



## **FOUNDATION for the Royal College of Chiropractic Sport Sciences Canada announces their 2022 Research Awards Winners**

**The FOUNDATION is pleased to announce the following awards**

**Dr. Gordon Lawson Research Funding Grant:**

**Dr. Adam Murphy**

**Dr. John De Finney Research Funding Grant:**

**Dr. Antonio Petrolo**

**Dr. Rocco Guerriero Research Funding Grant:**

**Dr. Alex Lee**

**Award of Excellence: Resident Category:**

**Dr. David Oh**

**Award of Excellence: Fellow Category:**

**Dr. Brad Muir**

**Dr. David Gryfe Academic Achievement Award:**

**Dr. Andrew Parks**

**Dr. Gregory P. Uchacz Outstanding Paper Award:**

**Dr. Alex Lee**

**Outstanding Paper Award**

**Dr. Darrin Germann**

**Scientific Conference Funding Grant:**

**Dr. Alex Lee**

**Following are the abstracts (where available) and descriptions of the awards and the award winners;**

**Dr. Adam Murphy**  
**Dr. Nicholas La Delfa**

## **Winner of the 2022 Dr. Gordon Lawson Research Funding Grant - Wireless Joint Range of Motion Tracking Correlations with Pitch Velocity**

Dr. Adam Murphy is currently investigating the relationship between baseball pitching biomechanics and pitch velocity using a marker less motion capture system. The study's aim is to assess feasibility of motion capture without expensive systems and joint range of motion during a pitch compared to active joint range of motion. The goal is to guide and improve current baseball pitching assessment and recruitment. The goal is to have this data widely accessible to players, coaches and others involved in baseball to improve pitching. Ultimately, the data will allow for others to implement drills to develop necessary joint mobility, assess current performance and help predict future potential of pitchers.

### **Abstract:**

The study is to investigate the correlations between joint range of motion measurements during pitch performance, pitch velocity and joint kinematics. Participants ages 16-24 will have joint range of motion recorded via video camera before pitching. Participants will then throw their fastest pitches recorded using a video software that uses marker less motion capture system. Participant data is then analyzed comparing pre testing joint range of motion to joint range of motion during their pitches. Data analysis is to be completed through an open-source software. The software will run a stepwise regression model to calculate multivariable correlations with pitch velocity. Variables such as joint range motion, joint velocities, joint kinematics, and temporal parameters will be used in the calculation. In addition, standard deviation and variance statistical analyses will be used to identify trends between and within participants. Percentage of joint range of motion will be measured by comparing the joint range of motion during a pitch compared to the pretest measurements. These pitching metrics will be correlated to pitch velocity. Conclusions will evaluate the reliability and significance found between pitching biomechanical variables and pitch velocity.

### **Dr. Adam Murphy Bio:**

*Dr. Adam Murphy is a graduate from the Canadian Memorial Chiropractic College. Prior to his early acceptance into the Doctor of Chiropractic program at CMCC, Dr. Murphy attended Brock University enrolled in the Bachelor of Kinesiology (Honours) program. Following his graduation from CMCC, he returned to Brock University to complete his degree. In addition, Dr. Murphy is currently enrolled in a Master's Health Sciences program at Ontario Tech University and concurrently completing his Sports Sciences Residency through the Royal College of Chiropractic Sports Sciences (Canada).*



## **Dr. Alex Lee**

**Dr. Lara deGraauw**

**Dr. Chris deGraauw**

**Dr. Brad Muir**

**Dr. Scott Howitt**

**Dr. Kaitlyn Szabo**

**Dr. David Oh**

## **Winner of the 2022 Dr. Rocco Guerriero Research Funding Grant - Creating an evidence-based research strategy to optimize impact – a multi-stakeholder consultation study to inform research agenda setting for Canadian sports chiropractors**

### **Abstract:**

Background: Involving stakeholders in research priority setting is an essential part of crafting a research strategy for a health profession. It facilitates shared responsibility and accountability amongst stakeholders in implementing the research agenda, it aids in the diffusion of research findings to the intended users, and it helps direct funding to meet research needs. This is a critical step in the development of a research agenda for the Canadian sports chiropractic field.

Objectives: To obtain stakeholder input in the priority setting process to set a research agenda for Canadian sports chiropractors.

Methods: A four step process will obtain stakeholder input: 1) stakeholder representatives will be identified by purposive and snowball sampling, 2) stakeholder consultation meetings, using the nominal group technique (NGT), will be conducted to develop an online stakeholder prioritization survey, 3) deployment of the online survey to stakeholders, and 4) a final stakeholder prioritization workshop, utilizing the NGT, will obtain final rankings of research priorities.

Analysis: A 9-point Likert scale will be used to rank the importance of each research priority in the online stakeholder prioritization survey and final stakeholder prioritization workshop. A mean ranking score for each research priority will be calculated from all participants to determine the overall ranking of research priorities across stakeholders, and separate mean ranking scores will be calculated to determine the ranking of research priorities for each individual stakeholder group.

Importance: This multi-stakeholder consultation study is the final project to inform the creation of an evidence-based research strategy to optimize societal impact for Canadian sports chiropractors. The results from this study will be integrated with the results from the Canadian sports chiropractic research prioritization Delphi study to set the first-ever research agenda for the Canadian sports chiropractic field.

### **Dr. Alex Lee Biography:**

*Dr. Lee started his academic career at the University of Waterloo where he earned a Bachelor of Science Honours degree in Kinesiology. His interest in sports medicine led him to the Canadian Memorial Chiropractic College (CMCC) where he graduated with magna cum laude honours and received the John M Wallace Memorial Award for clinical proficiency. Interested in specializing in sports health care, Dr. Lee completed a two-year, full time, post [1] graduate Sports Sciences Residency at CMCC which led him to*

*obtaining his Sports Sciences Fellowship from the Royal College of Chiropractic Sports Sciences (Canada). Dr. Lee has worked as a provider in both the elite and amateur levels of hockey, martial arts, wrestling, volleyball, track & field, and endurance sports. He is clinical faculty at CMCC, is a peer reviewer for various academic journals, and is actively involved in clinical research. He chairs the Research and Education Committee of the Royal College of Chiropractic Sports Sciences (Canada), is a member of the International Sports Chiropractic Federation Research Commission, and is the executive director of the Sports and Exercise Research Collaborative for Health Practice-based Research Network (SERCH PBRN).*



## Dr. Andrew Parks

**Winner of the 2022 Dr. David Gryfe Academic Achievement Scholarship Award - Recognition and conservative management for a spectrum of sport-related scapholunate interosseous ligament injuries: a case series**

These scholarships are open to members of the Royal College of Chiropractic Sports Sciences (Canada) [RCCSS(C)] who have recently conducted scholarly written requirements as part of their Canadian Chiropractic Sports Sciences Residency Program (SSRP).

### Dr. Andrew Parks Biography;

*Andrew is from Orillia Ontario and has been enrolled in CMCC's sports sciences residency program for the past two years while also concurrently completing his diplomate in clinical neuroscience and maintaining a private practice. His athletic history in collegiate hockey and his personal experiences with concussions has driven him to further his education and pursue sports chiropractic. Doing so, he's developed a passion and curiosity in neurology and the clinical applications we provide patients with concussions, but also in managing symptoms of dizziness, cognitive decline and helping healthy athletes enhance their performance. His current independent research includes investigating for construct validity of the Beighton Score in healthy varsity athletes, as well as a systematic review on dysautonomia following mild traumatic brain injury in pediatric athletes. Andrew looks forward to continuing to make a contribution to sports chiropractic research. Specifically, to continue to disentangle the complex relationships between what we do as manual and rehab professionals and the influence we have on the nervous system, in both injured and healthy populations. He is grateful for the recognition through this award and for the Foundation and College for what they do for residents.*



**Dr. Antonio Petrolo**

**Dr. Samuel Howarth**

**Dr. Scott Howitt**

**Winner of the 2022 Dr. John DeFinney Research Funding Grant - Research Funding Grant - The short-term effect of high-velocity low-amplitude spinal manipulation on kinematics of maximal effort soccer kicking: An exploratory mixed-methods feasibility study**

**Abstract:**

Spinal manipulation is used by chiropractors to treat athletes and enhance performance, sometimes irrespective of clinical findings. Unfortunately, primary research in this area is inconclusive and lacks methodological rigor. Nonetheless, performance enhancement is identified as a research priority for sports-focused chiropractors and a main reason that athletes seek chiropractic care. Addressing issues of methodological rigor through well-designed pilot/feasibility studies will improve the quality of future trials. Many studies on the effects of spinal manipulation for athletic performance also attempt to collect biomechanical and neurophysiological data from participants performing athletic tasks; however, these studies have been limited by the available motion capture technology and largely focus on investigator-presumed kinematic determinants of performance. This study will assess the feasibility of collecting three-dimensional kinematic data during maximal effort soccer kicking performed before and after receiving high-velocity low-amplitude manipulation of the lumbosacral spine.

This study will use a mixed-methods design. A sample of 17 participants will be recruited from professional and Canadian varsity soccer teams. Participants will be asked to perform two sets of maximal effort instep kicks of stationary soccer ball; one before and one after being treated with high-velocity low-amplitude manipulation of the lumbosacral spine. Three-dimensional kinematic data from the lower extremities, pelvis and thorax will be monitored throughout all kicking trials. Velocity of the soccer ball will be determined using kinematic data as input to equations of elastic collisions. Participants will also be briefly interviewed before and after the kicking trials. Questions of these interviews will focus on the participant's definition of performance, their past experiences with chiropractic treatment and spinal manipulation, and their description of whether/how the intervention affected their ability to kick. The percentage of participants with usable kinematic data will determine feasibility. Participant responses to interview questions be translated to kinematic quantities for additional descriptive analysis.

**Dr. Antonio Petrolo Bio:**

*Dr. Antonio Petrolo graduated from the Canadian Memorial Chiropractic College (CMCC) with Summa Cum Laude distinction as well as having the honour of receiving the Royal College of Chiropractic Sports Sciences Award upon graduation. He currently is completing his second year of the prestigious Sports Sciences Residency at CMCC and had previously studied Kinesiology and Health Sciences at York University. As a former professional soccer player, Dr. Petrolo shares a tremendous passion for the sport and currently serves as a member of health staff for a variety of semi-professional and professional clubs, such as York United FC, Alliance FC, the York Region Shooters, and the Oakville Blue Devils. Dr. Petrolo's passion for soccer has led him to begin conducting research in the sport as well. He can't wait to cheer on our Canadian boys at the upcoming World Cup in Qatar!*



## **Dr. Darrin Germann**

**Dr. Carol Cancelliere**

**Dr. Mohsen Kazemi**

**Dr. Cameron Marshall**

**Dr. Sheilah Hogg-Johnson**

### **Winner of the 2022 Outstanding Paper Award - Characteristics of adolescent athletes seeking early versus late care for sport related concussion.**

This award is open to all members (Fellows, Residents and Members) of the RCCSS(C) and is meant to recognize and assist with knowledge transfer of a published work judged to have an excellent contribution to sports-focused research.

#### **Dr. Darrin Germann – Biography**

*After receiving a Bachelor of Science Degree (Honours) in Kinesiology at Queen's University, Dr. Germann went on to graduate from the Canadian Memorial Chiropractic College (CMCC) and completed an additional two-year post-graduate residency to become a fellow of the Royal College of Chiropractic Sports Sciences (Canada). Dr. Germann has conducted research focused on sport-related concussion and mild-traumatic brain injury, and he has worked on collaborative projects with the Centre for Disability Prevention and Rehabilitation through the Faculty of Health Sciences at Ontario Tech University. He has also travelled abroad to present his prior research at the international World Federation of Chiropractic (WFC) 2019 Congress in Berlin, Germany.*

*Dr. Germann has worked numerous sporting events including the Fencing PanAm Games, the Toronto Triathlon, provincial taekwondo championships, and several national-level events in soccer, mountain biking, and wakeboarding. He also served as the team chiropractor for the Toronto Rush and worked with professional hockey players as part of an inter-disciplinary medical team for NHL training camps. Dr. Germann holds a full-time practice directing both the chiropractic and performance nutrition departments in a reputable inter-disciplinary sports medicine and performance training center in Toronto, Ontario where he has had the opportunity to work with Olympic, NHL, NBA, NFL, CFL and PGA athletes.*



## **Dr. Alex Lee**

**Dr. Lara deGraauw**

**Dr. Chris deGraauw**

**Dr. Brad Muir**

**Dr. Scott Howitt**

**Dr. Kaitlyn Szabo**

**Dr. Melissa Belchos**

**Winner of the 2022 Dr. Gregory P. Uchacz Outstanding Paper Award - A qualitative study investigating research priorities and investigative capacity in sports-focused chiropractic research, part 1 – identifying research priorities to inform a Delphi study.**

This award is open to all members (Fellows, Residents and Members) of the RCCSS(C) and is meant to recognize and assist with knowledge transfer of a published work judged to have an excellent contribution to sports-focused research.

### **Dr. Alex Lee Biography;**

*Dr. Lee started his academic career at the University of Waterloo where he earned a Bachelor of Science Honours degree in Kinesiology. His interest in sports medicine led him to the Canadian Memorial Chiropractic College (CMCC) where he graduated with magna cum laude honours and received the John M Wallace Memorial Award for clinical proficiency. Interested in specializing in sports health care, Dr. Lee completed a two-year, full time, post[1]graduate Sports Sciences Residency at CMCC which led him to obtaining his Sports Sciences Fellowship from the Royal College of Chiropractic Sports Sciences (Canada). Dr. Lee has worked as a provider in both the elite and amateur levels of hockey, martial arts, wrestling, volleyball, track & field, and endurance sports. He is clinical faculty at CMCC, is a peer reviewer for various academic journals, and is actively involved in clinical research. He chairs the Research and Education Committee of the Royal College of Chiropractic Sports Sciences (Canada), is a member of the International Sports Chiropractic Federation Research Commission, and is the executive director of the Sports and Exercise Research Collaborative for Health Practice-based Research Network (SERCH PBRN).*



## **Dr. David Oh**

### **Award of Excellence Winner – Resident Category**

Awards of Excellence are meant to recognize the outstanding achievement conducted by chiropractic students, RCCSS(C) sports residents and RCCSS(C) Fellows.

These awards are open to members of the Royal College of Chiropractic Sports Sciences (Canada) [RCCSS(C)] who have recently conducted scholarly written requirements as part of their Canadian Chiropractic Sports Sciences Residency Program (SSRP).

### **Biography Dr. David Oh**

*Dr. David Oh completed his Bachelor's degree from the University of Guelph in 2015 and graduated Summa Cum Laude from the Canadian Memorial Chiropractic College in 2020. He recently completed the Sports Sciences RCCSS(C) Residency Program at CMCC in 2022. Currently, he is involved in teaching and research at CMCC, sideline coverage for rugby and soccer at the club and varsity level, and private practice in Scarborough, Ontario. His research interests include sports-related concussion, Telehealth, and sleep in the athlete"*



## **Dr. Brad Muir**

### **Award of Excellence Winner – Fellow Category**

Awards of Excellence are meant to recognize the outstanding achievement conducted by chiropractic students, RCCSS(C) sports residents and RCCSS(C) Fellows.

These awards are open to members of the Royal College of Chiropractic Sports Sciences (Canada) [RCCSS(C)] who have recently conducted scholarly written requirements as part of their Canadian Chiropractic Sports Sciences Residency Program (SSRP).

### **Dr. Brad Muir Biography;**

*Dr. Brad Muir completed a Doctor of Chiropractic at CMCC in 2003 and attained his Sports Sciences Fellowship with the Royal College of Chiropractic Sports Sciences (RCCSS(C)) in 2006. Prior to attending chiropractic college, Dr. Muir earned an Honours Bachelor of Science degree in Kinesiology from the University of Waterloo. He worked for seven years as a Clinical and Occupational Kinesiologist, during which time he earned a diploma in Acupuncture. Dr. Muir served on the Board of Directors for the RCCSS(C) for 10 years and is currently the RCCSS(C) Regional Supervisor of the Sports Sciences Residency Program (SSRP) for Eastern Canada and co-ordinates the Education Modules. Dr. Muir has lectured across Canada on various clinical, sport and nerve related topics and has published several articles in peer reviewed journals. Dr. Muir is a Professor and Clinician at CMCC and maintains a private practice in Pickering and Ajax, Ontario.*



*Dr. Muir is the developer of the Peripheral Neural Dynamics continuing education course for the CMCC Continuing Education Program.*

## **Dr. Alex Lee**

**Dr. Lara deGraauw**

**Dr. Chris deGraauw**

**Dr. Brad Muir**

**Dr. Scott Howitt**

**Dr. Kaitlyn Szabo**

**Dr. Melissa Belchos**

**Mr. Kent Murnaghan**

**Winner of the 2022 Scientific Conference Funding Grant for his work entitled: A Delphi study to identify research priorities to inform a research agenda for Canadian sports chiropractors.**

These grants are open to all members (Fellows, Residents and Members) of the RCCSS(C) and are meant to encourage members to attend scientific conferences to disseminate their sports-focused research and encourage our members to build future research collaborations by attending scientific meetings.

### **Dr. Alex Lee Biography:**

*Dr. Lee started his academic career at the University of Waterloo where he earned a Bachelor of Science Honours degree in Kinesiology. His interest in sports medicine led him to the Canadian Memorial Chiropractic College (CMCC) where he graduated with magna cum laude honours and received the John M Wallace Memorial Award for clinical proficiency. Interested in specializing in sports health care, Dr. Lee completed a two-year, full time, post[1]graduate Sports Sciences Residency at CMCC which led him to obtaining his Sports Sciences Fellowship from the Royal College of Chiropractic Sports Sciences (Canada). Dr. Lee has worked as a provider in both the elite and amateur levels of hockey, martial arts, wrestling, volleyball, track & field, and endurance sports. He is clinical faculty at CMCC, is a peer reviewer for various academic journals, and is actively involved in clinical research. He chairs the Research and Education Committee of the Royal College of Chiropractic Sports Sciences (Canada), is a member of the International Sports Chiropractic Federation Research Commission, and is the executive director of the Sports and Exercise Research Collaborative for Health Practice-based Research Network (SERCH PBRN).*

