



The Canadian Arthritis Research Conference: Taking Collaborative Action

February 25, 2020 | 3:00 pm - 10:00 pm

February 26, 2020 | 8:30 am - 3:30 pm

**Fairmont Empress &
Victoria Conference Centre**
721 Government Street
Victoria, BC

AGENDA

TUESDAY, FEBRUARY 25, 2020
Crystal Ballroom

2:00 PM	Registration opens in Palm Court (<i>adjacent to Crystal Ballroom</i>)
3:00 PM	Land acknowledgment <i>Clarence (Butch) Dick, Songhees Nation</i>
3:10 PM	Opening remarks <i>The Arthritis Society, Canadian Rheumatology Association and CIHR-IMHA</i>
3:15 PM	Session 1 - Living Well: Easing Pain Through Research <i>Introduction to session by Dr. Hani El-Gabalawy & Graeme Reed</i> This session aims to provide a state-of-the-art summary of current pain research, a glimpse into patients' experience living with chronic pain, and explore the challenges and impediments to developing better approaches to pain treatment.
3:20 PM	Linda Wilhelm <i>Thirty Five Years Living with Pain</i>
3:35 PM	Dr. Yvonne Lee <i>Beyond the VAS: Advances in Clinical Research on Pain in Individuals with Arthritis</i>
4:05 PM	Dr. Cairistin McDougall <i>Quantitative Sensory Testing Demonstrates Similar Patterns of Pain Sensitization between Rheumatoid Arthritis Patients and their Unaffected First-Degree Relatives</i>
4:20 PM	Dr. Yves de Koninck <i>Basis/Translational Research Directions in Pain</i>
4:50 PM	Dr. Emerson Krock <i>The passive transfer of fibromyalgia symptoms from patients to mice</i>
5:05 PM	BREAK
5:15 PM	Maria Hudspith <i>Exploring the Intersection of Arthritis and Chronic Pain in Canada: Informing the Canadian Pain Task Force</i>
5:35 PM	Panel Discussion & group Q&A
6:05 PM	Session 1 Closing Remarks
6:30 - 8:00 PM	Poster Session & reception – in Upper Pavilion
8:00 - 10:00 PM	Dinner with industry presentations – In Crystal Ballroom

WEDNESDAY, FEBRUARY 26, 2020
Crystal Ballroom

7:45 - 8:30 AM	BREAKFAST
8:30 AM	Session 2 - New Approaches to Inflammation and Tissue Repair <i>Introduction to session by Dr. Jeffrey Dixon, Dr. Heinrike Schmeling, Dr. Shabana Amanda Ali</i> This session will highlight current and future approaches to research on inflammation and tissue repair, including innovative ways to do research and new directions for moving forward. The speakers will emphasize the integration of basic and clinical research, highlight potential opportunities for collaborative action by Canadian and international investigators, and encourage the audience to brainstorm opportunities for collaborative action.
8:35 AM	Jack Hornecker <i>Spotlight</i>
8:50 AM	Dr. Ali Akram <i>The role of TRAF1 in arthritis</i>
9:05 AM	Dr. Rae Yeung <i>What's in a name? Lessons learned from childhood arthritis</i>
9:40 AM	BREAK
10:05 AM	Dr. Matthew Grol <i>Gene Therapy Strategies for Treatment of Osteoarthritis</i>
10:20 AM	Dr. Cosimo De Bari <i>Cell therapy strategies for cartilage defects and osteoarthritis</i>
10:55 AM	Panel Discussion & group Q&A
11:25 AM	Session 2 Closing Remarks
11:30 AM	LUNCH
12:15 PM	Session 3 - Getting Hooked on Big Data Science – <i>Introduction to session by Co-Chairs Dr. Diane Lacaille and Dr. Proton Rahman</i> This session will examine big data from two important perspectives – the integration of “multi-omics” datasets, and the leveraging of big data collected in peoples’ daily lives from other sources. Speakers will review open sources of big data and tools available for research, highlight approaches in integrative computational biology and artificial intelligence on the path to novel biomarkers and improved therapies, and provide examples of clinical applications of big data in arthritis.

WEDNESDAY, FEBRUARY 26, 2020 CONT'D

12:25 PM	Cheryl Koehn <i>Is Big Data a Big Deal to Patients? A Patient Perspective</i>
12:50 PM	Dr. Linda Li <i>Citizen science – big data, big ideas</i>
1:15 PM	Nevena Rebić <i>r/thritis: investigating patient-centred questions using data from social media sources</i>
1:30 PM	Matthew Veras <i>Regulators of ectopic calcification in a mouse model of DISH: A multi-omics perspective</i>
1:45 PM	BREAK
2:00 PM	Dr. Igor Jurisica <i>Explainable AI for data-driven medicine: From data to models and treatments</i>
2:45 PM	Panel Discussion & group Q&A
3:10 PM	Session 3 Closing Remarks
3:15 – 3:25 PM	Conference Closing Remarks & Poster Session Announcements

SPEAKER BIOS

DR. ALI AKRAM

Presenting in Session 2 -
New Approaches to Inflammation and Tissue Repair

Dr. Ali Akram got his M.Sc. and Ph.D. from the University of Toronto from the Department of Immunology and The Institute of Medical Science. During his graduate studies he worked on deciphering factors contributing to immunodominance following viral infection (i.e., Influenza and HIV-1) in relation to arthritis. He is well published in many high impact journals.

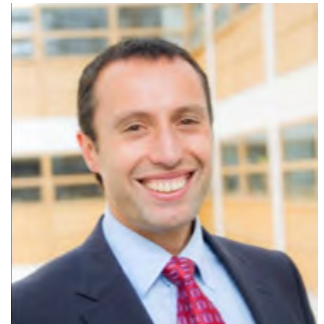


Following his graduation, he went on to do a postdoctoral fellowship at the University Health Network/UC Berkeley before joining the lab of Dr. Ali Abdul Sater at York University to conduct his current research on the role of TRAF1 in relation to arthritis.

DR. COSIMO DE BARI

Presenting in Session 2 -
New Approaches to Inflammation and Tissue Repair

Professor Cosimo De Bari is a clinically active rheumatologist and a translational scientist with expertise in musculoskeletal regenerative medicine and arthritis pathophysiology. He has a long-standing interest and track record in the study of joint health and disease, with a focus on cell-based therapies for cartilage repair and osteoarthritis. Cosimo



graduated in Medicine (summa cum laude) from the University of Bari (Italy), where he underwent specialist training in Rheumatology. He obtained his PhD from the University of Leuven (Belgium). In 2003 Cosimo moved to King's College London, where in 2005 he was awarded an MRC Clinician Scientist Fellowship. Since 2007 Cosimo holds a clinical chair in Translational Medicine at the University of Aberdeen. Cosimo is the founder and director of the Aberdeen Centre for Arthritis and Musculoskeletal Health (awarded "Centre of Excellence in Rheumatology" status by the EULAR), leads the Arthritis and Regenerative Medicine Laboratory, and is deputy director of the Tissue Engineering & Regenerative Therapies Centre Versus Arthritis.

DR. YVES DE KONINCK

Presenting in Session 1 -

Living well: Easing Pain Through Research

Yves De Koninck, PhD, FCAHS, FRSC is professor of Psychiatry & Neuroscience at Université Laval, Adjunct Professor of Pharmacology at McGill, Scientific Director of the CERVO Brain Research Centre and Director of Research of the Quebec Integrated University Health and Social Services Centre. Former President of the Canadian



Association for Neuroscience (www.can-acn.org), he founded the Quebec Pain Research Network (www.qprn.ca). He has served on advisory boards worldwide for CIHR, NSERC, FRQ, NIH, NSF, INSERM, The Wellcome Trust and the Gairdner Foundation. He holds a Canada Research Chair in Chronic pain and related brain disorders. He dedicated his career to understanding the mechanisms underlying chronic pain. For his accomplishments in this field he was awarded an Honorary Doctorate from Université de Montréal and the Distinguished Career Award from the Canadian Pain Society. To push the frontiers of neuroscience he founded the Neurophotonics Centre (www.neurophotonics.ca), bringing together physicists, engineers, mathematicians, and biologists to stimulate the development of technologies to probe the brain. Throughout his career he has been a strong advocate of breaking barriers between disciplines. He now leads Sentinel North (www.sentinelnorth.ulaval.ca) a global initiative to harness the power of light for the benefit of health, environment and sustainable development in the North. He currently chairs the Advisory Board of the CIHR Institute of Neuroscience, Mental Health and Addiction and leads the Canadian Brain Research Strategy (canadianbrain.ca). For his transdisciplinary achievements, he received the Jacques-Rousseau prize from Acfas, the NSERC Brockhouse Canada Prize and the Emily Gray Award from the Biophysical Society.

DR. MATTHEW GROL

Presenting in Session 2 -

New Approaches to Inflammation and Tissue Repair

Dr. Grol received his Ph.D. with Dr. S. Jeffrey Dixon at the University of Western Ontario, and completed a postdoctoral fellowship in the laboratory of Dr. Brendan H. Lee at Baylor College of MediREne. He is currently an Instructor at Baylor where he studies gene therapy strategies for treatment of osteoarthritis. Dr. Grol received CIHR funding for his masters, doctoral and postdoctoral training, and is currently funded by a grant from the Bone Disease Program of Texas. His work on gene therapy for osteoarthritis has been published in Arthritis and Rheumatology and Human Gene Therapy, and one of these strategies is currently the subject of a Phase 1 clinical trial in the U.S.



JACK HORNECKER

Presenting in Session 2 -

New Approaches to Inflammation and Tissue Repair

Jack Hornecker is an 18-year old student in his first year at the Alberta University of the Arts, studying Visual Communication and Design. He is a former patient of the Alberta Children's Hospital, where he participated in a clinical trial through the Rheumatology Clinic to treat a diagnosis of Systemic Juvenile Arthritis.



MARIA HUDSPITH

Presenting in Session 1 -

Living well: Easing Pain Through Research

Maria is the Executive Director of Pain BC, a collaborative NGO working to improve the lives of people living with pain. She Co-Chairs the Canadian Pain Task Force mandated to advise the federal government on an improved approach to pain care, education, research and data in Canada. She is a Co-Principal Investigator and co-lead for patient engagement in the CIHRfunded Chronic Pain Network, the first pain research network in Canada. She has twenty five years of experience in community development, organizational change, policy advocacy and capacity building in the health and non-profit sectors.



DR. IGOR JURISICA

Presenting in Session 3 -

Getting Hooked on Big Data Science

Igor Jurisica, PhD, DrSc is a Senior Scientist at Krembil Research Institute, Professor at U Toronto and Visiting Scientist at IBM CAS. He is an Adjunct Professor at Pathology and Molecular Medicine at Queen's U, an adjunct scientist at the Institute of Neuroimmunology, Slovak Academy of Sciences, and an Honorary Professor at Shanghai Jiao Tong University. Since 2015, he has also served as Chief Scientist at the Creative Destruction Lab, Rotman School of Management. He has published extensively on data mining, visualization and integrative computational biology, including multiple papers in Science, Nature, Nature Medicine, Nature Methods, J Clinical Oncology, J Clinical Investigations, and has over 14,086 citations since 2014, including 747 highly influential citations (SemanticScholar). He has been included in Thomson Reuters 2014, 2015 & 2016 lists of Highly Cited Researchers (<http://highlycited.com>), and The World's Most Influential Scientific Minds: 2015 & 2014 Reports. In 2019, he has been included in the Top 100 AI Leaders in Drug Discovery and Advanced Healthcare list (Deep Knowledge Analytics, <http://analytics.dkv.global>).

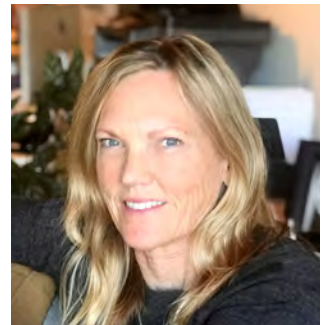


CHERYL KOEHN

Presenting in Session 3 -

Getting Hooked on Big Data Science

Cheryl Koehn lives with rheumatoid arthritis and over her 31 years since diagnosis has become a national patient community leader, educator, patient research partner and published author. Ms. Koehn has dedicated her life to helping others living with arthritis. She is the Founder and President of Arthritis Consumer Experts, Canada's first national, patient-led organization that provides science-based information and education programs in both official languages to people with arthritis. She served as Co-Chair of the Summit on Standards for Arthritis Prevention and Care, was a volunteer member of the management committee of Canada's first federally funded arthritis research institute (the Canadian Arthritis Network), was a consumer representative Board Member of the Arthritis Alliance of Canada and today serves as the patient representative on the Canadian Institutes of Health Research Standing Committee on Ethics.



DR. EMERSON KROCK

Presenting in Session 1 -

Living well: Easing Pain Through Research

Emerson Krock, PhD, is currently a post-doctoral fellow at the Karolinska Institute (KI) in Stockholm, Sweden. He completed his PhD in 2017 at McGill University with Lisbet Haglund, where he investigated mechanisms of intervertebral disc degeneration and chronic low back pain. At the KI, under the mentorship of Camilla Svensson, Emerson has examined various antibody-driven pain mechanisms in models of rheumatoid arthritis. Most recently, he has been exploring autoantibody and autoimmune mechanisms of fibromyalgia. Emerson has received post-doctoral fellowships from the International Association for the Study of Pain and the King Gustaf V's 80-year foundation to support his work.

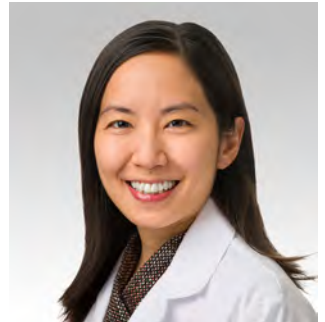


DR. YVONNE LEE

Presenting in Session 1 -

Living well: Easing Pain Through Research

Yvonne Lee is an Associate Professor of Medicine (Rheumatology) and Preventive Medicine at Northwestern University Feinberg School of Medicine. She received her medical degree from the University of Michigan Medical School and a masters in medical science from Harvard Medical School. She was trained in quantitative sensory testing (QST) methods by Dr. Daniel Clauw at the University of Michigan Chronic Pain and Fatigue Research Center. Her research focuses on the inflammatory and neural mechanisms of pain in rheumatic diseases. Her studies utilize multiple methods of pain assessment, including patient self-report measures, QST, and neuroimaging to assess pain among rheumatoid arthritis patients.



DR. LINDA LI

Presenting in Session 3 -
Getting Hooked on Big Data Science

Dr. Linda Li is Professor and Harold Robinson/Arthritis Society Chair at the Department of Physical Therapy, University of British Columbia. She holds a Canada Research Chair in Patient-oriented Knowledge Translation. Dr. Li's research centers on improving care for people with arthritis and empowering patient self-care. Her work focuses on integration of online, mobile, and wearable tools in health care. Example includes the use of fitness trackers and apps in patient coaching to promote physical activity. Dr. Li's work in knowledge translation has also led to new studies on the benefits of engaging patients in the full spectrum of research process.



DR. CAIRISTIN MCDOUGALL

Presenting in Session 1 -
Living well: Easing Pain Through Research

Dr. Cairistin McDougall attended medical school in her home province at the University of Saskatchewan and graduated in 2014. She went on to complete her Internal Medicine training at the University of Calgary followed by Rheumatology training at the University of Manitoba. During her residency, she began research with Dr. Hani El-Gabalawy on pain and QST after completing QST training with Dr. Yvonne Lee in Boston, MA. She completed her Rheumatology training in 2019 and has started practice back home in Regina, SK.



NEVENA REBIĆ

Presenting in Session 3 -
Getting Hooked on Big Data Science

Nevena Rebić is a 2nd year MSc graduate trainee at Arthritis Research Canada and the University of British Columbia Faculty of Pharmaceutical Sciences, where she previously completed a Bachelor of Pharmacy. In her research, she uses her clinical expertise to develop patient-centered approaches to examine how women with rheumatoid arthritis make medication decisions for family planning and pregnancy. She is also a mentor to undergraduate PharmD trainees and supervises student research projects employing data from social media sources. She is a recipient of the CIHR Drug Safety and Effectiveness Cross-Disciplinary Training.



MATTHEW VERAS

Presenting in Session 3 -

Getting Hooked on Big Data Science

Matthew Veras is a PhD Candidate in his final year in the Department of Physiology and Pharmacology at Western University. He is also affiliated with the Bone & Joint Institute at Western University where he has served as the Chair of the Trainee Leadership Committee. Matthew's PhD project is investigating regulators of ectopic calcification in a mouse model of Diffuse Idiopathic Skeletal Hyperostosis (DISH). This project has involved the integration of transcriptomic, proteomic, and metabolomic datasets in addition to behavioral assays of pain. To date, he has co-authored 4 publications related to intervertebral disc degeneration and DISH.



LINDA WILHELM

Presenting in Session 1 -

Living well: Easing Pain Through Research

Linda Wilhelm is the President of The Canadian Arthritis Patient Alliance, a national, volunteer, patient driven organization that has worked to improve the lives of people living with arthritis since 2002. She is Co-Chair of the Steering Committee for the Chronic Pain Strategy for Patient Oriented Research (SPOR) Network, as well as a member of the networks patient advisory committee. She is also a member of The Evidence Alliance (SPOR) Network. Linda has participated in past Health Canada expert advisory panels and numerous conferences concerning treatment access and drug safety issues. She is a former member of both the Expert Advisory Committee for Vigilance of Health Products and the Drug Safety and Effectiveness Network's steering committee and a current member of The National Pain Taskforce. Ms. Wilhelm has been an active advocate for treatment access and quality of care for all patients both regionally and nationally for over twenty years and is a past board chair for the New Brunswick Division of the Arthritis Society. Ms. Wilhelm has been living with Rheumatoid Arthritis for over thirty five years, many of those years unresponsive to the medications used to treat the disease which resulted in significant and irreversible damage to most of the joints in her body leaving her to manage chronic pain on a daily basis and throughout her recovery from fourteen major joint reconstructive surgeries. Ms. Wilhelm is a recipient of the Queen's Jubilee Golden and Diamond Medals of honour and the 2015 Arthritis Alliance of Canada Qualman/Davies Patient and Consumer Leadership Award.

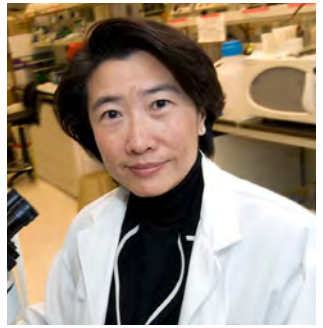


DR. RAE YEUNG

Presenting in Session 2 -

New Approaches to Inflammation and Tissue Repair

Rae Yeung is Professor of Paediatrics, Immunology and Medical Science at the University of Toronto, and Senior Scientist in Cell Biology Research, Scientific Director - Sickkids Biobank and the Hak-Ming and Deborah Chiu Chair in Translational Paediatric Research at The Hospital For Sick Children, University of Toronto. The goal of Rae's research is to understand



the mechanisms governing autoimmunity, specifically the mechanisms involved in initiating and sustaining the immune response in childhood arthritis and rheumatic diseases. Basic science findings have been translated into clinical correlates, which in turn are leading to new therapeutic interventions to improve the outcome in affected children. Dr. Yeung is leading both national and international efforts to understand the biologic basis for heterogeneity in childhood arthritis and rheumatic diseases towards personalized treatment decisions.
