# 2019/2020 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.



# TABLE OF CONTENTS

Message from the Scientific Director
Message from the Executive Director
Message from the Board Chair
Board of Directors
Arthritis Patient Advisory Board
Patients Intéressés par la Recherche sur L'arthrite
Our Team: Research Scientists, Affiliate Research Scientists and Clinician Investigators
Leading Research Across Canada
In British Columbia
In Alberta
In Quebec
Our Next Generation Scientists
With Thanks
ARThritis Soirée 2020
Dr. John Esdaile, A Legacy of Arthritis Research

26 Financials

## MESSAGE FROM THE SCIENTIFIC DIRECTOR



Dr. Diane Lacaille

It is an honour to have been appointed Scientific Director and to have the opportunity to lead this amazing organization. I deeply value the research conducted at Arthritis Research Canada/Arthrite-recherche Canada because of the impact it has on the everyday lives of people with arthritis. I am inspired by the incredible resilience of arthritis patients, the dedication of the research scientists and staff, the innovative ideas of my colleagues, and the sharp inquisitive minds of our trainees.

This year has been an exceptional year in many respects, and the scientific team at Arthritis Research Canada rose to the challenge. We adapted study protocols to meet the new reality of conducting research in the times of COVID-19, while ensuring the safety of staff and study participants. As well, we quickly responded to the pressing need for answers by embarking on new COVID-19 studies. Our scientists and staff have proven to be incredibly nimble and resourceful.

In the past year, Arthritis Research Canada has continued to be successful in obtaining funding to advance arthritis research and support trainees, despite a scarce funding environment. Additionally, we have been pleased to work with the BC Ministry of Health to support the implementation of the health policy for biosimilar transition. We look forward to continuing this collaboration as the transition is expanded to other biologic agents, and as other Provinces follow British Columbia's lead.

I look forward to the next decade and the future discoveries that will transform how health care is delivered and change how people with arthritis live their lives. These are exciting times. Arthritis Research Canada will continue to expand the breadth of our expertise in order to respond to the evolving needs of patients, and to harness the opportunities that arise from new trends, such as big data, artificial intelligence, and smart technologies. We will continue to tackle health inequities affecting people living with arthritis, especially Indigenous peoples, so that all Canadians regardless of race, ethnicity, or social circumstance, have access to the care they need and the best care available. And of course, we will continue to invest in the future of arthritis research by training and mentoring the next generation of arthritis research scientists.

A heartfelt thank you to everyone who contributes to the advancement of arthritis research. Together, we are indeed making a difference.

## MESSAGE FROM THE EXECUTIVE DIRECTOR



Shauneen Kellner

This past year celebrates over two decades of Arthritis Research Canada/Arthrite-recherche Canada transforming the lives of people living with arthritis and another year filled with exciting changes and growth.

We continue to be proud of our status as an accredited Imagine Canada organization. This accreditation demonstrates our excellence and leadership in five key areas of operation: board governance, financial accountability and transparency, fundraising, staff management and volunteer involvement. As well, we have received an "A" rating from Charity Intelligence, an independent evaluator of Canadian charities. We work hard to ensure accountability at all levels of Arthritis Research Canada and that funds given to our organization are spent with the greatest benefit to advancing research and improving the quality of life for people with arthritis.

During the past year, we welcomed Rob Appleton to our administrative team as Associate Director, Special Projects. Rob brings a wealth of non-profit experience to this position and we are thrilled to have his contributions to help with our growth and development in the years to come.

While this year saw us all facing the uncertainty and worry of COVID-19, I am very proud of Arthritis Research Canada's ability to respond to the pandemic and stay on track with our strategic plan. Our research team ensured we kept our momentum by adapting existing research and starting new studies. The commitment this required from our Board, research scientists and staff, and our team of volunteer patient partners, was nothing short of amazing. Thank you all.

Of course, none of this would be possible without the incredible support we receive from individuals, businesses, community organizations and foundations from across Canada. We are encouraged by your loyalty and thank you for your generosity as we continue to focus on reducing the burden of arthritis.

With the number of Canadians affected by arthritis, now over 6 million, the need for arthritis research is more important than ever. Thank you for making this possible.

# MESSAGE FROM THE BOARD CHAIR



Jocelyn **Cruickshank** 

Partner and Managing Director KPMG Corporate Finance Inc.

As I begin my fourth year as Board Chair of Arthritis Research Canada/Arthrite-recherche Canada, I want to pause and thank everyone who has contributed to another incredible year of world class arthritis research. Despite a global pandemic, the focus has remained solidly on our research and finding solutions that help people triumph over arthritis.

This year marked a significant change at Arthritis Research Canada, with the retirement of our Scientific Director, Dr. John Esdaile. It would be fair to say that after 21 years at the helm, Dr. Esdaile is the father of Arthritis Research Canada. He has been the driving force behind the creation of this organization which ranks among the best in the world, and I wish to acknowledge his countless contributions.

Arthritis Research Canada extends a very special thank you to departing Board members Colin Hansen and Amanda Girling. Their dedication and leadership has been evident throughout their terms; Colin has served on the Board for more than 6 years, most notably helping guide us in government relations and board governance, and Amanda, who served four years, has contributed her extensive skills and experience in human resource management and planning. We have all benefited from their intelligence and insight and they will be dearly missed.

This year, the Board welcomed new members and returning members: Don Elkington has re-joined the Board for his third term, assuming the role of Vice-Chair and new members Joy MacPhail and Jordan Langlois have started their first term. Both Joy and Jordan bring a wealth of skills and experience; Joy in government and corporate relations and Jordan a background in corporate and commercial law. Their knowledge further strengthens our Board and will be invaluable as we continue to develop opportunities for future growth.

I sincerely thank all my fellow Board members for your leadership and dedication to Arthritis Research Canada. Your collective hard work and diligence along with our scientific team and staff have made this another exceptional year. I am very proud to lead an organization so committed to its mission and vision - leading research, finding answers and saving lives.

# **BOARD OF DIRECTORS**



Jim **Dales** *Director* Retired



Don **Elkington** *Vice Chair* Retired



Rahim **Esmail** *Director* TELUS



Amanda **Girling** *Director* Retired



Lianne **Gulka** *Director* Arthritis Patient Advisory Board Liaison



Pauline **Hadley-Beauregard** *Director* Crux Strategic Clarity



Colin **Hansen** *Director* AdvantageBC



Jordan Langlois Director Kornfeld LLP



Rodrigue **Lussier** *Finance Chair* Corporation Fiera Capital



Joy **MacPhail** *Director* OUTTy



Naz **Panahi** *Director* Pan City Enterprises Inc.



Stephen **Schwartz** *Director* Burns Fitzpatrick LLP

## ARTHRITIS PATIENT ADVISORY BOARD

The Arthritis Patient Advisory Board (APAB), is comprised of volunteer advocates with arthritis who bring personal experience and knowledge to research decision making at Arthritis Research Canada. The patient voice is present in all aspects of research study, development and delivery.

Their quarterly Arthritis Newsletter continues to be an important resource for arthritis patients seeking information on research and learning more about living with arthritis through shared experiences. APAB continues to develop plain language summaries for our current research. These summaries, which are on our website, have all been reviewed by patients to ensure medical language has been translated and easily understood. APAB also hosts on-line meet and greet nights with our research trainees, to share patient experiences and to help guide and foster our next generation of arthritis scientists.

This year saw the launch of the new Arthritis Research Education Series. The Series has been created to provide patient and public engagement in research and delivers an in-depth look at specific areas of arthritis research while offering an opportunity for scientist/patient interaction. Two episodes, Running & Knee Osteoarthritis and Anxiety & Depression in People with Arthritis, are currently live on our website and continue to provide a great resource with their robust content.

Born out of the COVID-19 pandemic, a new patient outreach, the Arthritis Wellness Conversations, began in May. Each month, through a recorded Zoom meeting, members of the patient advisory board and a guest scientist whose area of study addresses the topic of conversation get together for an informal discussion and information sharing. The first conversation focused on the important topic of navigating COVID-19 for people living with arthritis. A big thank you to Sandra Sova, a Vancouver Island radio host, who is the creator and moderator. These recorded conversations may be found on our website.

This past year saw changes to our patient advisory board as APAB said goodbye to Kristin Tousignant and Rosemary Kirungyi - thank you both for your time and contributions. They also welcomed new members Nikki Bhatti, Julie Junneau, Tayaba Khan, Alison Legge, Chris Pudlak and Samantha Rogers. The Arthritis Patient Advisory Board is currently comprised of 19 active members, the largest in their history, and represents a diversity of disease types, ages, cultures, and skill sets.



## Arthritis Research Education Series

Anxiety & Depression in People with Arthritis

# PATIENTS INTÉRESSÉS PAR LA RECHERCHE SUR L'ARTHRITE



It has been another busy year for the Patients Intéressés par la Recherche sur l'Arthrite (PIRA) team, with their third annual walk at Université Laval to create awareness for people living with arthritis, as well as their participation in "Rencontre sur l'Arthrite", an event for people with arthritis, their families, and health professionals. Jean Légaré represented PIRA on the committee and as a session moderator. Additionally, the PIRA kiosk offered many opportunities to share examples of patient involvement in research and highlight researchers from the CHU de Quebec-Université Laval Research Center who spoke about their studies and the potential impacts on arthritis patients. A further event "Café Scientifique" was organized by PIRA member Mame-Awa Ndiave, in partnership with Stratégie de Recherche axée sur le Patient (SRAP) Quebec Unit, to share experiences on patient engagement in research projects.

Since the start of the pandemic, research projects were developed throughout the province to understand the impact of COVID-19 on patients living with arthritic diseases. This was particularly important as hydroxychloroquine was proposed as a treatment for COVID-19 which could have resulted in shortages for lupus and arthritic patients who take this drug. PIRA members are participating in some of these projects, among them is the Corona VIRus and Arthritis Library (CoVIRAL) project being led by Senior Research Scientist, Dr. Paul Fortin. L'équipe des Patients Intéressés par la Recherche sur l'Arthrite (PIRA) a connu une autre année fort occupée, tout d'abord avec sa troisième marche annuelle à l'Université Laval, organisée pour sensibiliser le public aux réalités quotidiennes des personnes atteintes d'arthrite, et par la suite avec sa participation à la Rencontre sur l'arthrite, un évènement destiné aux personnes souffrant d'arthrite, à leurs familles et aux professionnels de la santé. Jean Légaré a représenté l'équipe PIRA en étant membre du comité et modérateur d'une séance d'information. Le kiosque PIRA a en outre permis de partager de nombreux exemples de participation des patients à la recherche et a souligné le travail des chercheurs du Centre de recherche du CHU de Québec - Université Laval qui ont parlé de leurs études et de leur impact potentiel sur les personnes atteintes d'arthrite. Mame-Awa Ndiaye, une autre membre de l'équipe PIRA, a quant à elle organisé le Café scientifique, en partenariat avec l'Unité de soutien SRAP (Stratégie de Recherche axée sur le Patient) du Québec, pour partager plusieurs expériences de participation des patients aux projets de recherche.

Depuis le début de la pandémie, des projets de recherche ont été lancés dans toute la province pour comprendre quelles étaient les répercussions de la COVID-19 sur les personnes souffrant d'arthrite. Ces projets étaient d'autant plus importants que l'hydroxychloroquine était envisagée comme possibilité de traitement pour la COVID-19, ce qui aurait pu entraîner une pénurie de ce médicament pour les personnes atteintes de lupus et d'arthrite. Des membres de l'équipe PIRA participent à certains de ces projets, parmi lesquels le projet CoVIRAL (Corona VIRus and Arthritis Library) qui est dirigé par le Dr Paul Fortin, un chercheur scientifique principal chez 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 of Medicine, 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, 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**

Assistant 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**

Associate 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 Pediatric Rheumatologist, Section Chief Rheumatology, Alberta Children's Hospital

- 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

#### JOLANDA CIBERE - MD, PhD, FRCPC Senior Scientist, Rheumatology APPOINTMENTS

Associate Professor of Medicine, 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
- Chair, Systemic Lupus International Collaborating Clinics (SLICC)

#### INÉS COLMEGNA - MD Research Scientist APPOINTMENTS

Associate Professor, Division of Rheumatology, Department of Medicine, McGill University

Scientist, Research Institute, McGill University Health Centre, Infectious Diseases and Immunity in Global Health Program Centre for Translational Biology

#### DEBORAH DA COSTA - PhD Research Scientist, Psychology APPOINTMENTS

Scientist, Research Institute, McGill University Health Centre, Metabolic Disorders and Complications Program, Centre for Outcomes Research and Evaluation

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

#### MARY **DE VERA** - MSc, PhD Research Scientist, Pharmacoepidemiology **APPOINTMENTS**

Assistant 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

#### 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, Infectious and Immune Diseases Axis, Centre de recherche du CHU de Québec-Université Laval

#### DONALD **GARBUZ** - MD, MHSc, FRCSC Research Scientist, Orthopaedics **APPOINTMENTS**

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

#### NELSON **GREIDANUS** - MD, MPH, FRCSC Research Scientist, Orthopaedics **APPOINTMENTS**

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

#### 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

Arthur J.E. Child Chair, Rheumatology Outcomes Research Canada Research Chair, Health Systems and Services (2008-18) Professor, Department of Community Health Sciences, Cumming School of Medicine, University of Calgary

#### LAËTITIA **MICHOU** - MD, PhD Research Scientist, Rheumatology **APPOINTMENTS**

Regular Researcher, Endocrinology and Nephrology Axis, Centre de recherche du CHU de Québec-Université Laval Associate professor, Division de rhumatologie, département de médecine, Faculty of Medicine, Université Laval

#### KAMRAN SHOJANIA - MD, FRCPC

#### Clinical Trialist and former Director of Clinical Trials 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

#### Research Scientist, Musculoskeletal Rehabilitatioi 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 APPOINTMENTS

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

Research, Education, and Practice Coordinator, Providence Health Care Research Institute

- 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

#### 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

#### 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

#### ALLYSON **JONES** - PT, PhD Affiliate Scientist **APPOINTMENTS**

Professor, Department of Physical Therapy, Faculty of Rehabilitation, University of Alberta Adjunct Professor, School of Public Health, University of Alberta

#### ANNE TOWNSEND - MA, PhD Affiliate Scientist, Bioethics APPOINTMENTS

Senior Research Associate, Division of Health Research, Faculty of Health & Medicine, Lancaster University, UK

Affiliate, College of Medicine and Health, Medical School, University of Exeter, UK

# **CLINICIAN INVESTIGATORS**

#### MOLLIE CARRUTHERS - MD, FRCPC Clinician Investigator APPOINTMENTS

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

#### JONATHAN **CHAN** - MD, FRCPC *Clinician Investigator* **APPOINTMENTS**

Assistant Clinical Professor, University of British Columbia Rheumatologist, Artus Health Centre in Vancouver SHAHIN JAMAL - MD, FRCPC, MSc Clinician Investigator APPOINTMENTS

- Department of Medicine, Division of Rheumatology, Vancouver Coastal Health
- Clinical Associate Professor, University of British Columbia and Program Director of Adult Rheumatology

# LEADING RESEARCH ACROSS CANADA

4 Centres 100+ Research Team Members 5 Major Universities 100+ Research Studies



## **RESEARCH DISCIPLINES**

- rheumatology
- orthopedics
- physiotherapy
- occupational therapy
- pharmacy
- rehabilitation science
- public health
- epidemiology
- health services research

- biostatistics
- health psychology and behavioural change
- health economics
- health systems assessment
- education
- pediatrics
- knowledge translation

"I have seen firsthand the tremendous impact that arthritis research can have in transforming the lives of people living with arthritis. While we have made significant progress in the treatments available for arthritis, there is still so much we can do to lessen the pain and disability of this disease and help people live well with arthritis. The generosity of donors is integral to ensuring vital arthritis research continues."

- Dr. Diane Lacaille, Scientific Director



# IN BRITISH COLUMBIA



#### Responding to COVID-19.

Arthritis Research Canada's scientific team responded rapidly to the COVID-19 pandemic with new research projects to better understand its impact on people living with arthritis. Our researchers collaborated across Canada and internationally, leading Canadian teams in worldwide alliances to follow adults and children with arthritis, and to find answers quickly.

Many patients with autoimmune diseases, such as rheumatoid arthritis and lupus, use medications that affect their immune system. **Senior Research Scientist, Dr. Antonio Aviña-Zubieta** and his team are studying all British Columbians with COVID-19, to answer patients' questions about how their disease and their medications influence the risk of infection and the outcomes of COVID-19. This research will inform public health policy in response to the pandemic, by determining how this high risk group should be treated and whether they should be prioritized for vaccination when it becomes available.

The UNIFIED Study was launched by **Research Scientist, Dr. Mary De Vera,** to better understand the experiences of individuals with arthritis during the COVID-19 pandemic. The study is asking arthritis patients how COVID-19 has affected their access to their doctor and health care in general, their use of arthritis medications, and how it has impacted their mental health. Patient input is important to inform decisions by doctors and health care systems to ensure health care is optimized during the pandemic and beyond.

Using a digital app that tracks physical activity, arthritis symptoms and mood, Arthritis Research Canada's **Research Trainee, Jenny Leese,** will examine how COVID-19 and BC's pandemic restrictions (e.g. social distancing and stay-athome orders) have affected the physical activity, self-care management, and mental health of people living with rheumatoid arthritis. This research will inform strategies to better support people living with arthritis during the pandemic.

Special congratulations to **Senior Research Scientist, Dr. Linda Li,** who was inducted as **a Fellow of the Canadian Academy of Health Sciences.** Dr. Li has been a leader in advancing the engagement of patients in research from shaping the ideas to disseminating the final results. She is a leader in using digital technology to help people inform their health decisions through scientific evidence, and in knowledge translation, which is getting arthritis research results into the hands of those who need it most. Dr. Li is the head of knowledge translation research for all diseases in BC.

# IN ALBERTA

#### Improving care & reducing health inequities.

Arthritis Research Canada scientists have advanced research on developing frameworks to evaluate and improve the quality of care for people living with arthritis. They are also working with Indigenous communities to reduce health inequities.

Despite many advances in arthritis treatments, we know high quality care is not universal.

**Research Scientist, Dr. Claire Barber,** has focused her research on developing systems to continuously appraise the quality of care provided to Canadians with arthritis for quality improvement purposes. We can't improve what we don't measure. In recognition of this important work, Dr. Barber received the **2020 Canadian Rheumatology Association's Emerging Investigator Award.** By developing quality measures and testing them

in different care settings across Canada, her team has identified a number of gaps in care. Canadians living with rheumatoid arthritis often face barriers in receiving timely and effective care. Dr. Barber's current research will look at how these care gaps impact health outcomes, and health care costs. She is also designing and testing innovative ways of delivering care, to determine how to best achieve high quality care that meets the needs of patients.

#### Dr. Cheryl Barnabe, Senior Research Scientist,

is Canada's leader in research on health services for arthritis in Indigenous communities. Her research has shown that arthritis is much more common in Indigenous peoples, yet their access to care is lower, and health outcomes are worse, than in non-Indigenous populations. Dr. Barnabe's research program strives to implement arthritis services that are culturally safe and respond to the needs of communities. She and her team have received a \$3.5 million grant to create a Network for "Indigenous Primary Health Care and Policy Research in Alberta". The Network will nurture research that is deeply connected to community knowledge, is grounded within Indigenous ethics, and addresses the ongoing impacts of colonization of Indigenous peoples. The Network will use the knowledge derived from its research to advocate for transforming the primary health care system to ensure accessible and quality health care that is focused on promoting health equity for Indigenous peoples.



# IN QUÉBEC





#### Taking care of the whole person.

Just as your physical health is important, so is your mental health. People living with arthritis are more likely to have anxiety and depression than people without arthritis. The additional stress of the COVID-19 pandemic and the restrictions imposed that prevent people from managing their arthritis as they were used to, are making it even more challenging. Arthritis Research Canada is conducting research to better understand how arthritis can affect mental health and what we can do to better address these issues.

McGill University, Research Scientist, Dr. **Susan Bartlett,** has shown that patients with rheumatoid arthritis (RA) have higher rates of anxiety and depression, compared to the general population. Depression, in particular, has been linked to increased RA symptoms, such as fatigue, diminished response to treatment, and greater disability - revealing a large gap in patient care. Dr. Bartlett's research explored the burden of anxiety and depression and how one's health impacts their ability to live a fulfilling life. Of those participating in the study, 18% had mild anxiety, 9% had moderate to severe anxiety, 18% had mild depression, and 14% had moderate to severe depression. Understanding which individuals are at greater risk, enables us to offer tools and strategies for support.

Sleep disturbances, including difficulty falling asleep, staying asleep, and/or waking up early, are all symptoms of insomnia. Up to 80% of people with Systemic Lupus Erythematosus (SLE) report these symptoms. Sleep disturbances can increase other SLE symptoms, like fatigue, pain, and depression. Unfortunately, insomnia is often under recognized and under treated. The first-line treatment for insomnia is cognitive behavioural therapy, but no study has evaluated its use in SLE. Dr. Deborah Da Costa, Research Scientist at **McGill University,** is adapting an internet version of this intervention to fit the needs of people living with SLE and will test its use and benefits at improving insomnia with SLE patients. This research fills an important gap in SLE care. Dr. Da Costa plans to extend this work to other diseases such as RA.

Arthritis Research Canada/Arthrite-recherche Canada congratulates our Universite Laval Centre, **Senior Research Scientist, Dr. Paul Fortin,** on receiving the prestigious **2020 Distinguished Investigator Award** from the **Canadian Rheumatology Association.** This award goes to a Senior Scientist who is recognized internationally for outstanding science. Dr. Fortin is highly acclaimed for his patient focused research in systemic lupus erythematosus.

# IN TRAINING



Supporting the next generation of arthritis researchers.

#### At Arthritis Research Canada/Arthrite-recherche

**Canada,** we believe it is our responsibility to help train the next generation of scientists and are therefore dedicated to mentoring and supervising trainees at the masters, PhD and post-doctoral levels in a wide variety of disciplines that mirrors the diversity of our senior scientific leadership. For young professionals building a scientific career focused on arthritis, Arthritis Research Canada is recognized as a leading training hub in Canada.

We are proud to highlight just a few of our Trainees and their accomplishments thus far.

Under the supervision of Dr. Linda Li, and studying at the University of British Columbia. Research Trainee, Dr. Jasmin Ma, has successfully obtained three salary awards for her postdoctoral fellowship research, Improving strength training in people with rheumatoid arthritis: A foundational behaviour change science approach. Dr. Ma's research is developing strategies to tailor strength training exercises for patients with rheumatoid arthritis (RA). Strong muscles help protect joints, reduce pain, and improve general health. Strength training also prevents age-related cognitive decline. As only 14% of people with RA do strength training regularly, Dr. Ma's research will support people with RA to incorporate strength training as part of their regular habits.

**Research Trainee, Christina Le,** is studying at the University of Calgary under the supervision of

Dr. Jackie Whittaker and has received two salary awards for her PhD research. Dr. Le is investigating the overall well-being in youth following a sportrelated knee injury, and its implications for preventing osteoarthritis that may occur later in life as a long-term consequence of knee injuries.

Both **Research Trainees Darren Mazzei and Luiza Grazziotin Lago** are under the supervision of Dr. Deborah Marshall at the University of Calgary. Mr. Mazzei has received a three-year salary award for his PhD thesis research, *Informing public funding decisions for an exercise and education program for osteoarthritis*, and Ms. Grazziotin Lago received a three-year salary award for her project, *Cost-effectiveness of early initiation of personalized biologic treatment in children with juvenile idiopathic arthritis*.

Studying at the Universite Laval under the supervision of Dr. Paul Fortin, **Research Trainee**, **Dr. Laurence Mainville**, has received three salary awards for her Master's thesis research, *Public versus private drug insurance and degree of severity of psoriasis in patients prescribed biologics*. Biologic drugs are expensive medications that are very successful in treating severe psoriasis and psoriatic arthritis. Dr. Mainville's research will answer the question: 'Do people wait longer or do they need to have a more severe disease if they are covered by the public plan?'

# WITH THANKS

Arthritis Research Canada is honoured to recognize and thank the following donors for their generous support as members of our Fellows Circle. We are incredibly grateful to each and every one of you for your philanthropic leadership and dedication to advancing life-saving arthritis research.

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# WITH GRATITUDE

Arthritis Research Canada extends a very special thank you to all our 2020 ARThritis Soirée sponsors for standing by us despite the unexpected cancellation of our annual, signature event.

"As Presenting Sponsor, Macdonald Realty and Macdonald Commercial extend our gratitude to all sponsors who, like us, are committed to ensuring our support for life-changing arthritis research goes ahead. We must push forward and do all we can to accelerate discovery and find answers. My deepest appreciation for your generosity at this very crucial time."

- Dan Scarrow, President, Macdonald Real Estate Group

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### **PRESENTING** Sponsor



# A LEGACY OF ARTHRITIS RESEARCH



After 21 years as Arthritis Research Canada/Arthrite-recherche Canada's Scientific Director, world-renowned scientist and rheumatologist, Dr. John Esdaile, retired in June 2020.

It is our organization's extreme honour to pay tribute to his distinguished and amazing career.

Dr. Esdaile's visionary leadership for Arthritis Research Canada and his ability to take the organization from the humble beginnings of one scientist, one student trainee, and one administrative staff in 2000 - to become the largest clinical arthritis research institution in North America - is an extraordinary achievement. Thanks to Dr. Esdaile, Arthritis Research Canada is now home to a team of over 100 research scientists and staff, with four centres across Canada and affiliations with five major Canadian universities including: the University of British Columbia, Simon Fraser University, the University of Calgary, Université Laval, and McGill University. Arthritis Research Canada is globally recognized for its multi-disciplined expertise that is having a tremendous impact on the advancement of arthritis research and improving the lives of people living with arthritis.

Throughout his tenure, Dr. Esdaile created a distinct culture of hard work, research innovation, scientific excellence and collaboration. He ensured the patient perspective was at the forefront of all we do, as evidenced in the key role of the Arthritis Patient Advisory Board in all facets and phases of our research.

It is Dr. Esdaile's belief that Arthritis Research Canada has a responsibility to help train the next generation of arthritis scientists, that has seen him personally champion the mentoring of trainees at the masters, PhD and post-doctoral levels in a wide variety of disciplines since the organization's inception. Arthritis Research Canada is thrilled that Dr. Esdaile will continue to offer his wisdom and guidance.

"Personally, I plan to continue to be available to help in any way possible to mentor the largest group of people in North America training to become our next generation of arthritis scientists and initiating their careers. Watching younger scientists succeed has always brought me joy." – *Dr. John Esdaile.* 

Dr. Esdaile's unwavering dedication to find answers through research has had an immeasurable impact on the lives of people with arthritis. His desire to make a real difference will continue to inspire our leading-edge arthritis research for years to come and will be a long and lasting legacy of an incredible research scientist. Thank you Dr. Esdaile!



"Thank you for creating a community for all of us to be a part of. You have connected this large group at Arthritis Research Canada – you've brought us all together." – Dr. Cheryl Barnabe

"It is a very common theme from most of John's trainees – you believed in us and that's very important. Thank you for all of your support over the years. It's been a privilege to have benefited from your mentoring!"

#### - Dr. Paul Fortin

"John taught me the lesson of, 'why not?' It has sparked a lot of the ideas and research that I'm doing now. Thank you for everything you've done and congratulations on your retirement."

#### - Dr. Linda Li

"It was very evident very early on, what a special place Arthritis Research Canada was going to be. John supported patient partners and demonstrated really exemplary leadership."

- Alison Hoens (APAB)









# FINANCIALS

For a full copy of our audited financial statements, please see our website at:

http://www.arthritisresearch.ca/ about-us/our-finances

### ASSETS

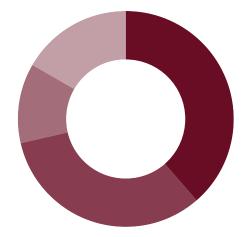
#### CURRENT

	\$15,818,600
CAPITAL ASSETS	12,651
INVESTMENTS	14,969,051
PREPAID EXPENSES	26,743
	810,155
Cash and Cash Equivalents Accounts receivables Recoverable from government – GST Prepaid expenses	\$591,482 154,896 30,534 33,243



### LIABILITIES AND NET ASSETS

CURRENT	
Accounts payable & accrued liabilities	220,462
Payables - Payroll deductions	11,646
Current portion of deferred revenue	956,751
	1,888,859
DEFERRED REVENUES	5,666,993
	6,855,852
FUND BALANCES	
Unrestricted	6,448,013
Internally restricted	2,514,735
	8,962,748
	\$15,818,600



## REVENUE

68%	Research
57%	Fundraising
21%	Unrealized Gain (Loss)
(29%)	Investment Income

	\$3,663,108
Investment Income	143,663
Unrealized Gains (Losses)	(1,070,105
Fundraising	2,106,934
Research	\$2,482,616

*EXPENSES T7%* Research *11%* Fundraising *10%* Administration *2%* Misc. Expenses

Excess of Revenues over Expenses	\$415,075
	4,078,183
Misc. Fees	75,317
Administration	405,279
Fundraising and Donations	474,274
Research	\$3,123,313



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