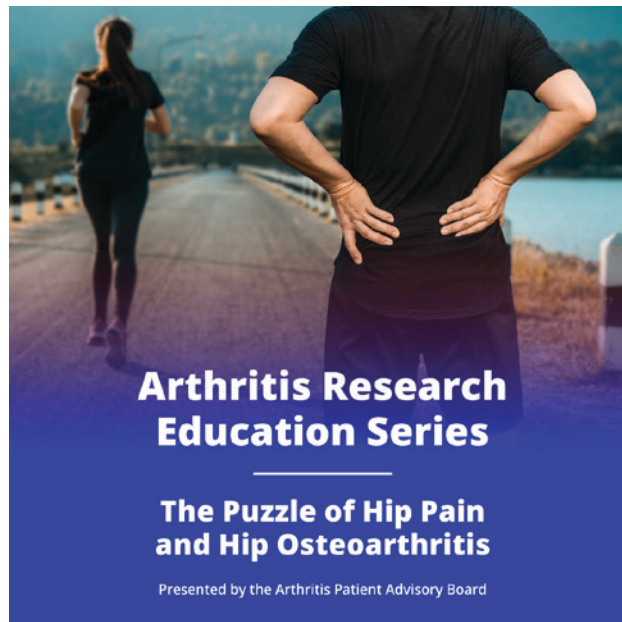
Arthritis Research Canada conducts practical research to help people living with different types of arthritis overcome challenges raised by their diseases so they can continue to thrive. But it can sometimes be difficult to show the direct impact of arthritis research.

Initiated by the Arthritis Patient Advisory Board, the Arthritis Research Education Series shows arthritis research in action. Research is determining whether running is safe for people with knee osteoarthritis. It's finding answers for individuals struggling with mental health after their arthritis diagnosis or working to identify causes of hip pain and hip osteoarthritis. It's finding ways to prevent serious, life-threatening complications like heart attacks and strokes. It's questioning how health decisions are made so that we can always be improving care for patients. Arthritis research is all of this and more.

The Arthritis Research Education Series continues to be an excellent way to make Arthritis Research Canada's research accessible to people living with arthritis, as well as their loved ones, care teams and the general public.

“The ultimate aim of research is always to find a cure, but that can be really difficult to do. It's important that we're also doing research that allows us to improve quality of life for people who are living with disease.”

Charlotte Ryder-Burbidge,
Arthritis Patient Advisory Board member, living with rheumatoid arthritis



The Arthritis Research Education Series is presented by the Arthritis Patient Advisory Board.

Educational Grants-in-Aid provided by:





FINANCIALS

THE ARTHRITIS RESEARCH CENTRE SOCIETY OF CANADA STATEMENT OF FINANCIAL POSITION AS AT MARCH 31, 2021

ASSETS

CURRENT

Cash and Cash Equivalents	\$591,344
Accounts receivables	435,076
Recoverable from government - GST	241,802
Recoverable from government - CEWS & CERS	79,067
Prepaid expenses	6,591
	<u>\$1,353,880</u>

PREPAID EXPENSES

INVESTMENTS	15,652,934
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CAPITAL ASSETS	9,256,611
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	<u>\$26,263,425</u>
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LIABILITIES AND NET ASSETS

CURRENT

Accounts payable & accrued liabilities	\$241,823
Payable to government - GST	440,000
Payables - Payroll deductions	18,977
Current portion of deferred revenue	908,082
Current portion of long term debt	192,839
	<u>\$1,801,721</u>

DEFERRED REVENUES	4,896,055
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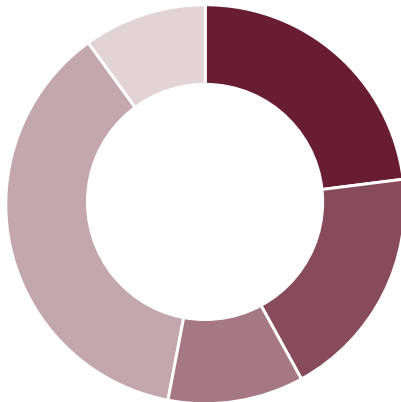
LONG TERM DEBT	6,707,161
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	<u>\$13,404,937</u>
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FUND BALANCES

Unrestricted	10,343,753
Internally restricted	2,514,735
	<u>\$12,858,488</u>

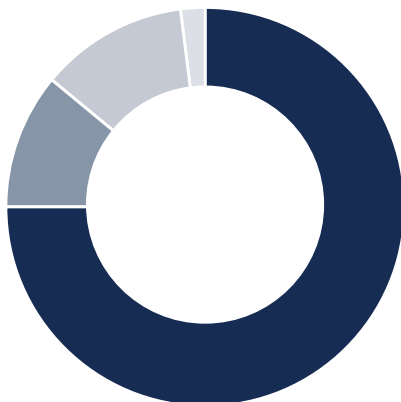
	<u>\$26,263,425</u>
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REVENUE

- 23%** - Research
- 19%** - Operating Grant
- 11%** - Fundraising
- 37%** - Unrealized Gain
- 10%** - Investment Income

Research	\$1,696,591
Operating Grant	1,440,584
Fundraising and Donations	813,755
Unrealized Gains (Losses)	2,829,370
Investment Income	760,623
Total Revenues	\$7,540,923



EXPENSES

- 75%** - Research
- 11%** - Fundraising
- 12%** - Administration
- 2%** - Misc. Expenses

Research	\$2,726,572
Fundraising	408,673
Administration	448,678
Misc. Fees	61,260
Total Expenses	\$3,645,183
Excess (Deficiency) of Revenues over Expenses	\$3,895,740



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