



UNIVERSITY OF CALGARY
FACULTY OF KINESIOLOGY



2020 Annual Report

VISION

To be an international leader in the study and advancement of human movement, sport, health and wellness.

MISSION

To provide excellence in research, education and community programs related to human movement, sport, health and wellness.



DEAN'S MESSAGE



We have certainly faced challenges this year with the COVID-19 pandemic. But, as always, I am very proud of our students, faculty and staff for their strength and caring during this time. We managed to achieve another milestone in the Faculty of Kinesiology by maintaining our position within an exclusive, international class of sport science schools. For the second time, the Faculty is ranked No. 1 in North America according to ShanghaiRanking's Global Ranking of Sport Science Schools and Departments, and 11th out of 429 universities globally. Quite remarkable!

Here are a few of the highlights of our Annual Report:

- We are exploring alternatives to the one-size-fits-all approach to exercise intensity for maintaining a healthy cardiovascular system, especially for those over 65.
- We are expanding our free exercise program geared for those with cancer and cancer survivors beyond urban settings to remote and rural communities across the country.
- We are collaborating with sport and recreation partners in Calgary to establish an innovative Calgary Adaptive Hub to offer programs for those with disabilities across facilities.
- We are collaborating with other scholars to investigate how brain blood flow is regulated, an important key to understanding how the brain changes under stress, such as after a concussion.
- We are researching how consuming low-calorie sweeteners while pregnant can increase body fat in offspring and disrupt their gut microbiota which affect our health and increase our risk of many diseases.
- We are developing new ways of performing neurological testing with greater accuracy. We are bringing these new neurological wearable technologies to market.
- We are using wearable technology to better understand heart rate and stress levels of those cycling to work, information that urban planners and developers may be able to use to improve the layout and connectivity of our street network.
- As you will see in this Annual Report, our work is changing how we understand the importance of movement for both performance and health, and creating opportunities for our students to learn and work alongside our superb faculty members.

Dr. Penny Werthner, PhD
Dean and Professor

HIGHLIGHTS

- Honour** **Nicole Culos-Reed** — [Inspired Albertan, CTV News Calgary, Darrel Janz.](#)
- Honour** **Carolyn Emery** — Canada Research Chair (Tier 1) Concussion
- Honour** **Walter Herzog** — Outstanding Reviewer, CIHR College of Reviewers, 2019 Fall Grant Competition
- Honour** **Jennifer Zwicker** — Governor General's Canadian Leadership Conference
Selected as one of 250 emerging leaders from across Canada to participate in the 2020 Governor General's Canadian Leadership Conference (postponed to 2021)
- Honour** **Jennifer Zwicker** — Canada Research Chair (II) - Disability Policy for Children and Youth
- Award** **Don Anderson**, PhD, University of Iowa Visiting Killam Scholar. (hosted by the Faculty of Kinesiology)
- Award** **William Bridel** — Calgary Institute for the Humanities Fellowship
- Award** **Reed Ferber** — McCaig-Killam Teaching Award - Killam Trust Foundation
- Award** **Walter Herzog** — Killam Memorial Chair - Killam Trust Foundation



*Dr. Reed Ferber
McCaig-Killam Teaching Award*



*Dr. Raylene Reimer
Killam Annual Professor*



*Dr. Walter Herzog
Killam Memorial Chair*



HIGHLIGHTS

- Award** **Walter Herzog** — Award for “Excellence in Basic, Clinical, and Translational Science” from the Journal of Orthopaedic Research for co-authored manuscript: Kajabi A, Finnilae M, Herzog W, Saarakkala S, Korhonen R, Nieminen M, Casula V, Ojanen S, Nissi M (2020). [Multiparametric MR imaging assessment reveals early cartilage degeneration at 2 and 8 weeks after ACL transection in a rabbit model](#). Journal of Orthopaedic Research, (38): 1974 –1986. DOI: 10.1002/jor.24644.
- Award** **Raylene Reimer** — Killam Annual Professors Award (\$10,000 prize) – Killam Trust Foundation
- Award** **Raylene Reimer** — Human Performance Laboratory Faculty Award
- Award** **Valeriya Volkova** — Supervisor Kenny — 2nd place winner at the Interdisciplinary Hackathon Competition (prototype of wearable device is currently in provisional patent stages)
- Appointed** **Cari Din** — Canadian Centre Canadian Centre for Advanced Leadership Fellow, Haskayne School of Business
- Appointed** **Carolyn Emery** — Chair Scientific Committee Sport Physiotherapy Canada Congress
- Appointed** **Franziska Onasch** — (Supervisor Herzog) – Student Representative, Canadian Society for Biomechanics
- Appointed** **Kathryn Schneider** — Co-Chair [6th International Consensus Conference on Concussion in Sport](#).
- Appointed** **Kathryn Schneider** — Executive committee, Canadian Concussion Network
Co-Lead Integrated Knowledge Translation Committee, Canadian Concussion Network
- Appointed** **Jennifer Zwicker** — Canadian Academy of Health Sciences National Autism Strategy Working group
- Appointed** **Jennifer Zwicker** — Deputy Chief Scientific Officer, Kids Brain Health Network
- Appointed** **Jennifer Zwicker** — Royal Society of Canada COVID-19 Disability Working Group

HIGHLIGHTS

- M.Sc. Ahmad Muhammad Al Qahtani** — Supervisor: Dr. Juan Murias.
Thesis: [Effects of a single-leg exercise training intervention on single and double leg peak power output, maximal oxygen consumption, gas exchange threshold, and the respiratory compensation point.](#)
- M.Sc. Jayne Beselt** — Supervisor: Dr. Meghan McDonough.
Thesis: [Social support for physical activity among older adults: An examination of two populations at increased risk of social isolation.](#)
- M.Sc. Joel Burma** — Supervisors: Drs. Kathryn Schneider and Jeff Dunn.
Thesis: [The Effect of High-Intensity Exertion on Sport Concussion Assessment Tool 5 Subcomponents.](#)
- M.Sc. Julia Daun** — Supervisor: Dr. Nicole Culos-Reed.
Thesis: [The Feasibility of Patient-Reported Outcomes, Physical Function, and Mobilization in the Care Pathway for Head and Neck Cancer Surgical Patients: A Mixed-Methods Study.](#)
- M.Sc. Sheila Downie** — Supervisor: Dr. Sarah Kenny.
Thesis: STICK ITT – Study to Increase Current Knowledge of Injuries in Trampoline and Tumbling; The Incidence of Injury in Competitive Trampoline and Tumbling
- M.Sc. Michael Esposito** — Supervisor: Dr. Darren Stefanyshyn.
Thesis: [Effects of midsole cushioning stiffness on Achilles tendon stretch during running.](#)
- M.Sc. Madison Fullerton** — Supervisors: Drs. Juan Murias and Louis Passfield.
Thesis: [Decrements in Cycling Performance are Dependent on the Intensity and Duration of Prior Exercise.](#)
- M.Sc. Ramandeep Jaswal** — Supervisor: Dr. Larry Katz.
Thesis: [High-Performance Coaches Attitudes and Beliefs Regarding Technology Adoption](#)
- M.Sc. Corson Johnstone** – Supervisor: Dr. Kathryn Schneider.
Thesis: [Heat, Cold and Pressure Pain Thresholds following a sport-related concussion.](#)
- M.Sc. Danika Kelly** — Supervisor: Dr. William Bridel.
Thesis: [Canadian Female Alpine Athletes' Constructions of Risk and Gender.](#)

HIGHLIGHTS

- M.Sc. Keenan MacDougall** — Supervisor: Dr. Brian MacIntosh.
Thesis: [Additional in-series compliance does not affect the length dependence of activation in rat medial gastrocnemius.](#)
- M.Sc. Anmol Mattu** — Supervisor: Dr. Juan Murias
Thesis: [Menstrual and Oral Contraceptive Phases Do Not Influence Submaximal and Maximal Responses to Exercise or Vascular Responsiveness at Rest.](#)
- M.Sc. Nathaniel Morris** — Supervisors: Dr. Walter Herzog, Dr. Matthew Jordan.
Thesis: [Neuromuscular deficits following anterior cruciate ligament reconstruction with hamstring autograft: implications for rehabilitation and return to sport testing.](#)
- M.Sc. Isla Shill** — Supervisor: Dr. Carolyn Emery.
Thesis: [Injuries in Canadian female high school rugby and coach perceptions of injury prevention: Informing an injury prevention implementation strategy.](#)
- M.Sc. Pratham Singh** — Supervisor: Dr. Darren Stefanyshyn.
Thesis: [Determining Speed and Stride Length using an Ultrawide Bandwidth Local Positioning System.](#)
- M.Sc. Larissa Taddei** — Supervisor: Dr. Kati Pasanen.
Thesis: [The Influence of Peer-to-Peer Learning via Technology on Youth Soccer Coaches' Neuromuscular Training Warm-up Exercise Error Detection.](#)
- M.Sc. Tom Tripp** — Supervisor: Dr. Martin MacInnis.
Thesis: Ryanodine receptor modifications following sprint interval exercise: Time course and fibre-specific responses in human skeletal muscle.
- M.Sc. Alanna Weisberg** — Supervisor: Dr. Larry Katz.
Thesis: [Impact of Bilateral Training on Overhand Throwing Performance: Speed, Accuracy, Technique, and Upper-body Kinematics.](#)
- M.Sc. Anneke Winegarden** — Supervisor: Patricia K. Doyle-Baker.
Thesis: 3km Track Time Trial Performance in M.Sc. Cross-Country Skiers after a HIIT Session.
- Ph.D. Kevin Boldt** — Supervisor: Dr. Walter Herzog.
Thesis: [Exercise and dietary interventions in a rat model of cardiac adaptation.](#)

HIGHLIGHTS

- Ph.D. Alex Campelo** — Supervisors: Dr. Larry Katz.
Thesis: [Using Active Video Games to Improve Physical Literacy Levels in Older Adults: A Mixed-Methods Approach.](#)
- Ph.D. Lindsay Gorrell** — Supervisor: Dr. Walter Herzog.
Thesis: [Musculoskeletal biomechanical and electromyographical responses associated with spinal manipulation.](#)
- Ph.D. Seong-won Han** — Supervisor: Dr. Walter Herzog.
Thesis: [Changes in patellofemoral joint mechanics in the presence of quadriceps muscle imbalance.](#)
- Ph.D. Lindsay Loundagin** — Supervisor: Dr. Brent Edwards.
Thesis: [The Influence of Intracortical Microarchitecture on the Mechanical Fatigue of Bone.](#)



GENERAL COMMENTS

Exercise Physiology and Nutrition in Health and Sport

ABOODARDA

Exercise Neurophysiology Laboratory

In 2020, Dr. Jalal Aboodarda's research focused on the integration of physiological and perceptual factors determining exercise tolerance in healthy individuals. Despite COVID-19 setbacks, the team managed to coordinate a large study investigating the kinetics of neuromuscular and perceptual responses to different exercise intensities and durations. In another project, they measured acute corticospinal excitability and inhibition responses to pre-induced fatigue and experimental pain conditions. Neurophysiological responses were quantified using non-invasive techniques such as transcranial magnetic stimulation of the brain and peripheral nerve electrical stimulation of the skeletal muscles.

DOYLE-BAKER

Doyle-Baker Lab

Dr. Patricia K. Doyle-Baker's lab focuses on sport science and health and exercise research. Their research, although often at the individual level (e.g., athlete or student) also takes on projects that focus on finding ways to improve the physical activity levels of whole communities (e.g. sport organizations (NSO) or recreation centres). The early part of this past year was disproportionately devoted to designing a 3-year evaluation of a local recreation centre with colleagues from the Built Environment and Health Living Lab within the Department of Community Health Sciences in the Cumming School of Medicine. The evaluation related to an innovative project on children's play based out of a large recreation centre in Calgary with a goal of transforming the community they interact with. Unfortunately, the COVID-19 pandemic interrupted this research and other lab-based work. The group was able to pivot and investigate the impact the imposed social and physical distancing restrictions had on several population groups including at the community level in North Central Calgary, university professors and the Alpine ski race community. They also collaborated with some of the university librarians and completed a scoping review on stroke in athletes and look forward to sharing the outcomes of this research in the near future.

HOLASH

Exercise Physiology Laboratory

The focus of Dr. John Holash's work was continued development and modification of courses and instructional materials within the Exercise Physiology group to leverage new technologies, instruments and research for course delivery. Dr. Holash represents the faculty on the current "Learning Technologies Advisory Committee" and is part of the Student Orientation Committee with Dr. William Bridal for the faculty of Kinesiology. Dr. Holash's primary roll within the faculty is to develop and integrate new advanced teaching and learning techniques and resources for exercise physiology. His aim is to develop a team under the exercise physiology umbrella, to develop integration of state-of-the-art computer-based methods for measuring, recording and analyzing large data sets of physiological variables. The goal

of this team will be to enhance the student experience by providing opportunities for software product development, rapid prototyping, machine learning, data processing and potentially some entrepreneurship opportunities that revolve around leveraging digital technologies and scaling them. This year, Dr. Holash used an evidence-based approach to turn an introductory research class into a modular virtual class to improve the remote learning experiences and feedback for students. He also started a research project with an honours student to investigate if virtual reality games, that allow individuals to participate in physical activities and competitions, produce activity levels high enough to make them a viable source of exercise. This type of activity might help provide a bridge for individuals who are unable to gather in groups to still participate together in activities albeit virtually.



Dr. John Hoash

MACINNIS

Metabolic, Exercise, and Environmental Physiology Laboratory (MEEP)

The Metabolic, Exercise, and Environmental Physiology (MEEP) Laboratory is an integrative physiology laboratory interested in understanding how humans respond to acute and chronic exercise and the extent to which these responses are influenced by nutrition, sex and the environment. Led by Dr. Martin MacInnis, this research group launched in 2018 and investigates: (1) adaptations in skeletal muscle, cardiovascular and hematological systems to different exercise training programs; (2) the mechanisms underpinning the plasticity of these physiological systems; (3) the development of non-invasive methods to assess skeletal muscle fitness; (4) the influence of oxygen availability and carbohydrates on aerobic metabolism, neuromuscular fatigue and exercise performance and (5) the use of wearable technologies to improve exercise testing and prescription. They employ a wide breadth of techniques, ranging from the biochemical and molecular analysis of human tissue (e.g., blood and muscle) to whole-body measures of exercise metabolism, tolerance and performance (e.g., pulmonary gas analysis and femoral nerve stimulation). The overall aim of their research program is to understand how molecular and physiological mechanisms regulate physiological systems in humans, with goals to translate and apply this research to improve the health and fitness of individuals ranging from athletes to those with chronic disease and disability.

REIMER

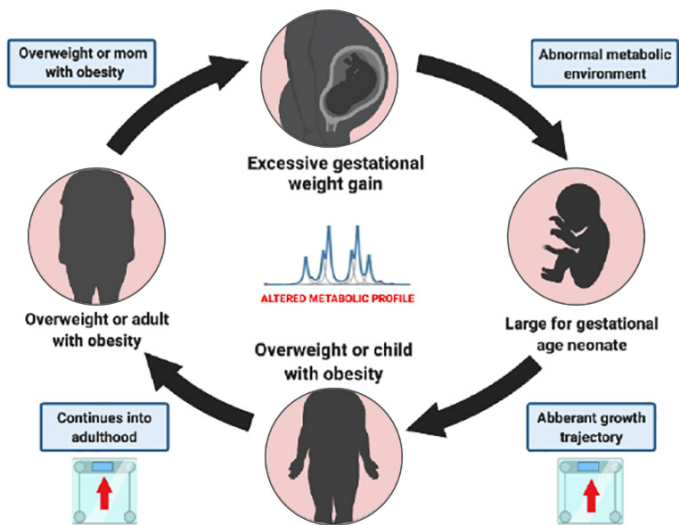
Associate Dean Research

Dr. Raylene Reimer's research focuses on understanding how nutrition and the bacteria that live in our intestine (called gut microbiota) interact to affect our risk of developing chronic diseases such as obesity, type 2 diabetes and fatty liver disease. Changes to the gut microbiota in early life play a particularly strong role in increasing or decreasing the risk of many diseases later in life including obesity and asthma. In 2020 the Reimer lab focused on two aspects of early life microbiota development. In the first instance, they examined changes in the gut microbiota that occur when offspring are born naturally or via Caesarean section. While it is known that C-section birth can increase the risk of certain diseases later in life, Dr. Reimer's Lab further examined how this risk is altered when the mother is lean or has obesity. The second set of experiments examined how fathers' diet can affect the metabolism of their offspring. While there is ample evidence that maternal diet affects offspring health, they are the first to examine the effect of a father's diet that is high in protein, high in fibre, or high in fat and sugar, on the health of their offspring. The Reimer lab was also able to make significant progress on one of our human clinical trials until COVID-19 halted the study. This study is examining the potential for prebiotic fibre supplement to reduce pain and improve function in individuals with knee osteoarthritis and obesity. Ultimately the goal is to design and evaluate diets aimed at body weight management and optimal gut microbiota profiles.

SHEARER

Food, and the energy it produces, is essential to all life. At the same time, nutritional disturbances and overnutrition can have profound impacts on our overall health and disease susceptibility. Dr. Jane Shearer’s research focuses on metabolic physiology and how the body uses and regulates energy in health and disease. There are two main areas of research interest, (1) the processes that govern energy generation and (2) the means by which energetic and other nutritional signals are communicated within the body. Energy is generated by mitochondria, tiny bean shaped organelles that are present in all cells. These structures are especially important in energy demanding tissues such as the brain, heart and skeletal muscle. Employing state of the art techniques to examine mitochondria, the laboratory is able to pinpoint the role of mitochondrial dysfunction in obesity, autism, epilepsy

and inflammatory bowel disease. The goal is to understand mitochondrial dysfunction (when they don’t work at optimal capacity) to develop novel strategies and therapeutics to improve their function. The second research area aims to understand how metabolic signals are communicated throughout the body. By quantifying and tracing small molecules in body fluids and tissues (metabolomics), the team is able to clarify signals that govern cross-talk between all organs in our body. In 2020, their group published work that was able to use these signals to predict excessive weight gain in pregnancy in the second trimester onwards. This finding is important because the implicated biomarkers have the potential to be a useful predictive tool for identifying women at risk for excessive weight gain, who may benefit from early and more aggressive prenatal care and lifestyle intervention (diet and exercise).



Injury Prevention, Sport Medicine, and Rehabilitation

BLACK

The Injury Prevention, Clinical Intervention, and Implementation Science Research Group

The Injury Prevention, Clinical Intervention, and Implementation Science Research Group led by Dr. Amanda Black, is a new group in the Faculty of Kinesiology. Core projects focus on injury surveillance and epidemiology, evidence-based practice and knowledge translation, and theory-driven implementation, behaviour change and evaluation. Ongoing projects include, (1) examining the implementation of concussion guidelines, education and management protocols for sporting organizations and high schools and (2) examining the context for implementation for injury prevention initiatives and injury surveillance in high school and university athletic populations.

EMERY

Sport Injury Prevention Research Centre (SIPRC)

Dr. Carolyn Emery is the Chair of the Sport Injury Prevention Research Centre and co-leads the Integrated Concussion Research Program at University of Calgary. Her research focuses on the evaluation of prevention and treatment strategies to reduce the burden of injuries and their consequences in youth sport. Her research has demonstrated that policy disallowing body checking in

15-17 year-old non-elite ice hockey leagues reduces injury rates >60% and concussion rates >50%. Her research also demonstrated a 45% reduction in injury rates in girls with neuromuscular training warm-up program implementation in physical education (ages 11-15). Surveillance in High Schools and Community Sports to Reduce Injuries and their Consequences in Youth Sport (SHRed Injuries) and SHRed Concussions is informing best practice in injury prevention and management across multiple youth sports nationally. The highest concussion rates in youth sport were found in rugby, football, ice hockey and ringette. Targeted prevention strategies are being evaluated across training (e.g., tackle training), equipment (e.g., helmet fit), and rules of the game (e.g., zero tolerance for head contact). The Alberta Prevention of Early Osteoarthritis (AB PrE-OA) Ankle study examined predictors of post-traumatic OA and demonstrated that youth with a significant ankle joint injury history have more pain and symptoms, poorer function and balance, reduced sport participation, and ankle-related quality of life compared to uninjured controls. The AB PrE-OA Knee study is evaluating an exercise intervention to prevent post-traumatic knee OA. Dr. Emery's research also focuses on youth with cerebral palsy, juvenile idiopathic arthritis and evaluation of adapted physical activity programs.

GENERAL COMMENTS

KENNY

Dr. Sarah Kenny's research is unique in Canada, bringing together the disciplines of Kinesiology and Dance. Specifically, Dr. Kenny applies her experience as a contemporary dancer to the science of injury epidemiology. As lead of a longitudinal project with professional dance organization, Alberta Ballet, Dr. Kenny's research is impacting the international dance medicine and science community, contributing towards refined international standards of how dance-related injury is defined and measured, and advocating for the recognition of dancers across all styles and levels of practice, as both artists and athletes.



Dr. Sarah Kenny

An additional focus of Dr. Kenny's research aims to understand the psychosocial experience of community dance as a form of physical activity and social connection for populations across the age spectrum. In particular, her research team is leading a Social Sciences and Humanities Research Council (SSHRC) funded project examining the lived experiences of participating in community dance and how these experiences contribute towards physical literacy and successful aging among older adults and those living with Parkinson's Disease.

MOHTADI

Dr. Nick Mohtadi is the director of the Sport Medicine Centre (SMC) which continues to fulfill its mandate to provide clinical care and participate in clinical research by successfully bridging the cultural gap between clinical care and clinical research. Given that the Sport Medicine Centre sees an average of 30,000 patient visits each year, the ability for the clinicians and staff to participate in meaningful clinical research is truly remarkable. The SMC would like to thank the staff and consultants who make our research mandate possible, while providing healthcare services to the patients in the Southern Alberta Community.

In addition to the number of studies that are currently being conducted out of the Sport Medicine Centre, this past year saw both Dr. Nick Mohtadi and Dr. Preston Wiley receive lifetime membership awards from the Canadian Academy of Sport and Exercise Medicine.

GENERAL COMMENTS

Dr. Nick Mohtadi participated in a consensus meeting on behalf of the International Olympic Committee in October 2017. The consensus statement: 2018 International Olympic Committee Consensus Statement on Prevention, Diagnosis and Management of Paediatric Anterior Cruciate Ligament (ACL) Injuries was recognized as a winner of the Best Original Article Award in the Journal of ISAKOS Best Article competition. The Best Article competition was conducted as part of the celebration of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS) 25th Anniversary and the JISAKOS 5th Anniversary.

PASANEN

Dr. Kati Pasanen's research program focuses on three major areas: (1) identification of mechanisms and risk factors for lower extremity injuries; (2) development of novel methods for training load monitoring using wearable technology; and (3) development and evaluation of neuromuscular training programs to decrease the risk of lower extremity injuries in youth and adult athletes. Dr. Pasanen is also leading five collaboration studies in Finland – three of them in team sports, one in professional ballet and one in recreational runners. Knowledge generated from this research could ultimately lead to better understanding of causes and mechanisms of lower extremity injuries which could allow us to develop current injury prevention strategies, promote lifelong sport participation and lower the public health care costs related to sport injuries.

SCHNEIDER

Concussion Prevention, Detection and Rehabilitation Lab

Dr. Kathryn Schneider's lab focuses on the prevention, detection and rehabilitation of concussion with a special interest in the role of the cervical spine and balance systems. They use clinical and technological tests that evaluate multiple different areas of sensory and motor function, ultimately gaining insight into changes that may occur following a concussion and with recovery. Additionally, with the use of technological tests alongside clinical tests they are gaining a better understanding of how to best evaluate various components of function. Ongoing projects in the lab focus on: (1) the role of neuromuscular training and sensorimotor training in the prevention of concussion; (2) changes in cervical spine, vestibular and sensory function with growth and development; (3) changes in cervical spine, vestibular and sensory function following a concussion; (4) optimizing assessment rehabilitation techniques to inform diagnosis and enhance recovery from concussion; and (5) evaluating implementation of concussion protocols. The program of clinical research involves collaboration with multiple clinicians and researchers across the University of Calgary and other national and international groups, ultimately enabling clinically meaningful questions to be evaluated and translated back to the clinic.

SMIRL

Cerebrovascular Concussion Research Laboratory

Dr. Jonathan Smirl's research team works in conjunction with the Sport Injury Prevention Research Centre and the Human Performance Laboratory. His team is focused on understanding the basis of the physiological and autonomic disruptions which occur following concussion. The aim is to use this knowledge base to develop informed interventions (exercise, physiological and pharmacological) which can be used to aid in the recovery process during both the acute and chronic symptom periods.

Dr. Smirl's team is currently leading the exercise-based measures in the Pan-Canadian Surveillance in High Schools to REDuce (SHRed) Concussions project. They are actively collaborating with other Canadian institutions on objectively quantifying the extent concussed athletes rest and exercise following concussions. The build out of the research space for Dr. Smirl's team was completed in August 2020 and they have spent the remainder of the year brining in new equipment and training so they will be able to perform in person testing in the upcoming year. Through an integrative approach to concussion research and collaboration network, Dr. Smirl's team aims to create new approaches and interventions which will enable them to objectively assess physiological disruptions following concussion and improve outcomes for individuals following this traumatic injury.

ZWICKER

Disability Policy for Children and Youth

Dr. Jennifer Zwicker is the Director of Health Policy at the School of Public Policy, an assistant professor in the Faculty of Kinesiology, University of Calgary, Canada Research Chair (II) in Disability Policy for Children and Youth and the Deputy Scientific Officer for Kids Brain Health Network. She is a member of the Owerko Center in the Alberta Children's Hospital Research Institute and the O'Brien Institute of Public Health. With broad interests in the impact of health and social policy on health outcomes, Dr. Zwicker's recent research utilizes economic evaluation and policy analysis to assess interventions and inform policy around allocation of funding, services and supports for children and youth with developmental disabilities and their families. She is an investigator with the CIHR funded Strategy for Patient-Oriented Research network on childhood disability called CHILD-BRIGHT and an investigator and board member of Kids Brain Health Network, where she co-leads the health economic cores for both networks. Strong collaborations with interdisciplinary researchers and stakeholders have been critical in the translation of peer reviewed publications to policy papers, op-eds and briefing notes which have been utilized by both federal and provincial government. Recently a policy report from Dr. Zwicker's team on the disability tax credit was used in Senate testimony and featured

GENERAL COMMENTS

in their Breaking Down Barriers report by the Senate Standing Committee on Social Affairs Science and Technology. This translational policy work is supported CRC, CIHR, SSHRC, ACHRI and the Sinneave Family Foundation.

Movement Science and Musculoskeletal Health

CLUFF

Integrative Sensorimotor Neuroscience Laboratory

The Integrative Sensorimotor Neuroscience Laboratory, led by Dr. Tyler Cluff is a growing group in the Human Performance Laboratory within the Faculty of Kinesiology. Their work focuses on the mechanistic, multidisciplinary study of human sensorimotor control and learning, and understanding how basic aspects of sensory processing contribute. The group combines behavioural experiments with robotics, neurostimulation, medical imaging, and computational models to examine the function of the human sensory and motor systems. Ongoing projects in the lab focus on four topics: (1) the role of sensory feedback in the selection, planning, and control of voluntary movements; (2) basic principles of sensory processing and how they impact individual patterns of human motor behaviour; (3) probing the function of neural circuits that support motor behaviour and (4) identifying how impairments in sensory and motor function caused by stroke and concussion influence sensorimotor control and learning. With ongoing collabora-

tions, the Integrative Sensorimotor Neuroscience Laboratory hopes to generate tools that allow better assessment, monitoring and diagnoses of deficits in sensory and motor function.

EDWARDS

Mechanical fatigue of load-bearing biological tissue is an inevitable consequence of physical activity. Over time, habitual loading of the musculoskeletal system causes microdamage accumulation that reduces the overall quality of the tissue. This leads to a reduction in stiffness and an increase in mechanical strain. Without adequate tissue repair, the evolution and accumulation of microdamage may lead to musculoskeletal injury. Mechanical fatigue is believed to play a predominant role in the pathophysiology of musculoskeletal injuries such as bone stress fracture and, Achilles and patellar tendinopathy. The research group led by Dr. Brent Edwards, combines biomechanical experimentation with advanced medical imaging and computational modelling to investigate tissue damage and fatigue in response to mechanical loading. This unique approach allows them to estimate in vivo tissue mechanics in a non-invasive

GENERAL COMMENTS

and subject-specific manner. Their work spans dimensional scales, from basic experiments at the tissue-level that enhance understanding of the mechanical fatigue process, to applied experiments at the whole-body level for the development of treatments and interventions to improve tissue quality and decrease risk of injury.

FERBER

Running Injury Clinic

Dr. Reed Ferber is a clinical biomechanist and his research is aimed at optimizing rehabilitation and predicting injuries. Overall, his group is engaged in two streams of research: clinical gait analysis and wearable sensors.

The group has successfully established an international and growing gait analysis research network currently consisting of 15 researchers and over 125 clinical partners. Each centre is linked to the world's largest research database of biomechanical gait and clinical data. They are transforming the biomechanics research community by openly sharing data between laboratories, employing unique data science analysis methods and growing our research network.

The Running Injury Clinic's wearable research is based on three challenges: (1) wearable sensors generate a profound amount of data that is largely ignored; (2) the information derived from these sensors is not placed within a contextual narrative; and (3) most sensors are designed for activity monitoring and not for healthcare. To address these challenges, Dr.

Ferber leads the NSERC Wearable Technology Research and Collaboration (We-TRAC) training program, which builds on being selected by the Vice President - Research to lead the Sensor Technology in Monitoring Movement (STiMM) research program supporting the University's Eyes High "Engineering Solutions for Health" research strategy.

HERZOG

This past year, Walter Herzog was on administrative leave and used this opportunity to teach, do research, and help in the internationalization process of the Federal University of Santa Catarina, Brazil. Two emotions from this experience prevailed: the eagerness of Brazilian students to learn, resulting in hour-long discussions following the formal class hours, and the ability of students and faculty members to do excellent research with little or no financial support. At the University of Calgary, seven of Dr. Herzog's trainees (three postdocs, three doctoral and one masters student) successfully finished their research training this past year, and were able to obtain a faculty position, postdoctoral positions and employment, respectively. In the area of muscle mechanics, the Herzog group found the surprising result this past year that the residual force enhancement property was present in muscles whose fibres shortened during contraction, an unexplainable result in the current thinking of muscle mechanics. In the area of joint biomechanics and osteoarthritis, they then demonstrated that not only aerobic

GENERAL COMMENTS

exercise, but also strength training is a powerful strategy for preventing knee osteoarthritis in subjects with obesity-related metabolic syndrome. Finally, in their applied research, the group initiated a clinical collaboration and obtained two small pilot grants, allowing them to test alternative approaches in preserving and restoring muscle function in children with Cerebral Palsy.

KUO

Dr. Arthur Kuo's laboratory studies the biomechanics, energetics and neural control of human movement. They develop computational models of the human body dynamics and apply them to simulations and analyses of locomotion and upper extremity reaching movements. They also perform experiments to test model predictions of stability, motion trajectories and energy expenditure. Ongoing projects include studies of human walking on uneven terrain, use of inertial measurement units to record locomotion in the real world, energetics of human reaching and modeling of neural central pattern generators for locomotion. These projects are intended to reveal basic mechanisms of locomotion and other movements, with applicability to neural rehabilitation and diagnosis of movement impairments.

PETERS

Integrative Sensorimotor Neuroscience Laboratory

Dr. Ryan Peters' research group investigates the neural basis of human movement using a vari-

ety of physiological, behavioural and computational techniques in concert. There are both basic and applied streams of research ongoing in the lab. Within the basic science stream, Dr. Peters research group studies the complex interaction between sensory and motor neurons during voluntary movement. They specialize in microneurography, the only method for directly recording the activity of human somatosensory neurons (muscle spindles, Golgi tendon organs, skin and joint receptors). Currently, they are focused on the functional properties of the muscle spindle's fusimotor system, which remains poorly understood to-date, particularly in humans. Within the applied research stream, they are translating basic science into the development of new vibration-emitting wearable technologies for remote neurological assessments, monitoring and therapeutics. Healthy older adults and individuals suffering from neurological disorders (e.g., peripheral neuropathy) experience a decline in somatosensory function which is associated with impairments in manual dexterity and balance. Standard clinical tests of neuropathy are arduous for clinicians and are not well-controlled; vibration-emitting wearable technologies offer a promising alternative approach. The new wearable technologies developed in Dr. Peters' lab enable frequent and accurate assessments of neurological function to be performed outside of the clinical setting, which may free-up valuable clinician time and improve the quality of patient care.

GENERAL COMMENTS

STEFANYSHYN

The general research interests of Dr. Darren Stefanyshyn's group focus on questions related to human locomotion, sport performance and sport injury biomechanics. Their research extends to functional sport equipment with a goal of tuning the properties of the equipment to specific athlete characteristics in order to maximize the athlete's performance and minimize the risk of injury. Performance research involves developing a basic understanding of the mechanics of human movement during various locomotor and athletic movements. The goal is to determine the mechanical factors dictating an athlete's performance and how performance can be improved by manipulating these particular factors. In 2020 the Stefanyshyn group extended

its industry work on identifying methods of matching sport equipment and footwear to individual athletes. This was accomplished through the investigation of the internal mechanisms using ultrasound imaging that explain an athlete's response to changes in shoe cushioning material, investigating how foot shape, size and sensitivity influence preferred insole selection and utilizing 3D foot scans and 3D printing to create individualized insoles.

Injury research involves identifying potential injury factors such as global loading characteristics associated with ankle and knee sport related injuries as well as developing an understanding of the role played by equipment. This past year valuable insight was gained on the role of sport surface characteristics studying different



Amanda Wurz, Postdoctoral Fellow

GENERAL COMMENTS

Psychosocial Aspects of Health and Sport

compositions of infilled artificial turf as well as next generation non-infilled surfaces.

BRIDEL

Dr. William Bridel's research explores social issues in sport, physical activity and the body. The overarching goal of William's research agenda is to investigate ways for sport and physical activity to be more inclusive and safer for all participants. This is accomplished by thinking critically about the culture of sport itself, the influence of social norms, beliefs, and values on sport, and the principles of social justice. Theoretically, William's work is informed primarily by poststructuralist gender and queer theories. He employs a wide variety of qualitative methods including interviews, focus groups, narrative analysis, and autoethnography (i.e., critical autobiography) in his projects. Committed to publicly-engaged sociology, current research projects in William's research group include: (1) LGBTQI2S+ (lesbian, gay, bisexual, trans, queer, intersex, two-spirit, and other identities) inclusion in the context of national, provincial, and municipal sport; (2) a socio-historical exploration of sport in the lives of LGBTQ+ Calgarians, 1960 to 2000; (3) representations of sport and gender diversity in children's literature; (4) examination of "intro to sport" programs servicing newcomers to Canada; (5) student-athletes' experiences

of concussion and "athletic identity"; (6) mediated representations of concussion and; (7) children and their understandings of risk and risky play.

CULOS-REED

Associate Dean Graduate Health and Wellness Lab

Dr. Nicole Culos-Reed and her team in the Health and Wellness Lab are working to bridge the gap between cancer exercise research and clinical practice by developing programs to include exercise assessment, prescription and education in exercise oncology as part of standard cancer care. Working with community partners and healthcare providers, the lab has developed a variety of exercise and wellness-related programs and services to benefit cancer survivors and their families. Projects and resources can be viewed at www.thriveforcancersurvivors.com. With a focus on knowledge translation, all activities for the Health and Wellness Lab, have transitioned to online in 2020-21 due to COVID-19. This success with online programming has included a Cancer Survivorship Team Grant (Canadian Institutes of Health Research-Canadian Cancer Society, and Alberta Cancer Foundation support) for 5 years, to bring the exercise oncology program across Canada with a focus on reaching rural and remote cancer survivors. The lab also delivers yoga to a young adult cancer survivor population and has developed a "Thrive-

GENERAL COMMENTS

er Manual for Wellness” available [here](#).

To further support research and knowledge translation activities, the Health and Wellness Lab also operates the Thrive Centre. Based in the Faculty of Kinesiology, the Centre is the first volunteer-run fitness facility in Canada to provide cancer survivors and their support persons a safe and supportive place to exercise at no cost. Since opening its doors in 2011, the Thrive Centre has trained over 800 kinesiology students in cancer and exercise facilitation. To date, volunteers have dedicated over 19,000 hours of service to help improve the quality of life of the 1200 cancer survivors involved with Thrive Centre. Thrive Centre programs have been virtual during COVID-19, and still engages over 50 volunteers for online delivery of programs, moderating classes to ensure safety and assisting educational events.

DIN

Teaching Scholars Research Lead

Dr. Cari Din co-led the Faculty of Kinesiology’s Undergraduate Program Curriculum Review in 2020 with Dr. William Bridel and shows strong educational leadership in the faculty through supporting colleagues in discovering and practicing evidence-led teaching strategies. She developed and runs the Kinesiology Mentorship program for post-doctoral scholars and graduate students in Kinesiology. The major focus of Cari’s academic work is in teaching and learning; however, she has brought

on a graduate student this year to begin investigating the lab reform project she and Dr. Martin MacInnis are undertaking as educational leaders in the faculty. Her Teaching Scholarship is supported by the University of Calgary over three years (2019-2022). This culture change project is moving lab learning from confirmation of known outcomes to exploration, inquiry and developing the habits of mind of a scientist. This year, Teaching Assistants (TAs) have received evidence-based support in developing their teaching strategies which enable rich student experience, reflection and deep learning in our undergraduate Exercise Physiology labs. Cari created an on-line course for the TA team and met with them weekly to facilitate a community of practice focused on teaching strategies which enable deep learning. As well, Cari became a Canadian Centre for Advanced Leadership Fellow in July 2020. This secondment and honor sees her developing two new courses for the Embedded Certificate in Leadership Studies which will become available to University of Calgary students across all faculties beginning in the fall of 2021.

KATZ

Sport Technology Research Laboratory

As an educational psychologist, Dr. Larry Katz is interested in how people learn and how they can use innovation and technology to improve human performance. In addition, he has the privilege of directing the Sport Technology Research Lab (STRL).

GENERAL COMMENTS

The mission of STRL is to improve human performance and learning through the research and development of technology-based learning models and resources and to provide a research and learning environment which enables such development. STRL's objectives are to: (1) investigate the impact of technology on performance and learning; (2) develop technology-based resources which enhance performance and learning; (3) liaise and collaborate with organizations and individuals on and off campus to promote human performance and learning technology; (4) encourage and coordinate the integration of technology into Faculty of Kinesiology programs; and (5) work with industry in developing and disseminating technology-based research and resources developed by the STRL.

Graduate Students who complete the STRL program receive the following designation: "Innovative Pedagogy and Sport Performance".

KILB

Brad Kilb's passion for facilitating the technical and personal growth of his students within the Leadership in Pedagogy and Coaching Degree route continues to inspire him every day as he begins his 44th year of coaching and instructing on the University of Calgary campus. Brad's focus is on developing leadership traits as students prepare to enter a career of teaching, coaching or instructing in the discipline of kinesiology.

Brad accepted the challenge of

switching to online teaching, a huge change for his interactive, experiential learning sessions. His innovative teaching engaged students in developing research skills, sharing evidence-based analysis with classmates and enhancing presentation skills. Brad's real-life disclosing of resiliency took on new meaning for his students as he grappled with the loss of a second son and a four-month recovery from spine surgery.

Brad continues to mentor university, school and club coaches within the community.

MCDONOUGH

Relationships and Exercise Lab

Social processes play an important role in promoting and maintaining physical activity and other health behaviours. Social mechanisms are also important in how physical activity participation affects psychological well-being and coping with stress; however, which aspects of social interactions, social support, social perceptions and social relationships contribute to these effects and how those social mechanisms work is not well understood. Furthermore, not all social interactions have positive effects and social needs and barriers vary, particularly among vulnerable groups and marginalized individuals.

The work in the Relationships and Exercise Lab, led by Dr. Meghan McDonough, is focused on examining how social processes affect physical activity, health behaviours and psychological well-being. This

GENERAL COMMENTS

research includes work with a variety of populations (older adults, cancer survivors, people with Parkinson's disease and people living in poverty) and the intersection of factors such as gender, racial/ethnic diversity and social isolation on social processes in these populations. A key goal is informing interventions and practice to leverage and improve social processes to enhance well-being.

PASKEVICH

Associate Dean Academic

Dr. David Paskevich's interests center upon the integration of the science- practitioner model, bringing the science of sport psychology into practical/applied settings. David's research combines a variety of areas within the realm of sport (using both quantitative & qualitative methodology) and examines important theoretical and practical questions related to athletes, coaches and officials (e.g., mental toughness, stress, coping and emotion and group dynamics). His research goals are to examine and understand the psychological preparation of athletes and coaches, and their ability to deal or cope with stressors experienced during practice and competition. The aim of this research is to understand how the athletes and coaches perceive

the contribution of their various psychological skills, identifiable stressors, and coping effectiveness related to their actual performance.

WERTHNER

Dean

Dr. Penny Werthner's research program is focused on three major aspects: (1) understanding how high performance coaches learn, utilizing social learning theory and Wenger's concepts of Community of Practice and Landscapes of Practice; (2) issues facing women coaches; and (3) the use of heart rate variability biofeedback and neurofeedback for optimal performance in high performance sport. Her current research includes an on-going investigation of cortical activity in high performance athletes utilizing mobile EEG, and a SSHRC funded investigation of the promotion and assessment of social learning with parasport coaches and their organizations.

PUBLIC ENGAGEMENT

Presentations

[Developing in-hospital physical activity opportunities for children and adolescents during treatment for cancer.](#) — **Amanda Wurz**, postdoc (Nicole Culos-Reed supervisor)

Knowledge Translation Canada Summer Seminar Series, Toronto ON; Jun.

[Diet and prebiotics: Happy gut, happy life.](#) — **Raylene Reimer**

The Zoo Inside You! Trillions of tiny organisms star in Canadian premiere of Me & My Microbes exhibition. Canadian Museum of Nature, Ottawa ON; Feb 6.

Disability Policy for Children and Youth. — **Jennifer Zwicker**

ACHRI's weekly Child Health and Wellness Seminar Series.

Evaluation and Policy Analysis for Disability Policy. — **Jennifer Zwicker**

Kids Brain Health Network Webinar; May 20.

Exercise and the aging athlete: consideration on how to adapt cardiovascular training to an aging population. — **John Holash**

Foothills Nordic Ski Club, Masters X-Country ski group,online; Oct 30.

Exercise to enhance quality of life in head and neck cancer survivorship.

— **Julia Daun**, PhD student, and **Nicole Culos-Reed**, supervisor

Invited presentation to head & neck cancer support group.

Wellspring, Calgary, AB; Mar 9.

Exercise to improve Quality of Life for Cancer Survivors.

— **Manuel Ester**, PhD student, and **Nicole Culos-Reed**, supervisor

Melanoma support group, Calgary.

Exercising Your Way Through Grad School. — **Julia Daun**, PhD student, and **Nicole Culos-Reed**, supervisor

Survive & Thrive Grad School Seminar, University of Calgary.

Invited presentation to graduate students; Mar 19.

Get a Grip. — **Patricia Doyle-Baker**

Celebration of Physical Activity Day, online. Renert School, Calgary AB; May 27.

Laying the foundation to promote physical activity for children and adolescents affected by cancer. — **Emma McLaughlin**, MSc student,

Amanda Wurz, postdoc, and **Nicole Culos-Reed**, supervisor
Children's Oncology Camping Association Virtual Conference.

Ottawa, ON; Nov.

Legacy Society Keynote Speaker. — **Nicole Culos-Reed.**

University of Calgary, online event; Sep.

PUBLIC ENGAGEMENT

LGBTQI2S+ inclusion in sport. — **William Bridel**

Calgary Sport Institute, Calgary AB; Jan 10.

Managing our healthy 'selves' is a leadership challenge.

— **Patricia Doyle-Baker**

Student Wellness Centre Support Staff Retreat. University of Calgary, Calgary AB; Jan 7.

Moving More for Wellness – The Role of Exercise. — **Nicole Culos-Reed**
(Invited speaker)

“Living Your Best During the Pandemic with Advanced, Metastatic, Chronic or Non-curable Cancer” series. Hosted by: Wellspring Calgary, Wellspring Edmonton, Cancer Control Alberta; Nov 15.

Muscle mass and physiological responses to exercise. — **Jenny Zhang**,
MSc student (**Jalal Aboodarda**, supervisor)

[STEM Fellowship Virtual Webinar Series](#)

Nutrition and your life. — **Raylene Reimer**

Health Class Guest lecture, Grade 9 William D. Pratt; Feb 21.

Policy Implications of COVID-19. — **Jennifer Zwicker**

Anatomy of a Pandemic Webinar, University of Calgary; May 20.

Policy implications of understanding early intervention.

— **Jennifer Zwicker**

Neonatal grand rounds, University of Calgary.

Policy Implications of Understanding Early Intervention.

— **Jennifer Zwicker**

Infant Mental Health Promotion Foundations in Infant and Early Childhood Mental Health Practice Certificate Lecture Series; Aug 6.

Project ACCESS: Accessing supports and services. — **Jennifer Zwicker**
Owerko rounds.

SHRed Concussions. — **Carolyn Emery**

Canadian Traumatic Brain Injury Consortium. Lake Louise AB; Jan

SHRed Concussions: Research opportunities in concussion prevention.

— **Carolyn Emery**

Students Interested in Medical Sciences (SIMS) Research Symposium. Calgary AB; Oct.

PUBLIC ENGAGEMENT

Social support and social outcomes in older adult physical activity.

Evidence-informed mental health considerations during COVID-19.

— **Meghan McDonough**

Knowledge Engagement networking event, University of Calgary. May.
O'Brien Institute for Public Health Seminar Series, University of Calgary. May.

Supporting Cancer Patients and Survivors with Physical Activity.

— **Julia Daun**, PhD student, and **Nicole Culos-Reed**, supervisor
Nurse Navigator Meeting, Cancer Care Alberta; Oct 22.

Take my breath away: asthma in female athletes. The effects of reproductive hormones and strategies for screening and management. — **Patricia Doyle-Baker**, Co-presenters, Drs. Connie Lebrun and Jane Thornton
CSEP Conference Symposium, online. Fredericton NB; Oct 23.

The Dancer as an Artistic Athlete: How does dance training contribute to injury risk? — **Valeriya Volkova**, PhD student (**Sarah Kenny**, supervisor)
Graduate College Lunch 'n Learn Series, Open to public, University of Calgary; Jul 29.

The influence of driven blood pressure oscillations on cerebral autoregulation. — **Jonathan Smirl**
International Cerebrovascular Seminar Series, online – Global.

The Role of Exercise in Advanced Cancer Care. — Lauren Capozzi and **Nicole Culos-Reed**
Tom Baker Cancer Centre Palliative Grand Rounds, Calgary.

UN-conference of the state parties panel. — **Jennifer Zwicker**
Promoting inclusive environments for the full implementation of the CRPD for children with disabilities; Dec.



Dr. Nicole Culos-Reed

Media and Interviews

[*84 scholars sign letter telling World Rugby: Let trans women play.*](#)

— **William Bridel**

Outsports.com, Karleigh Webb; Sep 9.

[*COVID-19 diet: UCalgary nutrition expert offers tips on eating well.*](#)

— **Raylene Reimer**

UCalgary News, Stacy McGuire and Deb Cummings; May 1.

[*Body conditioning class helps UCalgary dance students prevent injuries.*](#)

— **Sarah Kenny**

UCalgary News, Marta Cyperling; Jun 1.

[*Cancer journey inspires legacy gift.*](#) — **Nicole Culos-Reed**

UCalgary News, Nathan Luit; Sep 28.

Cancer Survivorship Team Grant Announcement

— **Nicole Culos-Reed**, Team Lead; Sep 15.

[*Cancer survivors thrive through exercise.*](#)

UCalgary News, Stacy McGuire.

[*A major collaborative investment in cancer survivorship research in Canada. Message from Scientific Director, Dr. Stephen Robbins.*](#)

Canadian Institutes of Health Research News Release.

[*With more Albertans surviving cancer, partnership focuses on survivorship research.*](#)

Alberta Cancer Foundation News Release.

[*New clinical trial tests common diabetes drug to enhance brain function in childhood brain cancer survivors.*](#)

Canadian Cancer Society News Release.

Cancer Survivorship Team Interviews

— **Nicole Culos-Reed**, Team Lead

[*Alberta exercise program for cancer survivors expands across Canada.*](#)

— Margaret McNeely

CBC News, Madeleine Cummings; Sep 27.

[*Exercise program to help cancer patients.*](#)

— Margaret McNeely & Adam Brown (participant)

Radio Active, Adrienne Pan; Sep 23.

[*Free cancer exercise program for Nova Scotians moves online.*](#)

— Melanie Keats

CBC News, Haley Ryan; Nov 11

[*Creating a Flipped Classroom with John Holash \(Episode 8\).*](#)

— **John Holash**

Podcast: COVID Coffee Chats @UCalgary, Mia Anderson; Dec.

PUBLIC ENGAGEMENT

Eight ways to make skating more inclusive to the LGBTQI2S community.

— **William Bridel**

Skate Canada, William Bridel; Jun 17.

UCalgary News; Jun 17.

Faculty of Kinesiology once again ranks as No. 1 sport science school in North America. — **Faculty of Kinesiology**

UCalgary News, Faculty of Kinesiology staff; Dec 9.

Free yoga classes for young adults affected by cancer. UCalgary postdoctoral scholar customizes yoga classes to help young adults with and recovering from cancer.

— **Amanda Wurz**, postdoc, and **Nicole Culos-Reed**

UCalgary News; Oct 8.

Good news from the University of Calgary. — **Sarah Kenny**

IADMS Newsletter, Volume 27(1); Jacqueline Dimmock (ed); Jan.

Happy Gut, Happy Life. (Diet and your microbes). — **Raylene Reimer**

CTV Morning Live, Ottawa; Feb 6.

Health. Wellness. And You. Week 2 Episodes 8 & 9. — **Nicole Culos-Reed**

730 CKDM; Nov 18.

I heart exercise for Valentine's Day. — **Martin MacInnis**

UCalgary News, Leanne Yohemas; Feb 14.

Kids and Weight Training. — **Patricia Doyle-Baker**

770 Radio CHQR, Joel McFarland; Feb 11.

Kinesiology PhD student with arms of steel challenges Guinness World Record for most pull-ups in 24 hours. — **Arash Khassetarash**

UCalgary News, Stacy McGuire; Nov 26.



Faculty of Kinesiology Running Track



Dr. Ryan Peters and PhD student Dan Hodgson Photo by Riley Brandt.

[Kinesiology researcher creates new way to assess and track neurological function.](#) — **Ryan Peters**

UCalgary News, Stacy McGuire; Oct 15.

Low-calorie sweeteners do not mean low risk for infants.

— **Raylene Reimer**

[UCalgary News](#), Leanne Yohemas; Jan 30.

[EurekAlert!](#), Leanne Yohemas; Jan 29.

[CTVNews Calgary.ca](#), Michael Franklin; Jan 29.

Maternal consumption of artificial sweeteners. — **Raylene Reimer**

Lisa Fields, Freelance writer; Feb 6.

[Mouthguards do more than just protecting teeth in youth ice hockey. New Study finds risk of concussion reduced by wearing mouthguard.](#) — **Carolyn Emery and Brent Hagel.**

UCalgary News, Stacy McGuire; Jan 24.

[New study on women's menstrual cycle shows no impact on exercise performance.](#) — **Patricia Doyle-Baker**

UCalgary News, Stacy McGuire; Apr 24.

[Parents' high anxiety levels linked to less active kids during pandemic.](#)

— **Patricia Doyle-Baker**

UCalgary News, Brittany DeAngeli; Dec 18.

[Pearls of Performance.](#) — **Carolyn Emery**

Pearls of Performance podcast (Health & Safety in Sports),
Evert Verhagen; Oct 13.

PUBLIC ENGAGEMENT

Pregnant women who consume low-calorie drinks may be programming their children to be fat, scientists warn; (Artificial sweeteners during pregnancy). — **Raylene Reimer**

The Mail on Sunday (UK), Stephen Adams; Feb 15.

Researcher pioneers prevention of sport-related concussions in youth. Kinesiology's Carolyn Emery awarded Canada Research Chair.

— **Carolyn Emery**

UCalgary News, Mark Lowey; Sep 23.

Researcher's work to increase exercise among cancer survivors expands across Canada. — **Nicole Culos-Reed**

UCalgary News, O'Brien Institute for Public Health Staff; Dec 1.

Running injury prof wins McCaig-Killam Teaching award. — **Reed Ferber**

UCalgary News, Advancement Staff; Oct 19.

Running outside with COVID: is it safe? — **Patricia Doyle-Baker**

CBC Radio. Alex Zabjek; Apr 8.

Rural cancer survivors wanted. — Heather Mielke, Lloydminster AB.

(**Nicole Culos-Reed**)

Meridian Source, Geoff Lee, pgs 8 & 12; Aug 27.

Sharing the sidewalk, Part 2. — **Patricia Doyle-Baker**

The Current, Matt Galloway; Apr 9.

Sport and recreation opportunities expand for those with disabilities.

UCalgary a partner in Calgary Adaptive Hub: Powered by Jumpstart.

— **Carolyn Emery**

UCalgary News, Faculty of Kinesiology Staff; Oct 13.

Student health during COVID19 event. — **Patricia Doyle-Baker**

SAIT Journalism, Kaur Simrandepp; Nov 4.

Sweeteners risky for developing babies, study finds. (Pregnancy and low-calorie sweeteners). — **Raylene Reimer**

CBC French Radio, Tiphanie Roquette; Jan 30.



Dr. Raylene Reimer

[*The Sweet and the Sour. \(Risks of aspartame and stevia on offspring\).*](#)

— **Raylene Reimer**

CTV News at Noon Calgary, Medical Watch (28:29 – 34:09); Feb 4.

[*University celebrates 2020 Killam Laureates with online event for all.*](#)

— **Reed Ferber, Raylene Reimer De Bruyn, Walter Herzog**

UCalgary News, Dan Ferguson; Oct 16.

[*Winter running: boost endurance and lower injury risk.*](#) — **Reed Ferber**

Global News, Tiffany Lizée; Jan 3.

Tours & Events Hosted

The Faculty of Kinesiology welcomes students into its facilities for tours and events annually. Students from Calgary high schools and programs such as Operation Minerva, IBM STEM4Girls, Shad Valley, and Heritage Youth Researchers Summer program are provided the opportunity to visit various labs in the faculty to learn about science, technology, engineering, and mathematics in a university setting. For health reasons, all events were cancelled in 2020.

Workshops, Forums, Panels & Webinars

Approaching inclusion through policy and education: From research to rink. — **William Bridel** and Kaitlan Cook (Skate Canada)

Webinar, Coaching Association of Canada; Jun 4.

Concussion in sport: Assessment and management.

— **Kathryn Schneider** and Isabelle Gagnon

Workshop for Health Care Professionals and sport organizations.

Tel Aviv, Israel; Feb 3.

PUBLIC ENGAGEMENT

Dance: Best Practices for Warm Ups and Cool Downs. — **Sarah Kenny**
Palliser District Teachers' Convention. Feb 21.
Audience: Alberta Physical Education school teachers

EXCEL Webinar Series (Exercise for Cancer to Enhance Living Well)
— **Nicole Culos-Reed**
Participant and qualified exercise presentations; Aug 2020 - ongoing.

Fitness in the Age of COVID. — **Patricia Doyle-Baker**
UCalgary COVIDcast; Mar 26.

Fundamental principles of muscle mechanics. — **Walter Herzog**
Webinar for Federal University of Manaus, Manaus, Brazil; Nov 27
Audience: students, researchers, members of Brazilian Society for Biomechanics.

Future Careers Panel. — **Martin MacInnis** (Invited Speaker)
Kinesiology graduate student association; Feb 27.

How we learn motor skills and strategies for enhancing learning.
— **Andrea Downie**, PhD student (**Sarah Kenny**, supervisor)
BC Dance Educators Association; Oct 23.
Audience: Community dance instructors.

Immigration, integration, and winter sport participation: Exploring the intersections for newcomers to Canada. — **Simon Barrick**, PhD student (**William Bridel**, supervisor)
Webinar, Cape Breton University; Oct.

Injury Prevention and Management. — **Andrea Downie**, PhD student (**Sarah Kenny**, supervisor)
Canadian Contemporary Dance Theatre Sundance Summer School; Jul 7.
Audience: High school dance students.

Injury Prevention for the Artistic Athlete. — **Valeriya Volkova**, PhD student (**Sarah Kenny**, supervisor)
Alberta Ballet School, Calgary; Jul 24.
Audience: Junior high school dance students.
Alberta Ballet School, Calgary; Jul 28.
Audience: Senior high school dance students.

Introduction to Growth Mindset. — **Cari Din** (Invited Presentation)
British Columbia Artistic Swimming, Leadership and Culture Change Project Launch Webinar (two workshops); May.

Kinesiology Mentorship for Support: Mentorship Skills Workshop.
— **Cari Din**
Faculty of Kinesiology webinar; Sep.

PUBLIC ENGAGEMENT

Language matters. — **William Bridel** and Lindsay Alcock
Speed Skating Canada and Calgary Sport Institute Webinar; Sep 20.

Leadership Learning Workshops. — **Cari Din**
BMO Mentorship Program at the Canadian Centre for Advanced Leadership webinar; Sep and Oct.

Osteoarthritis: One disease, many causes. — **Walter Herzog**
Federal University of Santa Catarina, Ararangua, Brazil, Webinar; Oct 27.
Audience: clinicians, physiotherapists, personal trainers, students.

Preparation Course for Healthy Dance Certificate. — **Andrea Downie**,
PhD student (**Sarah Kenny**, supervisor)
Community dance instructors, 10-part webinar series.

Safe Return to Sport. — **Aki Matti Alanen**, PhD student and invited
panelist (**Kati Pasanen**, supervisor) .
Olympic Oval, University of Calgary Webinar; Jun.

Safe Stretching for Dancers. — **Andrea Downie**, PhD student
(**Sarah Kenny**, supervisor)
Alberta Ballet School, Calgary; Jan 28
Canadian Contemporary Dance Theatre Sundance Summer School;
Jul 21. Audience — High school dance students

Stress and Anxiety during COVID keeps us hopping.
— **Patricia Doyle-Baker**
Return to school and mental health impacts panel, public virtual
forum. Mathison Centre and O'Brien Institute partnership with the
University of Calgary, Calgary AB, Sep 29.

Student Mentorship Panel — **Patricia Doyle-Baker**
Annual Conference of the Canadian Society of Exercise Physiology,
virtual event, Fredericton NB; Oct.

'The transition': From graduate student to tenure-track professor.
— **Amanda Black**
Canadian Traumatic Brain Injury Research Consortium,
Invited Panel; Jan.

USport Leadership Training. — **Cari Din**
Lieutenant Governor's USport Student-Athlete Nominees Leadership
Summit Canada Webinar. Apr 30-May 1.

Wearable technology and movement analysis in sports.
— **Aki Matti Alanen**, PhD student (**Kati Pasanen**, supervisor)
Finnish Coaches Association webinar; Sep 25.

PUBLIC ENGAGEMENT

Wondering how to keep up with your fitness goals during #COVID19. Keeping a grip on fitness. — **Patricia Doyle-Baker**
UCalgary COVID-19 Community Support webinar series with the
UCalgary Chancellor Deb Yellin, virtual event; Apr 2.

Innovative Solutions for Healthy Aging.
— **Larry Katz** and **Sofia Backåberg**, guest postdoc (co-hosts)
Pre-Symposium Workshop; Nov 12.

Innovative Solutions for Improving Quality of life for Individuals with Autism Spectrum Disorder.
— **Larry Katz** and **Homa Rafiei Milajerdi**, postdoc (co-hosts)
Pre-Symposium Workshop; Nov 9.

Wellness Days - Thrive at Home.— **Nicole Culos-Reed**
Online educational event; May.

Other Knowledge Translation Activities, Publications and Documents

Blog Posts and Podcasts

[*Concussion affects 1 in 10 youth athletes every year. Here's what needs to change.*](#)
The Conversation, **Carolyn Emery**; May 26.

[*Interested in Concussion CPD? Level up with this #MOOC.*](#)
British Journal of Sport Medicine Blog, **Kathryn Schneider**, Pierre Fremont; Sep 19.

[*Supporting Leadership Learning: From Classroom to Boardroom to Playing Field.*](#)
SIRC Blog, **Cari Din**; Oct 4.

Knowledge Translation

"Mental Health in Sport" e-module development. — **William Bridel**
Inclusion in sport expert Coaching Association of Canada; Sep 2020 to present.

Advocacy group to develop Concussion related content.
— **Kathryn Schneider**, Lead
Canadian Physiotherapy Association (CPA).

Alberta Women in Sport Leadership Impact Project — **Cari Din**
Women and Gender Equity Canada Grant (formerly Status of Women), Leadership Mentor; Fall 2017-Winter 2020



Dr. Kathryn Schneider

[Concussion Awareness and Training tool \(CATT\) for Health Care Professionals.](#) — **Kathryn Schneider**

Physiotherapy and Occupational Therapy sections of website; Dec 1.

Concussion in Sport Group (CISG) – Risk of bias training - **Kathryn Schneider** (Methodology lead) in collaboration with David Cassidy (University of Toronto); Mar 2nd and 5th.

An international group of over 100 leaders/experts in the field of concussion (academics and clinician scientists) working on the writing of ten systematic reviews to inform the 6th Consensus Conference on Concussion in Sport. Online webinar.

- Methodology and Risk of bias training – Case Control studies.
- Methodology and Risk of bias training – Cohort studies.
- Methodology and Risk of bias training – Diagnostic studies.
- Methodology and Risk of bias training – Intervention/Randomized Controlled Trials.

[Pride Profile: It makes you wonder if there is something wrong with you.](#)

— **William Bridel**

Skate Canada; Jun 29.

[RECOVER](#) Launch. — **Amanda Black**

An online resource that provides concussion information to parents and children who visit the emergency room for a concussion.

SHRed Injuries Rugby. Neuromuscular training warm-up programs for injury Prevention. — **Carla van den Berg, Isla Shill**, MSc student, and **Anu Raisanen**, postdoc (**Carolyn Emery**, supervisor)
Sport Injury Prevention Research Centre Rugby Coach Workshop

PUBLIC ENGAGEMENT

8 Workshops Audience: 86 coaches & teachers.
In Calgary, Grand Prairie and online.

SHRED injuries: Neuromuscular training program. — Carla van den Berg, Mike McKinnon (**Carolyn Emery**, supervisor)
Sport Injury Prevention Research Centre Neuromuscular Training sessions. 10 sessions; audience: 104 youth athletes, online.

SHRED injuries: Neuromuscular training warm-ups for injury prevention.
— Carla van den Berg, (**Carolyn Emery**, supervisor)
Sport Injury Prevention Research Centre Coach Workshops.
2 workshops; audience: 28 coaches in Edmonton.
— Carla van den Berg, Mike McKinnon (**Carolyn Emery**, supervisor)
2 workshops; audience: 18 coaches, online.

[Soccer NMT warm-up program.](#) **Kati Pasanen**, I Lahtinen
Soccer NMT Warm-up You Tube channel; Jan.

White paper: Building and supporting the use of digital research infrastructure among qualitative researchers. Tamminen, K. A., Bohaker, H., Bundon, A., Gastaldo, D., Gladstone, B., Krmpotich, C., **McDonough, M.**, & Smith, B. (2020). White Paper for the New Digital Research Infrastructure Organization.

[Terve Urheilija alkulämmittely \(Healthy Athlete warm-up program\).](#)
Kati Pasanen, I Lahtinen
Terveurheilija You Tube channel; Aug 6.

The New Standard of Warming Up: Quality PE through skill development, fitness and injury prevention.
— Carla van den Berg (**Carolyn Emery**, supervisor)
8 teacher convention workshops; audience: 138 teachers in Calgary, Edmonton, Red Deer, Lethbridge and Grande Prairie
— **Larissa Taddei**, MSc student (**Kati Pasanen**, supervisor) & **Patrick Pankow**, MSc student (**Carolyn Emery**, supervisor)
1 teacher convention workshop; audience: 9 teachers in Canmore AB.

PATENTS AND LICENSES

Device, System, and Method for Measuring Cutaneous Sensitivity and Providing Feedback.
U.S. Provisional Patent Application No. 63/062,745.
Inventors: **Ryan Peters**

Method and system for matching athletes with equipment.
U.S. patent number 10,639,528, issued May 2020.
Inventors: **Darren Stefanyshyn**, **John (Bill) Wannop**, Ryan Madden, Jay Worobets.

OFFICIAL RESEARCH RELATED FUNCTIONS

ABOODARDA

Memberships

- Canadian Society for Exercise Physiology
- The American College of Sports Medicine

BLACK

Board Member

- Canadian Athletic Therapy Association Education Committee
- Pediatric Research in Sport Medicine Society Education Committee

Grant Reviewer

- Child Health Research Development (CHRD)
- Partnership for Research and Innovation in the Health System (PRIHS) Stage 2, Alberta Innovates, Internal Peer Reviewer

Conference Reviewer

- Canadian Athletic Therapists Association (CATA) Conference
- Pediatric Research in Sports Medicine (PRISM) 7th Annual Meeting

Membership

- American College of Sport Medicine
- Pediatric Research in Sports Medicine Society
- Alberta Athletic Therapy Association
- Canadian Athletic Therapy Association (CATA)
- International Society of Qualitative Research in Sport & Exercise

BRIDEL

Advisory/Editorial Board Member

- Canadian Parks and Recreation Association, Gender Equity and Recreational Sport Advisory Committee, LGBTQI2S+ inclusion in sport expert.
- Journal of LGBT Youth
- Sociology of Sport Journal

Committee Member

- LGBTQI2S Sport Inclusion Task Force, Coordinator

Membership

- Canadian Sociological Association
- North American Society for the Sociology of Sport

CLUFF

Grant Reviewer

- Faculty of Graduate Studies Graduate Awards Committee, UCalgary
- NSERC CGS-M competition, UCalgary
- University Research Grants Committee (URGC), UCalgary

Conference Reviewer

- Motor Learning and Motor Control (MCML) Conference, Society for Neuroscience

Memberships

- Society for Neuroscience

CULOS-REED

Editor

- Global Advances in Health and Medicine (GAHM), Associate Editor

OFFICIAL RESEARCH RELATED FUNCTIONS

Advisory Board Member

- Alberta Centre for Active Living Research Advisory Committee

Editorial Board Member

- Board of Integrative Cancer Therapies, Editorial Board Member - TBCC

Committee Member

- Alberta Health Services, Cancer Care Fatigue Guidelines, Panel Member
- Alberta Prevents Website Project (<http://albertapreventscancer.ca/>) Alberta, Ca Prevention Legacy Fund Project, Review Member
- Cancer-related Fatigue Guideline, Alberta Health Services - Cancer Control
- Class Review Steering Committee, Alberta Health Services
- UWALK (<http://uwalk.ca/pages/about/>), Research Advisory Committee

Grant Reviewer

- Canadian Cancer Society Research Institute – Quality of Life and Innovation program grant

Conference Reviewer

- Society of Behavioral Medicine Abstract Reviewer: Physical Activity Special Interest Group

Membership

- Alberta Centre for Active Living
- Alberta Children's Hospital Research Institute (ACHRI)
- Arnie Charbonneau Cancer Institute (Formerly SACRI)
- Canadian Association of Psycho-Oncology (CAPO)

- Canadian Centre for Applied Research in Cancer Control
- International Society of Psycho-Oncology (IPOS)
- O'Brien Institute for Public Health
- Society of Behavioral Medicine (SBM)

DIN

Advisory Board Member

- Canadian Women and Sport, Game On 2.0 Educational Advisor

Editorial Board Member

- Canadian Journal of Women in Coaching

Conference Reviewer

- Conference on Postsecondary Learning and Teaching
- Taylor Institute for Teaching and Learning, UCalgary

Membership

- Teaching Academy <https://taylorinstitute.ucalgary.ca/teaching-academy>
- Scholarship of Teaching and Learning in Higher Education Member

DOYLE-BAKER

Advisory Board Member

- International Congress on Sport Science in Skiing (ICSS)
- Annals of Applied Sport Science

Editorial Board Member

- International Journal of Environmental Research in Public Health.

OFFICIAL RESEARCH RELATED FUNCTIONS

- Special Edition Editor: Stroke in Athletes
- International Journal of Kinesiology and Sport Science

Grant Reviewer

- Markin Undergraduate Student Research Program, UCalgary
- South Africa National Research Foundation (NRF)

Conference Organization

- Walk 20 Conference Committee
- Exercise Perspectives in Exercise, Health, and Fitness Conference Committee

Membership

- Alberta Centre for Active Living (AC4L)
- Alberta Children's Hospital Research Institute (ACHRI)
- Alberta Fitness Leadership Association (AFLCA)
- American College of Sports Medicine (ACSM)
- Canadian Society of Exercise Physiology (CSEP)
- European College of Sport Science (ECSS)
- O'Brien Institute for Public Health

EDWARDS

Executive Board Member

- International Society of Biomechanics, Secretary General

Editorial Board Member

- JBMR Plus, Journal of Bone and Mineral Research

Grant Reviewer

- Arthritis Society Training Awards Review Panel

- NSERC Discovery Grants, External Reviewer

Conference Reviewer

- Canadian Society of Biomechanics
- American Society of Biomechanics

Membership

- American College of Sports Medicine
- American Society of Biomechanics
- American Society of Bone and Mineral Research
- Canadian Society of Biomechanics
- International Society of Biomechanics
- Orthopaedic Research Society

EMERY

Editor

- British Journal of Sport Medicine, Associate Editor

Advisory Board Member

- Centre for Health and Injury and Illness Prevention in Sport (CHI2PS) University of Bath.

Editorial Board Member

- Journal of Science and Medicine in Sport
- International Journal of Sports Physical Therapy

Scientific Advisor

- 6th International Consensus on Concussion in Sport, Expert Group

OFFICIAL RESEARCH RELATED FUNCTIONS

- International parasport translation of IOC consensus on the recording and reporting of data for injury and illness in sport 2020. Expert group

Committee Member

- Canadian Concussion Network Executive Committee
- Canadian Traumatic Brain Injury Research Consortium Executive Committee
- Canadian Physiotherapy Association, Strategic Research Committee
- Massive Open Online Course (MOOC) in Concussion Leadership Committee
- Parachute Canada Concussion Awareness Advisory Committee

Grant Reviewer

- Canadian Institutes of Health Research (CIHR) Project Grant, Internal Peer Review
- National Institute for Health Research (United Kingdom)

Conference Organization

- Canadian Concussion Network Annual meeting, Conference Organizing Committee, Chair
- Canadian Traumatic Brain Injury Research Consortium national meeting, Conference Organizing Committee
- Osteoarthritis Research Society International, World Congress Program Planning Committee
- Sport Physiotherapy Canada Congress, Scientific Committee
- World Conference on Prevention of Injury and Illness in Sport, Scientific Committee

Conference Reviewer

- Canadian Concussion Network Annual Meeting, Scientific Committee, abstract review
- Osteoarthritis Research Society International, abstract review

External Reviewer

- 2020 candidate for Fellowship of Royal Society of New Zealand Te Apārangi, Independent Referee
- 2020 candidate for Stacie Prize National Research Council of Canada,
- Director of Biomedical Engineering, University of Victoria
- Promotion to Associate Professor and tenure, Michigan Technological University
- Promotion to Associate Professor and tenure, School of Education & Development, University of Virginia
- Promotion to Professor, Faculty of Health Science, University of South Carolina Chapel Hill

Membership

- Alberta Children's Hospital Research Institute for Child Health, UCalgary
- Alberta College of Physiotherapists
- Alberta Physiotherapy Association
- American College of Sport Medicine
- Canadian Academy of Health Sciences Fellow
- Canadian Pediatric Society
- Canadian Physiotherapy Association

OFFICIAL RESEARCH RELATED FUNCTIONS

- Canadian Physiotherapy Association Orthopaedic Division
- Canadian Physiotherapy Association Pediatric Division
- Canadian Physiotherapy Association Research Division
- Canadian Physiotherapy Association Sport Physiotherapy Division
- Canadian Society for Epidemiology and Biostatistics
- Centre for Hip Health and Mobility, University of British Columbia
- Hotchkiss Brain Institute, UCalgary
- Institute of Public Health, UCalgary
- McCaig Institute for Bone and Joint Health, UCalgary
- Osteoarthritis Research Society International
- Society for Epidemiologic Research
- Society of Canada College of New Scholars
- Strategic Research Committee of the Canadian Physiotherapy Association

FERBER

Scientific Advisory Board Member

- Biotricity Inc., Redwood City CA
- Fitbit Inc., San Francisco CA

Editorial Board Member

- Prosthetics and Orthotics International
- Journal of Sport Rehabilitation
- Journal of Athletic Training

HERZOG

Editor

- Journal of Sport and Health Science, Co-Editor in Chief
- Exercise and Sports Science Reviews, Associate Editor
- IEEE Transactions in Neural Systems and Rehabilitation Engineering, Associate Editor

Editorial Board Member

- Biomechanics and Modeling in Mechanobiology
- BMC Biomedical Engineering
- Chiropractic & Manual Therapies
- International Journal of Mechanical and Materials Engineering
- Journal of Biomechanics
- Journal of Electromyography and Kinesiology
- Journal of Functional Morphology and Kinesiology
- Journal of Manipulative and Physiological Therapeutics
- Journal of the Canadian Chiropractic Association
- Molecular and Cellular Biomechanics
- Muscles, Ligaments and Tendons Journal
- Sports Orthopaedics and Sports Traumatology
- Sportverletzung Sportschaden
- The Current Issues of Sport Science (CISS)

Advisory Board Member

- German Journal of Exercise and Sport Research

OFFICIAL RESEARCH RELATED FUNCTIONS

- German Journal of Sport Sciences
- Nike Sport Research
- Sportorthopädie Sporttraumatologie, International Board Member
- Sportwissenschaft Journal

Committee Member

- Motor Control Group, International Society of Biomechanics, Vice-Chair
- Human Mobility Group, Biomedical Engineering Calgary Initiative, Co-Leader
- SUPPORT: Training and Professional Development, UCalgary, Chair

Grant Reviewer

- NSERC (1990-present)
- CIHR Foundation Grant Program
- CIHR College of Reviewers

Conference Organization

- IUPESM World Congress on Medical Physics and Biomedical Engineering 2021 (WC2021), Singapore, International Scientific Committee Member
- European Society of Biomechanics Congress, Warsaw, Poland (2019-2022), Scientific Committee Member
- International Congress on Science and Skiing (ICSS), Austria, 2022, Scientific Advisory Board Member

Memberships

- American Association for the advancement of Science
- American Physiological Society

- American Society of Biomechanics
- Biophysical Society
- Brazilian Society of Biomechanics
- Canadian Society for Biomechanics
- Chilean Association for Human Movement Science, Elected Honorary Member
- European College of Sport Science
- European Society of Biomechanics
- Royal Society of Canada. Fellow
- International Society of Biomechanics
- International Society of Electrophysiology and Kinesiology
- Orthopaedic Research Society, American Academy of Orthopaedic Surgeons
- Osteoarthritis Research Society International

HOLASH

Committee Member

- Canadian Society of Exercise Physiology
- High Performance Computing Canada
- Westgrid

KATZ

Conference Organization

- Symposium on Innovative Solutions for Healthy Aging in Preparation

OFFICIAL RESEARCH RELATED FUNCTIONS

- Symposium on Innovative Solutions for Improving Quality of life for Individuals with Autism Spectrum Disorder in Preparation

Grant Reviewer

- Austrian Research Promotion Agency
- Mitacs Accelerate

Membership

- International Association of Computer Science in Sport
- Society of Health And Physical Educators (SHAPE) America
- Physical and Health Education (PHE) Canada
- Society for a Healthy Mouth - Healthy Child (Alberta)
- Canadian Obesity Network

KENNY

Board Member

- Healthy Dancer Canada. Secretary (elected)

Scientific Advisor

- Cirque du Soleil

Committee Member

- Healthy Dancer Canada, Dancer Screening Committee, Co-Chair
- International Association for Dance Medicine and Science, Program Committee Member

Membership

- Alberta Children's Hospital Research Institute (ACHRI)
- Alberta Dance Alliance (ADA)
- Healthy Dancer Canada

- International Association for Dance Medicine and Science (IADMS)

- O'Brien Institute for Public Health, UCalgary

- Performing Arts Medicine Association (PAMA)
- Qualitative Research Methods in Sports Medicine & Injury Research Network; Amsterdam IOC Research Centre of Excellence

MACINNIS

Scientific Advisor

- XIII World Congress International Society for Mountain Medicine – Scientific Committee

Grant Reviewer

- NSERC Discovery Grants
- MRC grant

Conference Reviewer

- XIII World Congress International Society for Mountain Medicine, Abstract reviewer

Memberships

- Canadian Society for Exercise Physiology
- American Physiological Society

MCDONOUGH

Editor

- Journal of Sport & Exercise Psychology, Associate Editor

Editorial Board Member

- Sport, Exercise, and Performance Psychology
- International Journal of Sport Psychology

OFFICIAL RESEARCH RELATED FUNCTIONS

Board Member

- Canadian Association of Psycho-social Oncology
- International Society of Qualitative Research in Sport and Exercise
- North American Society for the Psychology of Sport and Physical Activity

Scientific Advisor

- Sport Intelligence Team, UK Sport

Committee Member

- Canadian Association for Psychosocial Oncology Research Committee, Co-Chair
- Journal of Sport and Exercise Psychology Excellence in Research Award, Selection Committee Chair
- City of Calgary Seniors Age Friendly Strategy Research Advisory Committee
- City of Calgary Recreation Active Aging Action Group

Grant Reviewer

- CIHR
- Mitacs
- Swiss National Science Foundation

Conference Organization

- North American Society for the Psychology of Sport and Physical Activity (NASPSPA), Sport and Exercise Psychology Program committee

Conference reviewer

- Canadian Association for Psychosocial Oncology

Membership

- Canadian Association of Psycho-social Oncology
- Canadian Society for Psychomotor Learning and Sport Psychology
- International Society of Qualitative Research in Sport and Exercise
- North American Society for Psychology of Sport and Physical Activity (NASPSPA)

PASANEN

Editor

- Translational Sports Medicine (TSM)
- British Journal of Sports Medicine, Injury Prevention & Health Protections of the athlete (BJSM IPHP), Senior Associate Editor
- Frontiers in Sports and Active Living, Editorial Board of Injury Prevention and Rehabilitation, Review Editor
- Textbook: Urheiluvammojen ehkäisy, hoito ja kuntoutus (Sport Injuries: Prevention, diagnosis, treatment, and rehabilitation), VK Kustannus Oy, Editor in Chief

Advisory Board Member

- Finnish Coaches Association, Finland
- Finnish Strength and Conditioning Coaches Association, Finland
- Healthy Dancer program, Finnish National Ballet, Helsinki, Finland

Scientific Board Member

- Finnish Sports Physiotherapists Association

OFFICIAL RESEARCH RELATED FUNCTIONS

Conference Organization

- FSPA Congress “Injury prevention works – Mission Possible, Jun 5-6, 2020, Helsinki, Finland, Session Chair (Postponed to 2021)

Conference Reviewer

- FSPA Congress “Injury prevention works – Mission Possible, Jun 5-6, 2020, Helsinki, Finland, Session Chair (Postponed to 2021), Abstract Reviewer

Membership

- Alberta Children’s Hospital Research Institute
- American College of Sports Medicine
- Canadian Association of University Teachers
- European Society of Biomechanics
- Finnish Association of Physiotherapists
- Finnish Coaches Association
- Finnish Society of Sport Science
- Finnish Sports Physiotherapists Association
- Finnish Strength and Conditioning Coaches Association
- HEPA Europe Injury Prevention Group
- International Society of Biomechanics
- McCaig Institute for Bone and Joint Health
- Osteoarthritis Research Society International

PASKEVICH

Editorial Board Member

- Case Studies in Sport and Exercise Psychology (CSSEP)
- International Journal of Coaching Science

Membership

- American Psychology Association
- American Psychology Association (Div. 47)
- Association of Applied Sport Psychology
- Canadian Sport Psychology Association (Professional Member)

REIMER

Editor

- Applied Physiology, Nutrition and Metabolism. Associate Editor (2010-present)

Editorial Board Member

- Frontiers in Endocrinology

Research Consultant

- BioRad Laboratories Inc.
- General Mills Inc.
- InovoBiologic Inc.
- Beneo GmbH

Committee Member

- Canadian Museum of Nature Microbiome Exhibit (Apr 2019 – present), Working Group Member
- Canadian Nutrition Society Awards Committee (Aug 2019 – present)
- Canadian Nutrition Society-UCalgary Faculty Advisor (10/2019 – present)

OFFICIAL RESEARCH RELATED FUNCTIONS

- Canadian Obesity Network-Calgary Chapter (Recruitment/Networking Coordinator), Executive Committee
- CIHR Banting Postdoctoral Fellowships Selection Committee
- Data Monitoring Committee: FMT in Major Depression (2019 – present)

Grant reviewer

- Canadian Liver Foundation
- CIHR College of Reviewers
- New Frontiers in Research Fund – Exploration
- The Fund for Scientific Research – FNRS Belgium

Membership

- American Society for Nutritional Sciences
- Canadian Nutrition Society
- College of Dietitians of Alberta
- Obesity Canada – Calgary Chapter
- Obesity Canada (formerly Canadian Obesity Network)
- The Obesity Society

SCHNEIDER

Editor

- British Journal of Sport Medicine, IPHP Senior Associate Editor
- Frontiers in Neurology – Neuro-otology Review Editor

Scientific Advisory Board

- Alberta Rehabilitation Research Counsel (currently on hold)
- Brain Injury Canada

- Canadian Committee of Combative Sports Associations, Medical Sub Committee
- Canadian Concussion Collaborative, Representative for the Canadian Physiotherapy Association
- EyeGuide
- Federal Working Group on Concussion in Sport, Canadian Concussion Collaborative Representative
- Federal Working Group on Concussion in Sport, Surveillance initiative. co-lead with Dr. Charles Tater
- Parachute Canada Expert Advisory group on Concussion, Co-Chair, Scientific Committee and Expert Panelist

Conference Organization

- 6th International Consensus Conference on Concussion in Sport

Grant reviewer

- SSHRIC Insight Grant
- Abstract Review
- Canadian Sport Physiotherapy Congress 2021
- Canadian Concussion Network Annual Meeting
- Board member
- Sport Physiotherapy Canadian Concussion symposium, Co-organizer
- Committee member
- Sport Physiotherapy Congress 2021 Scientific Committee

OFFICIAL RESEARCH RELATED FUNCTIONS

Membership

- Hotchkiss Brain Institute (2014-present)
- Alberta Children's Hospital Research Institute (2013-present)
- Canadian Physiotherapy Association:
- Orthopaedic Division
- Sports Physiotherapy Division
- Neurological Division
- Paediatric Division
- Canadian Academy of Manipulative Therapists
- Physiotherapy Alberta College + Association
- Vestibular Disorders Association

SMIRL

Committee Member

- International Cerebral Autoregulation Research Network Steering Committee (Re-elected)

Conference Organization

- Cerebral Autoregulation Research Network Annual Meeting

Conference Reviewer

- Cerebral Autoregulation Research Network Annual Meeting

Membership

- American Physiological Society (APS)
- Canadian Concussion Network (CCN)
- Canadian Society for Exercise Physiologists (CSEP)
- Canadian Traumatic Brain Injury Research Consortium (CTRC)
- Cerebral Autoregulation Research Network (CARNet)

- The Physiological Society (Phys Soc)

STEFANYSHYN

Editorial Board Member

- Footwear Science
- European Journal of Sport Science
- Committee Member
- NFL Engineering Committee

WERTHNER

Advisory/Editorial Board Member

- International Sport Coaching Journal (2013-ongoing)
- Canadian Journal for Women in Coaching (on-line journal of Coaching Association of Canada) (2000-present)
- Advisory Committee – Actively engaging women and girls: Addressing psycho-social factors. Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS) (2012-present)
- Advisor to the Coaching Association of Canada Women and Coaching Program (1998-present)

Membership

- Past Chair, Canadian Sport Psychology Association (CSPA/ACPS) (2013-present)
- PGA of Canada Technical Advisory Panel (2014-present)
- International Council for Coach Education (ICCE) (2005-present)

ZWICKER

Board Member

- Kids Brain Health Network, Executive Committee, Deputy Scientific Director
- Kids Brain Health Network, Trainee Advisory Committee, Faculty representative and lead

Advisory Board Member

- CHILD-BRIGHT Strategic Planning Committee

Grant Reviewer

- CIHR Operating Grant, Academic Reviewer
- Canadian Autism Spectrum Disorder Alliance (CASDA-KBHN) Policy, Fellowship Reviewer
- Alberta Children's Hospital Foundation, Child Health Research Development (CHRD) Fund

Conference Organization

- Kids Brain Health Network Brain Development Conference, Organizing Committee Chair
- Developmental Origins of Health and Disease Planning Committee (KBHN representative)



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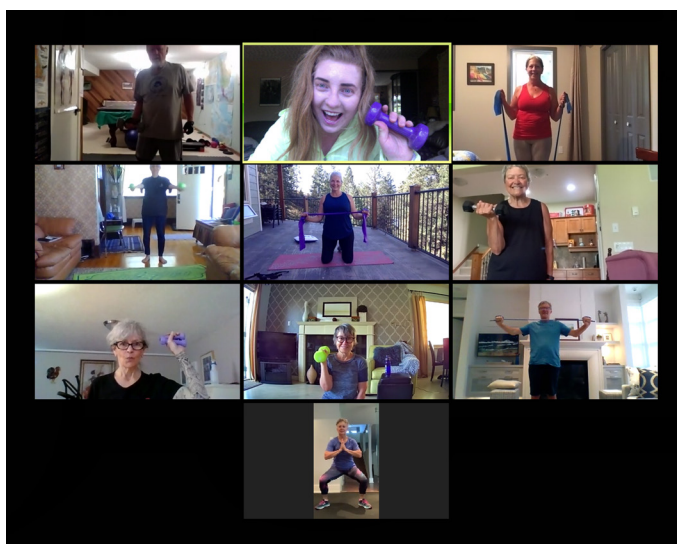
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KEYNOTE AND INVITED LECTURES

Advancing clinical research through AI and wearable sensors. University of Ottawa Artificial Intelligence Symposium. Jan. (Keynote)

Advancing the Field of Biomechanics Through Wearable Sensors and Machine Learning. 12th Annual Meeting of the Danish Society of Biomechanics. Aalborg University, Denmark (via Zoom). Nov. (Keynote)

Herzog W. Dos and don'ts in an academic scientific career Conference of the International Society for Electrophysiology and Kinesiology, Tokyo, Japan, Jul 12, 2018 (Live virtual session) (Keynote)

Herzog W. Titin: the forgotten filament in muscle contraction. 10th International Conference on Biomedical Engineering and Technology, Tokyo, Japan, Sep 15, 2020 (Live virtual session) (Keynote)

Herzog, W. Basic muscle mechanics and selected applications in sports. International Society of Biomechanics in Sports Seminar Series, United Kingdom, Sep 10, 2020 (Virtual Event).

Herzog, W. Obesity, exercise and musculoskeletal rehabilitation. Chilean Association for Human Movement Science, Chile, Jul 30, 2020 (Virtual Event)

Herzog, W. Science is not about papers, it is about people. Neuromechanics Live, Brazilian Society of Biomechanics, Florianopolis, Brazil, Jul 8, 2020

Herzog, W. Secrets of successful international collaborations. IV Regional Health Innovation Symposium, Urugaiana, Brazil, Oct 23, 2020 (Virtual Event)

Herzog, W. Skeletal muscle mechanics: problems, questions and possible solutions. Federal University of Santa Catarina, Florianopolis, Brazil, Dec 2, 2020 (Virtual Event)

Pasanen K. Lower extremity injuries in youth team sports. Can they be predicted? Can they be prevented? Sport Innovation (SPIN) Summit 2020. Own the Podium. For Canada to be a world leader in high performance sport at the Olympic and Paralympic Games. Virtual conference. October 22, 2020. (Keynote)



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Murdoch Children's Research
Institute, Australia
National Basketball Association
(NBA)/GE Healthcare
National Institute of Health (NIH)
Natural Sciences and Engineering
Research Council of Canada
(NSERC)
NFL Scientific Advisory Board
NSERC Collaborative Research
and Training Experience
(CREATE)
NSERC CREATE CONNECT!
Queen's University
NSERC CREATE We-TRAC
O'Brien Institute of Public Health,
UCalgary
Ontario Neurotrauma Foundation
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