

Sasha Carsen
MD,CM, FRCSC, MBA, HonBSc

Curriculum Vitae

Career Statement

I am an academic pediatric orthopaedic surgeon; a clinician-scientist balancing a clinical orthopaedic practice with academic investigations focusing on collaborative and inter-disciplinary studies. I have a particular focus and emphasis on paediatric sports conditions of the hip and knee, including both injury prevention and treatment, as well as paediatric orthopaedic trauma.

Contact Information

Children's Hospital of Eastern Ontario (CHEO)
Department of Surgery, Division of Orthopaedic Surgery
401 Smyth Rd
Ottawa, ON, Canada K1H 8L1

Current Positions

Attending Staff Orthopaedic Surgeon, CHEO
Associate Professor of Surgery, University of Ottawa
Consultant Orthopaedic Surgeon, The Ottawa Hospital
Consultant Orthopaedic Surgeon, Hawkesbury General Hospital
Scientist, CHEO Research Institute
Clinical Investigator, Ottawa Hospital Research Institute
eConsult Pediatric Orthopaedic Specialist, Champlain Local Health Integration Network

Education

July 2008 – June 2013	FRCS C Orthopaedic Surgery; University of Ottawa
Sept 2003 – June 2008	MD,CM ; McGill University
Sept 2003 – June 2008	MBA ; McGill University. Major: Health Care Systems/Management
Sept 1998 – June 2002	HonBSc ; University of Western Ontario. Major: Kinesiology

Post Graduate Education and Training

Aug 2014 – July 2015	Fellowship – Pediatric Orthopaedic Surgery: BC Children's Hospital & UBC Vancouver, BC Fellowship Director: Dr. Kishore Mulpuri
Aug 2013 – July 2014	Fellowship – Orthopaedic Sports Medicine: Children's Hospital Boston & Harvard University, Boston, MA Fellowship Director: Dr. Lyle Micheli
July 2008 – June 2013	Orthopaedic Surgery FRCSC Residency Training Program, University of Ottawa, Ottawa, ON Program Director: Dr. Joel Werier

Certifications

Fellow, Royal College of Surgeons of Canada (FRCSC) – 2013
Diplomate American Board of Orthopaedic Surgery (ABOS) – 2018
Licentiate of the Medical Council of Canada (LMCC) – 2009

Medical Licensures

Ontario: Full Medical License (2015 – current) – #89058
Massachusetts: Full Medical License (2013 – current) – #254103

Honors and Awards

- 2020 **CHEO Research Institute – Investigator of the Year**
Top award for the Research Institute, awarded to Investigator from any discipline
- 2019 **Canadian Orthopaedic Foundation – Robert Salter Award** Principal Investigator
“Determining the optimal bone-derived stem cell source for cartilage regeneration in the treatment of osteoarthritis”
- 2019 **Canadian Orthopaedic Foundation – Cy Frank Award** Co-Investigator -*“Efficacy of a non-surgical treatment protocol for patients with symptomatic femoro-acetabular impingement: a randomized controlled trial”*
- 2018 **ConMED Canada Sports Medicine Research Award** – Principal Investigator –
“Functional capacity of the pediatric and adolescent knee joint and ACL injury: Optimizing recovery, and preventing re-injury”
- 2018 **Hacking Health and CHEO 2nd Annual Hackathon – Multiple Prize winner**
“CliniCAL” Cheung K, Chung A, Cooney R, **Carsen S.**
- 2018 **University of Ottawa Department of Surgery Junior Faculty Research Grant:**
“Functional capacity of the knee joint before and after surgery in pediatric males and females after anterior cruciate ligament (ACL) injury: Optimizing recovery, preventing re-injury”
- 2018 **Canadian Orthopaedic Foundation – Carrol A. Laurin Award** Co-Investigator -*“Efficacy of a non-surgical treatment protocol for patients with symptomatic femoro-acetabular impingement: a randomized controlled trial”*
- 2018 **AAOS Kappa Delta Elizabeth Winston Lanier Award – Co-Investigator** – *“Unravelling the Hip Pistol Grip / CAM Deformity: Origins to Joint Degeneration”*. Beaulé P, **Carsen S, et al.**
- 2017 **CHEO Research Institute – 2017 Research Growth Award**
- 2017 **International Society for Hip Arthroscopy – 2017 ISHA Travelling Fellowship**
- 2017 **Canadian Orthopaedic Foundation – Carrol A. Laurin Award** – *“Determining the role of physical activity in the development of hip impingement morphology in adolescents during the final stages of skeletal maturation”*
- 2017 **US Bone and Joint Initiative – Young Investigator Initiative & Grant Development and Career Mentoring Program** – *“Determining the role of physical activity in the development of hip impingement morphology in adolescents during the final stages of skeletal maturation”*
- 2017 **Hacking Health and CHEO Inaugural Hackathon – Multiple Prize winner**
“Building a Better Knee Brace” Miguel M, Benoit D, **Carsen S**
IBM Gold Prize, People’s Choice Award, Shopify Award, & the MadeMill Designer Team Award
- 2016 **McGill University Visiting Professor in Knee Arthroscopy** – Nov, 2016
- 2014 **Best Fellow Research Award** – *“Operative and Non-Operative Treatment of Adolescent Mid-diaphyseal Clavicle Fractures”*
Boston Children’s Hospital/Harvard University Pediatric Sports Medicine
- 2013 **Otto Aufranc Research Award – The Hip Society**
• The Hip Society's top award for innovative research, either clinical or basic, encompassing important advances in the management of hip disorders, for:
Carsen S, Moroz P, Rakhra K, Ward L, Dunlap H, Hay J, Willis RB, Beaulé, PE
On the etiology of the Cam deformity: A paediatric MRI study.
- 2013 **Detweiler Travelling Fellowship Award from the Royal College of Physicians and Surgeons of Canada – 2013-2014**
- 2013 **Best Resident Teacher** – Division of Orthopaedic Surgery, Department of Surgery, University of Ottawa
- 2013 **International Pediatric Orthopaedic Symposium Fellow Scholarship**
- 2012 **University of Ottawa Department of Surgery –**
Graeme Barber Prize for Best Clinical Research Presentation
- 2011 **HK Uthhoff, University of Ottawa Orthopaedic Research Day – Resident Research Prize**
- 2007 **Force Avenir Project Winner – McGill Journal of Medicine**
• Provincial Award recognizing a contribution to Quebec and the world.

Research & Publications

Peer-Reviewed Publications

- 1) Coupal S, Lukas K, Plint A, Bhatt M, Cheung K, Smit K, **Carsen S**. Management of Gartland Type 1 Supracondylar Fractures: A Systematic Review. *Front Pediatr*. 2022 May 19;10:863985. doi: 10.3389/fped.2022.863985. PMID: 35664877; PMCID: PMC9160664.
- 2) **Defining Parameters for Surgical Correction and Outcomes for Femoroacetabular Impingement Through Consensus (DEFINE) Investigators**. Defining Parameters for Surgical Correction and Hip Complications for Femoroacetabular Impingement Syndrome: Results of an International Modified Delphi Study. *Arthroscopy*. 2022 Dec 8;S0749-8063(22)00767-8. doi: 10.1016/j.arthro.2022.11.023. Epub ahead of print. PMID: 36621448.
- 3) Block AM, Eisenberg MT, Ellis HB, Crepeau AE, Schmitz MR, **Carsen S**, Nepple JJ; PRiSM Hip RIG. Orthopaedic Surgery Pediatric Sports Medicine: Characterizing Practice Patterns and Subspecialization. *J Pediatr Orthop*. 2022 Sep 1;42(8):e833-e838. doi: 10.1097/BPO.0000000000002209. Epub 2022 Jul 19. PMID: 35856492.
- 4) Romanchuk NJ, Livock H, Lukas KJ, Del Bel MJ, Benoit DL, **Carsen S**. Protocol for the systematic review of return-to-activity criteria in adolescent patients following an anterior cruciate ligament reconstruction. *Syst Rev*. 2022 May 14;11(1):93. doi: 10.1186/s13643-022-01965-w. PMID: 35568927; PMCID: PMC9107732.
- 5) Moore L, Freire G, Ben Abdeljelil A, Berube M, Tardif PA, Gnanvi E, Stelfox HT, Beaudin M, **Carsen S**, Stang A, Beno S, Weiss M, Labrosse M, Zemek R, Gagnon IJ, Beaulieu E, Berthelot S, Klassen T, Turgeon AF, Lauzier F, Pike I, Macpherson A, Gabbe BJ, Yanchar N. Clinical practice guideline recommendations for pediatric injury care: protocol for a systematic review. *BMJ Open*. 2022 Apr 27;12(4):e060054. doi: 10.1136/bmjopen-2021-060054. PMID: 35477878; PMCID: PMC9047816.
- 6) Kay J, Simunovic N, Ayeni OR; **FIRST Investigators**; Bhandari M, Bedi A, Järvinen T, Musahl V, Naudie D, Seppänen M, Slobogean G, Thabane L, Duong A, Skelly M, Shanmugaraj A, Crouch S, Sprague S, Heels-Ansdell D, Buckingham L, Ramsay T, Lee J, Kousa P, Carsen S, Choudur H, Sim Y, Johnston K, Wong I, Murphy R, Sparavalo S, Whelan D, Khan R, Wood GCA, Howells F, Grant H, Zomar B, Pollock M, Willits K, Firth A, Wanlin S, Remtulla A, Kaniki N, Belzile EL, Turmel S, Jørgensen U, Gam-Pedersen A, Sihvonen R, Raivio Sihvonen M, Toivonen Sihvonen P, Pirjetta Routapohja M. Effect of Osteochondroplasty on Time to Reoperation After Arthroscopic Management of Femoroacetabular Impingement: Analysis of a Randomized Controlled Trial. *Orthop J Sports Med*. 2022 Apr 5;10(4):23259671211041400. doi: 10.1177/23259671211041400. PMID: 35400136; PMCID: PMC8988676.
- 7) Lee RJ, Nepple JJ, Schmale GA, Niu EL, Beck JJ, Milewski MD, Finlayson CJ, Joughin VE, Stinson ZS, Pace JL; PRiSM Meniscus Research Interest Group; Albright J, **Carsen S**, Chambers H, Nault ML, Schlechter JA, Stavinoha TJ, Tompkins M, Wilson PL, Heyworth BE. Reliability of a New Arthroscopic Discoid Lateral Meniscus Classification System: A Multicenter Video Analysis. *Am J Sports Med*. 2022 Apr;50(5):1245-1253. doi: 10.1177/03635465221076857. Epub 2022 Mar 2. PMID: 35234542.
- 8) Degen RM, Hiemstra LA, Lobo J, Woodmass JM, Sommerfeldt M, Khan M, **Carsen S**, Pauyo T, Chahal J, Urquhart N, Grant J, Rousseau-Saine A, Lebel ME, Sheehan B, Sandman E, Tucker A, Kopka M, Wong I. Arthroscopy Association of Canada Position Statement on Intra-articular Injections for Hip Osteoarthritis. *Orthop J Sports Med*. 2022 Feb 7;10(2):23259671211066966. doi: 10.1177/23259671211066966. PMID: 35155702; PMCID: PMC8832617.
- 9) Wang Y, Doyle M, Smit K, Varshney T, **Carsen S**. The Toddler's Fracture. *Pediatr Emerg Care*. 2022 Jan 1;38(1):36-39. doi: 10.1097/PEC.0000000000002600. PMID: 34986580.
- 10) Nissen CW, Albright JC, Anderson CN, Busch MT, Carlson C, **Carsen S**, Chambers HG, Edmonds EW, Ellermann JM, Ellis HB Jr, Erickson JB, Fabricant PD, Ganley TJ, Green DW, Grimm NL, Heyworth BE, Po JHH, Kocher MS, Kostyun RO, Krych AJ, Latz KH, Loveland DM, Lyon RM,

- Mayer SW, Meenen NM, Milewski MD, Myer GD, Nelson BJ, Nepple JJ, Nguyen JC, Pace JL, Paterno MV, Pennock AT, Perkins CA, Polousky JD, Saluan P, Shea KG, Shearier E, Tompkins MA, Wall EJ, Weiss JM, Willimon SC, Wilson PL, Wright RW, Zbojniec AM, Carey JL; ROCK Group. Descriptive Epidemiology From the Research in Osteochondritis Dissecans of the Knee (ROCK) Prospective Cohort. *Am J Sports Med.* 2022 Jan;50(1):118-127. doi: 10.1177/03635465211057103. Epub 2021 Nov 24. PMID: 34818065.
- 11) **Carsen S**, Grammatopoulos G, Zaltz I, Ward L, Smit K, Beaulé PE. The Effects of Physical Activity on Physical and Skeletal Development. *JBJS Rev.* 2021 Oct 12;9(10). doi: 10.2106/JBJS.RVW.21.00060. PMID: 34637401.
 - 12) Dion MO, Faure PA, May O, Bonin N, Beaulé P, **Carsen S**, Nault ML, Pelet S, Simonyan D, Belzile EL. Validation of the French Version of the Self-Administered International Hip Outcome Tool-33 Questionnaire. *Orthopaedics & Traumatology: Surgery & Research.* 2021 Feb 12:102858. PMID: 33588091
 - 13) Lovse L, Coupal S, Tice A, **Carsen S**. Pediatric Acetabular Osteomyelitis treated with Hip Arthroscopy: A case report. *JAAOS: Global Research and Reviews: May 2021 - Volume 5 - Issue 5 - p e21.00011* doi: 10.5435/JAAOSGlobal-D-21-00011
 - 14) Zhang K, Catapano M, **Carsen S**, Peterson D, de Sa D. Management and Complications in Nonoperative Fractures of the Tibial Spine: A Systematic Review. *J Pediatr Orthop.* 2021 Jan 11. doi: 10.1097/BPO.0000000000001750. Epub ahead of print. PMID: 33448724.
 - 15) Slullitel PA, Grammatopoulos G, Smit K, **Carsen S**, Wilkin G, Rakhra KS, Beaulé PE. Hip Joint Preservation Surgery: What Every Orthopaedic Provider Needs to Know. *Instr Course Lect.* 2021;70:181-208. PMID: 33438911.
 - 16) Girard CI, Warren CE, Romanchuk NJ, Del Bel MJ, **Carsen S**, Chan ADC, Benoit DL. Decision Tree Learning Algorithm for Classifying Knee Injury Status Using Return-to-Activity Criteria. *Annu Int Conf IEEE Eng Med Biol Soc.* 2020 Jul;2020:5494-5497. doi:10.1109/EMBC44109.2020.9176010. PMID: 33019223.
 - 17) Kay J, Simunovic N, Heels-Ansdell D, Bhandari M, Ayeni OR; **FIRST Investigators**. Lower body mass index and age are predictive of improved pain and health utility scores following arthroscopic management of femoroacetabular impingement. *Knee Surg Sports Traumatol Arthrosc.* 2021 Jan 5. doi: 10.1007/s00167-020-06395-6. Epub ahead of print. PMID: 33398481.
 - 18) Almasri M, Simunovic N, Heels-Ansdell D, Ayeni OR; **FIRST Investigators**. Femoroacetabular impingement surgery leads to early pain relief but minimal functional gains past 6 months: experience from the FIRST trial. *Knee Surg Sports Traumatol Arthrosc.* 2021 Jan 2. doi: 10.1007/s00167-020-06401-x. Epub ahead of print. PMID: 33386426.
 - 19) Ayeni OR, Karlsson J, Heels-Ansdell D, **Carsen S**, FIRST Investigators et al. Osteochondroplasty and Labral Repair for the Treatment of Young Adults With Femoroacetabular Impingement: A Randomized Controlled Trial. *The American Journal of Sports Medicine.* September 2020. doi:10.1177/0363546520952804
 - 20) Stinson ZS, Beck JJ, **Carsen S**, Crepeau A, Cruz AI, Jr., Ellington MD, Mayer SW, Vandenberg CD. Safe Return to Play Following ACL Reconstruction in Young Athletes: A Current Concepts Review. *JPOSNA.* 2(3) Nov, 2020. <https://www.jposna.org/ojs/index.php/jposna/article/view/163>
 - 21) Lukas K, Livock H, Kontio K, **Carsen S**. Bilateral Discoid Medial Menisci: A Case Report and Review of the Literature. *J Am Acad Orthop Surg Glob Res Rev.* 2020;4(8):e2000069. doi:10.5435/JAAOSGlobal-D-20-00069 PMID: 32769707
 - 22) Ohlin, A., Simunovic, N., Duong, A. Ayeni OR, **FIRST Investigators**. Low rate of adverse events in a randomized controlled trial addressing the surgical treatment of femoroacetabular impingement (FAI) syndrome. *Knee Surg Sports Traumatol Arthrosc* (2020). <https://doi.org/10.1007/s00167-020-06236-6>

- 23) Teo T, Schaeffer EK, Habib E, El-Hawary R, Larouche P, Shore B, Aarvold A, **Carsen S**, Reilly C, Mulpuri K. Is the Modified Gartland Classification System Important in Operative versus Nonoperative Decision-Making for Supracondylar Humerus Fractures? *J Child Orthop*. 2020 Dec 1;14(6):502-507. doi: 10.1302/1863-2548.14.200093. PMID: 33343744; PMCID: PMC7740680.
- 24) Seth A, Yen YM, Tourn D, Smit K, **Carsen S**. A Unique and Characteristic Cam FAI Morphology in Young Patients with Comorbid Inflammatory Conditions. *Journal of Bone & Joint Surgery*, epub ahead of Print, May 2020. PMID: 32453107
- 25) **Carsen S**, Grammatopoulos G, Zaltz I, Ward L, Smit K, Beaulé PE. Adolescent Physical Activity: Effects On Physeal & Skeletal Development. *Accepted, Journal of Bone & Joint Surgery*, 2020
- 26) Karir A, Huynh MNQ, **Carsen S**, Smit K, Cheung K. Management and Outcomes of Clinical Scaphoid Fractures in Children [published online ahead of print, 2020 Jul 1]. *Hand (N Y)*. 2020;1558944720930293. doi:10.1177/1558944720930293 PMID: 32609009
- 27) Teo TL, Schaeffer EK, Habib E, Cherukupalli A, Cooper AP, Aroojis A, Sankar WN, Upasani VV, **Carsen S**, Mulpuri K, Reilly C. Assessing the reliability of the modified Gartland classification system for extension-type supracondylar humerus fractures. *Journal of Children's Orthopaedics*. Published Online: 29 Nov 2019 <https://doi.org/10.1302/1863-2548.13.190005>
- 28) Chang Y, **Carsen S**, Kontio K, Smit K. Electronic consultation systems: Impact on pediatric orthopaedic care. *Journal of Pediatric Orthopaedics*. June 05, 2020 - Volume Publish Ahead of Print - Issue - doi: 10.1097/BPO.0000000000001607
- 29) Wang Y, Smit K, Doyle M, Varshney T, **Carsen S**. The Toddler's Fracture., *Pediatric Emergency Care*. Dec 2021.
- 30) Del Bel M, Girard C, Kemp L, **Carsen S**, Benoit D. Translation and validation of the Hospital for Special Surgery Pediatric Functional Activity Brief Scale for French pediatric populations. *Physiotherapy Canada*. Published Online: 2020, March 30th.
- 31) Grammatopolous G, Jamieson P, Dobransky J, Rakhra K, **Carsen S**, Beaulé P. Acetabular Version Increases During Adolescence Secondary to Reduced Anterior Femoral Head Coverage. *Clinical Orthopaedics and Related Research*. *Clin Orthop Relat Res*. 2019;477(11):2470-2478. doi:10.1097/CORR.0000000000000900
- 32) Simunovic N, Heels-Ansdell D, Thabane L, Ayeni OR, **FIRST Investigators**. Femoroacetabular Impingement Randomised controlled Trial (FIRST) - a multi-centre randomized controlled trial comparing arthroscopic lavage and arthroscopic osteochondroplasty on patient important outcomes and quality of life in the treatment of young adult (18-50 years) femoroacetabular impingement: a statistical analysis plan. *Trials*. 2018;19(1):588. Published 2018 Oct 29. doi:10.1186/s13063-018-2965-0
- 33) Beaulé PE, Grammatopoulos G, Speirs A, Ng G, **Carsen S**, Frei H, Melkus G, Rakhra K, Lamontagne M. Unravelling the Hip Pistol Grip / CAM Deformity: Origins to Joint Degeneration. *J Orthop Res*. 2018 Sep 3. doi: 10.1002/jor.24137. [Epubahead of print] PubMed PMID: 30175856.
- 34) **Carsen S**, Tourn D, Marien M, Smit K. Arthroscopy of the pediatric hip. *Ann Joint* 2018;3:58.
- 35) Risberg MA, Ageberg E, Nilstad A, Lund B, Nordsetten L, Løken S, Ludvigsen T, Kierkegaard S, **Carsen S**, Kostogiannis I, Crossley KM, Glyn-Jones S, Kemp JL. Arthroscopic Surgical Procedures Versus Sham Surgery for Patients With Femoroacetabular Impingement and/or Labral Tears: Study Protocol for a Randomized Controlled Trial (HIPART1) and a Prospective Cohort Study (HARP). *J Orthop Sports Phys Ther*. 2018 Apr;48(4):325-335. doi: 10.2519/jospt.2018.7931.PMID: 29607761
- 36) Lai L, Liddy C, Keely E, Afkham A, Kurzawa J, Abdeen N, Audcent T, Bromwich M, Brophy J, **Carsen S**, Fournier A, Fraser-Roberts L, Gandy H, Hui C, Johnston D, Keely K, Kontio K, Lamontagne C, Major N, O'Connor M, Radhakrishnan D, Reisman J, Robb M, Samson L, Sell E, Splinter W, van Stralen J, Venkateswaran S, Murto K., The impact of electronic consultation on a Canadian tertiary care pediatric specialty referral system: A prospective single-center observational study. *PLoS One*. 2018 Jan 10;13(1):e0190247. doi: 10.1371/journal.pone.0190247

- 37) Phillips L, **Carsen S**, Vasireddi A, Mulpuri K. Use of Patient-reported Outcome Measures in Pediatric Orthopaedic Literature. *J Pediatr Orthop*. 2016 Sep 3. [Epub ahead of print] PubMed PMID: 27603185.
- 38) **Carsen S**, Quinn BJ, Beck E, Southwick H, Micheli LJ. A Case of a "Nutcracker Fracture" in a Ballet Dancer Performing in "The Nutcracker" *Journal of Dance Medicine & Science*, 19(3); 2015.
- 39) **Carsen S**, Park S, Simon DA, Feibel RJ. "Radiographic outcomes of closed diaphyseal femur fractures treated with the SIGN nail". *Clinical Orthopaedics and Related Research*, 473(5) 2015.
- 40) **Carsen S**, Moroz P, Rakhra K, Ward L, Dunlap H, Hay J, Willis RB, Beaulé PE. The Otto Aufranc Award. On the Etiology of the Cam Deformity: A Cross-sectional Pediatric MRI Study. *Clinical Orthopaedics & Related Research*. (2013) Pub online April 19th, 2013.
- 41) White C, **Carsen S**, Rasuli K, Feibel R, Kim P, Beaulé PE. High Incidence of Migration with Poor Initial Fixation of the Accolade Stem. *Clinical Orthopaedics & Related Research*. (2012) 470:410-417
- 42) Dervin G, Liew A, Simon D, **Carsen S**, Johnson D. Knee Dislocation: The Ottawa Approach. *Operative Techniques in Sports Medicine*. March 2011 (Vol. 19, Issue 1, Pages 12-26).
- 43) **Carsen S**, Xia C, Fordyce C. The future of multi-disciplinary medicine. *McGill Journal of Medicine*. 9(2), p80-81. July, 2006. PMID: 18523621
- 44) **Carsen S**, Xia C. The physician as leader. *McGill Journal of Medicine*. 9(1), p1-2. January, 2006.

Textbook Chapters

- 1) Bali K, Potras S, **Carsen S**. "Non-Surgical Management of Pre-Arthritic Dysplastic Hip Pain" in Beaulé P: Hip Dysplasia: Understanding and Treating Instability of the Native Hip. Springer. March 2020. ISBN: 978-3-030-33357-7
- 2) **Carsen S**, Al-Youssef H, Beaulé P. "Cam Impingement, Pincer Impingement, Combined Impingement: Diagnosis, Work-up and Treatment" in Tanzer M, Mont, MA: Orthopaedic Knowledge Update – Hip and Knee Reconstruction 5. American Academy of Orthopaedic Surgery, 2016
- 3) **Carsen S** and Yen YM. "Hip Injuries in the Young Female Athlete" in Stein C, Straccolini N, Ackerman K: The Young Female Athlete. Part of series: *Contemporary Pediatric and Adolescent Sports Medicine* (series Ed. Micheli, LJ). 2016.
- 4) **Carsen S**, Deakon T, Johnson D. "Instrumented Measurement of the Posterior Cruciate Ligament Injured Knee: Arthrometry, Stress Radiography, Rotationometry, and Computer Navigation" in Fanelli, GC: Posterior Cruciate Ligament Injuries: A Practical Guide to Management 2nd Ed. (2014). Springer, New York, 2014.
- 5) **Carsen S**, and Johnson D. "Instrumented Measurement of the Multiple Ligament Injured Knee: Arthrometry, Stress Radiography, Rotationometry, and Computer Navigation" in Fanelli, GC: The Multiple Ligament Injured Knee: A Practical Guide to Management 2nd Ed. (2013). Springer, New York, 2013.
- 6) **Carsen S**, Willis RB. "Pediatric Orthopaedics". In The Children's Hospital of Eastern Ontario Resource Handbook & Online Resource. Ed: Lewis, E, Sell, E, Jimenez, C. University of Ottawa and the Children's Hospital of Eastern Ontario. 2012.

Published Abstracts

- 1) Girard CI, Warren CE, Romanchuk NJ, Del Bel MJ, **Carsen S**, Chan AD, Benoit DL. Decision Tree Learning Algorithm for Classifying Knee Injury Status Using Return-to-Activity Criteria. In 2020 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) 2020 Jul 20 (pp. 5494-5497). IEEE.

- 2) **Carsen, S.** Pediatric patients with FAI and inflammatory comorbidities have a characteristic Cam deformity: A pilot study. *Orthopaedic Journal of Sports Medicine*, (March 2019). doi:10.1177/2325967119S00015.
- 3) Grammatopoulos G, Jamieson P, Dobransky J, Rakhra K, **Carsen S**, Beaulé PE. Acetabular version increases during adolescence secondary to a reduction in anterior femoral head coverage. *Orthopaedic Proceedings*. 2018. 100 (SUPP_9), 25-25
- 4) Phillips L, Aarvold A, **Carsen S**, Alvarez C. Results of acute ulnar Lengthening for forearm deformity in hereditary multiple exostoses. *Orthopaedic Proceedings* 2016. 98 (SUPP_21), 43-43
- 5) **Carsen S**, Bae DS, Kocher MS, Waters PM, Donohue K, Heyworth BE. "Outcomes of Operatively Treated Non-unions and Symptomatic Mal-unions of Adolescent Diaphyseal Clavicle Fractures". *Orthopaedic Journal of Sports Medicine*. 2015 Jul 1;3(2 suppl).
- 6) Heyworth BE, May C, **Carsen S**, Donahue K, Kramer D, Kocher M, Bae D. "Outcomes of Operative and Non-operative Treatment of Adolescent Mid-diaphyseal Clavicle Fractures". *Orthopaedic Journal of Sports Medicine*. July 2014. Vol 2, No 2, Suppl.
- 7) **Carsen S**, Park S, Simon D, Feibel RF. "Radiographic Outcomes of Closed Diphyseal Femur Fractures Treated with the SIGN Nail". *Can J of Surgery. Bethune Round Table 2012, 12th Annual Conference: 2012;55(4)*
- 8) **S Carsen**, S Park, D Simon, LG Zirkle, RJ Feibel. Outcomes of closed diaphyseal femur fractures treated with the Sign nail. *CMAJ Canadian Medical Association Journal* 55 (4), 281
- 9) Dunlap H, **Carsen S**, Beaulé PE, Willis RB, Ward L, Rakhra K, Moroz P. Radiographic and biologic assessment of cam-type femoroacetabular impingement morphology of developing hips in asymptomatic children and adolescents: a pilot study . *Pediatr Radiol* (2011) 41 (Suppl 1):S289
- 10) White C, **Carsen S**, Risuli K, Ducette S, Beaulé P. "The migration pattern of a cementless, tapered, plasma sprayed femoral stem using EBRA-FCA." *J Bone Joint Surg Br*. 2011 93-B: 568
- 11) **Carsen S**, Xia C, Fordyce C, Miao W, Lawler PR. "The McGill Journal of Medicine: A unique medium for the training and development of young scientific researchers, editors, and publishers." *Clinical & Investigative Medicine*. Aug 2006;29(4)261

Non-Peer Reviewed Publications

- 1) **Carsen S**. "The Development of Femoroacetabular Impingement Morphology and its Implications in the Young Hip", *US Bone and Joint Initiative Newsletter*, December 2018.
- 2) Marien M, **Carsen S**. "Heterotopic Ossification Prophylaxis: Use Cautiously as a Standard in Hip Arthroscopy". *Canadian Orthopaedic Association Bulletin*, #121, Fall, 2018.
- 3) **Carsen S**. "ISHA Travelling Fellowship Report 2017". *ISHA Newsletter*, August 2018.
- 4) **Carsen S**. "Teaching physician management in the developing world". Accepted to the *Canadian Medical Association Journal. Perspectives*. 2011.
- 5) **Carsen S**. and Gold, I. "The history and practice of knowledge brokering". *Canadian Health Services Research Foundation*. 2006.

National & International Research Presentations

Carsen S, Siu C, Schaeffer E, Mulpuri K, Reilly CW. Variation in Operative and Non-Operative Treatment Rates for Paediatric Gartland Type II Supracondylar Humerus Fractures Across Multiple Canadian Centres

Podium Presentation:

- COA Meeting, June 2021

Van Gennip S, Romanchuk N, Flaxman T, Del Bel M, Livock H, Benoit D, **Carsen S**. The Impact of Concomitant Meniscus Repair on Functional and Patient Reported Outcomes at Return to Activity in Paediatric Patients Undergoing ACL Reconstruction

Podium Presentation:

- COA Meeting, June 2021

Kerrigan A, Robinson ME, Ward L, Smit K, Dover S, Rauch F, Willis RB, Lawton LJ, Jarvis JG, Kontio K, Tice A, **Carsen S**. Recurrent Low-Energy Fractures in Otherwise Healthy Children May Indicate Bone Fragility

Podium Presentation:

- COA Meeting, June 2021

Cheung K, Smit K, Livock H, Rubin Z, Koujok K, Tang K, **Carsen S**. Clinical Scaphoid Fractures in Children: A Prospective Radiological Study

Podium Presentation:

- COA Meeting, June 2021

Thibault J, Livock H, **Carsen S**, Tice A, Malic C, Smit K. Do Post-Operative Opioid Prescriptions Vary Based on the Type and Severity of Pediatric Elbow Fractures or by the Operative Approach?

Podium Presentation:

- COA Meeting, June 2021

Girard CI, Del Bel M, Bedard V, Bradley C, Comptour AM, O'Connor K, **Carsen S**, Benoit D. Reliability of Functional Hopping Tests Between School and Laboratory Environments in Adolescent Males and Females

Poster Presentation:

- COA Meeting, June 2021

Romanchuk N, Del Bel M, Girard CI, Flaxman T, **Carsen S**, Benoit D. Machine Learning Algorithm for Evaluating Limb Symmetry Index Cut-Off Thresholds in ACL Injured Paediatric Patients

Podium Presentation:

- COA Meeting, June 2021

Kerrigan A, Alrammaal WA, Smit K, **Carsen S**
Hip Arthroscopy in Children 14 and Under: A Descriptive Analysis

Poster Presentation:

- COA Meeting, June 2021

Girard CI, Warren CE, Romanchuk N, Del Bel M, **Carsen S**, Chan ADC, Benoit D. Two Return-to-Activity Measures Can Evaluate Functional Deficits in Female Adolescents with ACL Injury

Poster Presentation:

- COA Meeting, June 2021

Romanchuk N, Del Bel M, Girard CI, Flaxman T, **Carsen S**, Benoit D. Determining the optimal limb symmetry index cut-off threshold for classifying ACL injured paediatric patients: a preliminary analysis

Poster Presentation:

- COA Meeting, June 2021

Siu C, Schaeffer E, Bone J, Sachsaber P, Page J, Sabar S, Carsen S, Reilly CW. Inter-rater Agreement Levels of Lateral Humeral Capitellar Angle and Baumann's Angle Measurements for Type II Supracondylar Humerus Fractures

Poster Presentation:

- COA Meeting, June 2021

Nissen C, ROCK Study Group. Descriptive Epidemiology from the Research in OsteoChondritis Dissecans of the Knee (ROCK) Prospective Cohort

Podium Presentation:

- POSNA 2021 – May 13th, 2021

Carsen S, Smit K, Rubin Z, Livock H, Koujok K, Highmore K, Tang K, Cheung K. Clinical Scaphoid Fractures in Children: A prospective radiological study.

Podium Presentation:

- POSNA 2021 – May 12th, 2021

Warren CE, Girard CI, Romanchuk NJ, Del Bel MJ, **Carsen S**, Benoit DL. *Using a Decision Tree Learning Algorithm to Classify Injury Status in Adolescent Males Following Return-to-Activity Criteria*

Poster Presentation:

- ESMAC 2020 Poster – Sept 17th, 2020

Girard CI, Warren CE, Romanchuk NJ, Del Bel MJ, **Carsen S**, Chan AD, Benoit DL. *“Decision Tree Learning Algorithm for Classifying Knee Injury Status Using Return-to-Activity Criteria”*. In 2020 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) 2020 Jul 20 (pp. 5494-5497). IEEE.

Podium Presentation:

- 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) 2020 Jul 20

Catelli DS, **Carsen S**, Lamontagne M. *“Week-Long Protocol to Monitor Physical Activity Intensity and Impact Loading in Children”*

Poster Presentation:

- ESMAC 2020 Poster – Sept 17th, 2020

Catelli DS, Stone D, **Carsen S**, Lamontagne M. *“Comparison of Lower-Limb Load Impacts in Active and Less Active Children During a Week-Long Protocol”*

Poster Presentation:

- ESMAC 2020 Poster – Sept 17th, 2020

Traduction et validation transculturelle de la version française du questionnaire auto-administré International Hip Outcome Tool-33 (iHOT-33) appliqué dans les pathologies de la hanche Auteurs : Dion MO, Faure PA, May O, Bonin N, Beaulé P, **Carsen S**, Nault ML, Pelet S, Simonyan D, Belzile EL

Podium Presentation:

- SOFCOT, Nov 9-11, 2020

Mattice C, Livock H, Smit K, Tice A, Jarvis J, Kontio K, **Carsen S**. Rational Electronic Medical Record template design and implementation improves documentation quality.

Poster Presentation:

- COA Meeting, June 2020 – High Ranking Poster Winner

Podium Presentation:

- POSNA Meeting, May 2020

Teo T, Schaeffer E, Habib E, El-Hawari R, Larouche P, Shore B, Aarvold A, **Carsen S**, Mulpuri K, Reilly CW. *“Is the Modified Gartland Classification System Important in Operative versus Nonoperative Decision-Making for Supracondylar Humerus Fractures?”*

Poster Presentation:

- COA Meeting, Halifax, NS, June 2020

Del Bel, MJ, Benoit DL, Kontio K, **Carsen S**. *“Are limb symmetry indices a sensitive tool for measuring functional knee joint capacity in youth with ACL injuries?”*

Poster Presentation:

- PRISM, Glendale, AZ, January 2020

R. Jay Lee, Jeffrey J. Nepple, **PRISM Meniscus Research Interest Group**, Gregory A. Schmale, Emily Niu, Jennifer J. Beck, Matthew D. Milewski, Craig J. Finlayson, Elaine Joughin, Zachary S. Stinson, J. Lee Pace, Benton E. Heyworth. *Interobserver Reliability of a Comprehensive Lateral Discoid Meniscus Classification System: A Multicenter Arthroscopic Video Analysis Study*.

Podium Presentation:

- Pediatric Research in Sports Medicine, Glendale, AZ, January 2019.

Teo T, Schaeffer E, Cherukupalli A, Cooper A, Aroojis A, Sankar W, Upasani V, **Carsen S**, Mulpuri K, Bone J, Reilly CW. *“Reliability of the Gartland Classification System for Extension-Type Supracondylar Humerus Fractures”*

Podium Presentation:

- COA / ICORS Meeting, Montreal, QC, June 2019

Shin J, Smit K, **Carsen S**, Cheung K. *"Measuring the Health Utility of Volkmann's Contracture"*

Poster Presentation:

- ICORS / COA, Montreal, QC, June 2019

Karir A, Huynh MNQ, Smit K, **Carsen S**, Cheung K. *"Management and Outcomes of Clinical Scaphoid Fractures in Children"*

Podium Presentation:

- COA / ICORS Meeting, Montreal, QC, June 2019

Milad D, Smit K, **Carsen S**, Cheung K. *"Predictors of True Scaphoid Fractures in Children"*

Podium Presentation:

- COA / ICORS Meeting, Montreal, QC, June 2019

Del Bel, MJ, Benoit DL, Kontio K, **Carsen S**. *"Assessing functional capacity of the knee joint using limb symmetries in paediatric patients with ACL injuries"*

Poster Presentation:

- ICORS / COA, Montreal, QC, June 2019

Carsen S, Doyle M, Smit K, Shefrin A, Varshney T. *"Point of Care Ultrasound In The Emergency Department May Provide More Accurate Diagnosis Of Toddler Fractures Than Radiographs: A Pilot Study"*

Podium Presentation:

- COA / ICORS Meeting, Montreal, QC, June 2019

Poster Presentation:

- POSNA Meeting, Charlotte, NC, May 2019

Robinson ME, Ward L, Rauch F, Smit K, Jarvis J, Willis B, Lawton L, **Carsen S**. *"A Pilot Investigation Into The Genetics Of Mild Bone Fragility"*

Poster Presentation:

- POSNA Meeting, Charlotte, NC, May 2019

Padeanu S, Cheung K, Smit K, Carsen S, Highmore K, Koujok K. *"Inter-rater Reliability of X-ray for the Diagnosis of Paediatric Scaphoid Fractures"*

Poster Presentation:

- Canadian Society of Plastic Surgery, St John's, NF, June 2019

Carsen S, Ibrahim M, Beaulé PE. *"Does Acetabular Coverage Influence the Clinical Outcome of Surgical Treatment of Cam Femoroacetabular Impingement?"*

Podium Presentation:

- International Society for Hip Arthroscopy (ISHA), Melbourne, Australia, October 2018

Seth S, Tourn D, Smit K, **Carsen S**. *"A Characteristic and Unique Cam Morphology is Observed in Pediatric Patients with FAI and Inflammatory Conditions: A Preliminary Analysis"*

Podium Presentation:

- Pediatric Research in Sports Medicine (PRISM) Meeting, Atlanta, January 2019

Poster Presentation:

- ICORS / COA Meeting, Montreal, QC, June 2019
- International Society for Hip Arthroscopy (ISHA), Melbourne, Australia, October 2018

Tourn D, Seth S, Smit K, **Carsen S** *"Comorbidities in Pediatric Patients with FAI"*

Podium Presentation:

- Pediatric Research in Sports Medicine (PRISM) Meeting, Atlanta, January 2019

Poster Presentation:

- International Society for Hip Arthroscopy (ISHA), Melbourne, Australia, October 2018
- COA / ICORS Meeting, Montreal, QC, June 2019

Ng GKC, Mantovani G, Modenese L, Lamontagne M, **Carsen S**, Beaulé PE. *"Altered walking and muscle patterns reduce hip contact forces in individuals with symptomatic cam FAI"*

Poster Presentation:

- International Society for Hip Arthroscopy (ISHA), Melbourne, Australia, October 2018

Catelli DS, Kowalski E, **Carsen S**, Beaulé PE, Lamontagne M. *"Muscle Activity during Deep Squat in Patient with Femoroacetabular Impingement after Corrective Surgery"*

Poster Presentation:

- International Society for Hip Arthroscopy (ISHA), Melbourne, Australia, October 2018

Grammatopoulos G, **Carsen S**, Jamieson P, Dobransky J, Rakhra K, Carsen S, Beaulé PE. *"Acetabular Version Increases During Adolescence Secondary To A Reduction In Anterior Femoral Head Coverage"*

Podium Presentation:

- Canadian Orthopaedic Association, June 2018, Won Honourable Mention Best Presentation
- International Society for Hip Arthroscopy, October, 2017
- Orthopaedic Research Society – *Spotlight Session*, March 11, 2018
- EFORT Barcelona Congress, 30 May - 01 June 2018 – Rated top 10 Poster

Poster Presentation:

- American Academy of Orthopaedic Surgery, March 2018

Jamieson P, **Carsen S**, Rakhra K, Highmore K, Ward LM, Willis RB, Beaulé PE. *"A Prospective Cohort Study Assessing the Development of Cam Femoroacetabular Impingement Morphology"*

Podium Presentation:

- Canadian Orthopaedic Association, June, 2017
- American Academy of Orthopaedic Surgery, March 2018
- Pediatric Research in Sports Medicine (PRISM), January, 2018

Poster Presentation:

- Orthopaedic Research Society, March 11-13, 2018

Chang Y, Smit K, Carsen S, Kontio K. *"Improving access to pediatric orthopaedic expertise using an asynchronous eConsult system"*

Podium Presentation:

- Canadian Orthopaedic Association, June, 2018

Poster Presentation:

- POSNA, April, 2018

Doyle M, **Carsen S**, Smit K, Shefrin A, Varshney T. *"Point of Care Ultrasound in the Diagnosis of Toddler's Fracture"*

Podium Presentation:

- Pediatric Emergency Research Canada, Annual Meeting, January, 2018

Garland K, Smit K, **Carsen S**. *"The Adoption of a new EMR in a Pediatric Ambulatory Clinic"*

Poster Presentation:

- Canadian Orthopaedic Association, June, 2017

Carsen S, Tao T, Reilly C. *"Type 2 Supracondylar Humerus Fracture Management and Outcomes: A prospective cohort study"*.

E-poster:

- EPOSNA, May, 2017

Phillips L, Aarvold A, **Carsen S**, Alvarez C. *"Acute ulnar lengthening for forearm deformity in hereditary multiple exostoses"*.

Podium Presentation:

- Canadian Orthopaedic Association, June, 2016
- British Society for Children's Orthopaedics, April 2016

Carsen S, Kocher MS, Bae D, Waters P, Heyworth BE. *"Results of Operatively Treated Non-unions and Symptomatic Mal-unions of Adolescent Diaphyseal Clavicle Fractures"*.

Podium Presentation:

- Canadian Orthopaedic Association, June, 2015
- Pediatric Orthopaedic Society of North America, April 2015

Tice A, Feibel RJ, **Carsen S**. *"Stability of a Novel Intramedullary Nail for the Treatment of Diaphyseal Femoral Fractures in the Developing World"*

Podium Presentation:

- American Academy of Orthopaedic Surgery, Las Vegas, NV, Mar 26, 2015
- Surgical Implant Generation Network International Conference, Richmond, WA, Sept 11-13, 2014

Carsen S, May C, Donahue K, Kramer D, Kocher M, Bae D, Heyworth BE. “*Outcomes of Operative and Non-operative Treatment of Adolescent Mid-diaphyseal Clavicle Fractures*”.

Podium Presentation:

- Canadian Academy of Sports and Exercise Medicine, Ottawa, Canada, Feb 12-14, 2015
- American Orthopaedic Sports Medicine Association, Seattle, WA, July 10-13, 2014
- Pediatric Orthopaedic Society of North America, Hollywood, CA, May 1-3, 2014

Carsen S, Moroz P, Rakhra K, Ward L, Dunlap H, Hay J, Willis RB, Beaulé, PE. “*On the etiology of the Cam deformity: A paediatric MRI study*”

Podium Presentation:

- The Hip Society, Open Meeting, Specialty Day, AAOS, Chicago, IL; Mar 23, 2013
 - Otto Aufranc Hip Society Award Research Presentation

Electronic & Poster Presentation:

- Radiological Society of North America, Chicago, IL; Dec 1-6, 2013

Carsen S, Park S, Simon D, Feibel, RF. “*Radiographic Outcomes of Closed Diaphyseal Femur Fractures Treated with the SIGN Nail*”.

Podium Presentation:

- Orthopaedic Trauma Association Mtg, Minneapolis, MN; October 6, 2012
- Canadian Orthopaedic Association Mtg, Ottawa, ON; June 8, 2012
- Bethune Round Table International Surgery Conference, Toronto, ON; May 25, 2012

Poster Presentation:

- American Academy of Orthopaedic Surgeons, New Orleans, LA; March 18-22, 2014.

Carsen S, Beaulé, PE, Willis, B, Ward, L, Rakhra, K, Dunlap, H, Moroz, P. “*A Radiographic Assessment of CAM-Type Femoroacetabular Impingement Morphology in the Developing Hip*”.

Podium Presentations:

- American Academy of Orthopaedic Surgery, San Francisco, CA; February 9, 2012
- Canadian Orthopaedic Association Mtg, St. John's, NL; July 9, 2011
- International Pediatric Radiology Joint Societies Conference, London, UK; May, 2011

Poster Presentations:

- Canadian Orthopaedic Residents' Association; July 7, 2011
- Orthopaedic Research Society; Feb 3-7, 2012. Poster No. 1861

White, C, **Carsen, S**, Risuli, K, Ducette, S, Beaulé, P. “*The Migration Pattern of a Cementless, Tapered, Plasma Sprayed Femoral Stem Using EBRA-FCA*.”

Poster Presentation:

- Orthopaedic Research Society Annual Meeting; Feb, 2010

Podium Presentation:

- Canadian Orthopaedic Association Meeting; July, 2010

Carsen S, Xia C, Fordyce C, Miao W, Lawler PR. “*The McGill Journal of Medicine: A unique medium for the training and development of young scientific researchers, editors, and publishers*.”

Podium Presentation: Canadian Society for Clinical Investigation forum of the Royal College of Physicians and Surgeons Conference, Sept. 2006; Ottawa, Ontario, Canada.

Peer-Reviewed Research Grant Support

Dec 2020 – Dec 2022

University of Ottawa Faculty of Medicine - Translational Research Grant
\$50,000

Carsen S, Campbell M, Dilworth J

Determining the cartilage regeneration potential of novel stem cell populations to repair cartilage defects

- April 2020 – April 2022 **University of Ottawa Department of Surgery - Research Program Award**
\$120,000
Carsen S, Benoit D
The adolescent ACL: Development of a clinical prediction rule in order to optimize post-operative recovery and avoid re-injury
- April 2020 – April 2022 **AANA (Arthroscopy Association of North America) Clinical Research Grant**
\$20,000 (USD)
Carsen S, Benoit D
A novel approach to clinical assessment of the adolescent knee; Using in-clinic tools to optimize ACL recovery and prevent re-injury
- April 2020 – April 2022 **CHAMO Innovation Award**
\$90,854
Carsen S, Benoit D
A novel approach to clinical assessment of the ACL injured knee; Using in-clinic tools to optimize recovery and prevent re-injury
- Feb 2020 – Jan 2023 **PSI Young Investigator Award**
\$249,500
de SA DL, **Carsen S**, Bartley D, Peterson D, Ayeni O: *“Soft-tissue QUadriceps autograft ACL-reconstruction in the Skeletally-immature vs. Hamstrings (SQUASH): A Multi-Centre Pilot Randomized Controlled Trial”*
- May 2019 – Jan 2022 **US Department of Defence – Clinical Translational Research Award**
\$2,000,000 (USD)
Clohisy J, et al., ANCHOR Hip Surgery Study Group (**Carsen S** – Co-Investigator)
Identification of Predictors for Clinical Outcomes in Femoroacetabular Impingement Surgery
- May 2019 – Aug 2019 **CHEO RI Summer EPIC Research Student Grant**
\$6,000 Grant
Carsen S, Tice, A, Smit K: *EPIC Electronic Medical Record optimization: Effects on documentation quality, efficiency, and user experience*
- April 2019 – Dec 2020 **CHEO Dept of Surgery Startup Grant**
\$6,000 Grant
Carsen S, Del Bel M, Kontio K, Benoit D: *Investigating the relationship between a cartilage turnover biomarker and knee joint health in a paediatric population with ACL injuries*
- April 2019 – Dec 2020 **Canadian Orthopaedic Foundation – Robert B. Salter Award**
\$20,000 Award
Carsen S, Campbell TM, Dilworth FJ: *“Determining the optimal bone-derived stem cell source for cartilage regeneration in the treatment of osteoarthritis”*
- April 2019 – Dec 2020 **Canadian Orthopaedic Foundation – Cy Frank Award**
\$20,000 Award
de SA DL, **Carsen S**, Bartley D, Peterson D, Ayeni O: *“Soft-tissue QUadriceps autograft ACL-reconstruction in the Skeletally-immature vs. Hamstrings (SQUASH): A Multi-Centre Pilot Randomized Controlled Trial”*
- Dec 2018 – Dec 2021 **CHAMO Innovation Award**
\$89,991.52
Cheung K, **Carsen S**, Cooney R
Improving Patient Experience by addressing clinic queue times

- Dec 2018 – Dec 2020 **ConMed Sports Medicine Grant**
\$25,000 Grant
Carsen S, Benoit D, Del Bel M: *Functional capacity of the knee joint before and after surgery in pediatric males and females after anterior cruciate ligament (ACL) injury: Optimizing recovery, preventing re-injury*
- Oct 2018 – Dec 2020 **CHEO Research Institute (RI) – Research Growth Award**
\$28,474.80 Grant
Cheung K, **Carsen S**, Smit K, Tang K, Koujak K, Highmore K:
Management of pediatric clinical scaphoid fractures: a feasibility study
- Sept 2018 – Mar 2024 **CIHR Project Grant**
\$711,450 Grant over 5 years
Beaule, PE; Lamontagne, M; Melkus, GE; Speirs, AD
Carsen S Collaborator
Cam type femoroacetabular impingement (FAI) is a cause of hip pain in the young adult and a precursor to osteoarthritis (OA)
- May 2018 – Dec 2023 **Team Grant: Canadian Epigenetics, Environment, and Health Research Consortium (CEEHRC) Phase II**
Epigenetic changes affecting muscle stem cell function in the aging population
PI: F. Jeffrey Dilworth
Principal Applicants: **Carsen S**, Beaulé PE, Lapner P, Liew A, Brand M, Bourque G
\$1,497,750 = \$299,550 x 5 years
- April 2018 – Dec 2019 **University of Ottawa Department of Surgery Junior Faculty Research Grant**
\$25,000 Grant
Carsen S, Benoit D, Del Bel M: *Functional capacity of the knee joint before and after surgery in pediatric males and females after anterior cruciate ligament (ACL) injury: Optimizing recovery, preventing re-injury*
- April 2018 – Dec 2019 **Canadian Orthopaedic Foundation – Carrol A. Laurin Award**
\$20,000 Award
Poitras S, Beaulé P, **Carsen S**, Wilkin G, Lamontagne M: *Efficacy of a non-surgical treatment protocol for patients with symptomatic femoro-acetabular impingement: a randomized controlled trial*
- Oct, 2017 – Dec, 2018 **CHEO Research Institute (RI) – Research Growth Award**
\$30,000 Grant
Carsen S, Ward L, Lamontagne M, Highmore K, Rakhra K, Beaule P:
Determining the role of physical activity in the development of hip impingement morphology in adolescents during the final stages of skeletal maturation
- April, 2017 – Nov, 2018 **CHEO RI – Trainee Research Grant**
\$2,000 Grant
Doyle M, **Carsen S**, Shefrin A, Varshney T: *Point of Care Ultrasound in the Diagnosis of Toddler's Fracture*
- April, 2017 – Nov, 2018 **Canadian Orthopaedic Foundation – Carrol A. Laurin Award**
\$20,000 Award
Carsen S, Ward L, Lamontagne M, Rakhra K, Beaule P: *Determining the role of physical activity in the development of hip impingement morphology in adolescents during the final stages of skeletal maturation*
- April, 2016 – Mar, 2018 **Pediatric Orthopaedic Society of North America – POSNA/OREF Research Grant**
\$38,500 Grant
Carsen S: *The Genetics of Mild Bone Fragility, A Pilot Study*

- April, 2015 – Mar, 2016 **Pediatric Orthopaedic Society of North America Startup Research Grant Award**
\$10,000 Grant
Reilly C, Carsen S: *Type II Pediatric Supracondylar Humerus Fracture Management and Outcomes: A prospective multi-centre cohort study*
- Jan 1, 2011 – Dec, 2012 **Orthopaedic Trauma Association Resident Research Grant Award**
\$10,000 Grant
Carsen S: *Radiological Post-Operative Evaluation of Closed Diaphyseal Femur Fractures treated with the SIGN Intramedullary Nail*

National/International Clinical Contribution:

- Orthopaedic liaison for Canadian Paediatric Society's Infectious Disease Committee's guidelines for the treatment of septic arthritis and osteomyelitis
- Choosing Wisely Canada – Expert Advisory Group on Unnecessary Knee Arthroscopy

Academic Publishing

Editorial Board Member – Injury Prevention and Rehabilitation
(specialty section of *Frontiers in Sports and Active Living*) as a Review Editor

Editorial Board Member – the Video Journal of Sports Medicine
(publication of the AOSSM)

Peer Reviewer

Peer-Reviewed Journals:

CMAJ Open – 2021 - present
American Journal of Sports Medicine – 2019 - present
Journal of Pediatric Orthopaedics – 2018 - present
Canadian Medical Association Journal – 2018 - present
Arthroscopy: The Journal of Arthroscopic and Related Surgery – 2016 - present
Canadian Journal of Surgery – 2016 - present
The Bone & Joint Journal – 2015 - present
Journal of Dance Medicine & Science – 2013 – present

Grant Peer-Reviewer - Grant Agencies/Groups:

TD Grand Challenge – Healthcare Innovation Awards – 2019 – present
University of Ottawa Department of Surgery Grant Program – 2020 – present
ConMed Canadian Sports Medicine Grants – 2019 – present
PolicyWise Grant Foundation – 2019 - present
PSI – Physician Services Incorporated Foundation – 2018 - present
CHAMO Innovation Grant – 2016 – present
CHEO Research Institute – 2016 – present
CHEO Department of Surgery Research Grant – 2019, 2020
CHEO Research Institute Trainee Research Award - 2021

Abstract/Study review for Societies/Conferences:

International Society for Hip Arthroscopy, 2020
Canadian Orthopaedic Association 2016-2021 (Annual member of the Abstract review committee.
Pediatric Orthopaedic and Arthroscopy & Sports Medicine sub-specialty groups)
Bethune Round Table, 2017

Judge

CHEO Research Institute Serge Taillon Summer Studentship Presentation - 2020

Recent (5 years) Invited Lectures

- Ste-Justine Pediatric Review Course, "Paediatric Shoulder Instability", Montreal, QC, Feb 19th, 2021
- Ste-Justine Pediatric Review Course, "The Young Athlete", Montreal, QC, Feb 19th, 2021
- Canadian Orthopaedic Resident Review in Paediatrics, "Lower Extremity Fractures – Top 10 Things You Need to Know". Toronto, ON, Feb 12th, 2021
- Canadian Orthopaedic Association Meeting, Knee Symposium, "ACL Primary Repair: When and How", June 20th, 2020
- Ste-Justine Pediatric Review Course, "Paediatric Shoulder Instability", Montreal, QC, March 2020
- Ste-Justine Pediatric Review Course, "The Young Athlete", Montreal, QC, March 2020
- Canadian Orthopaedic Resident Review in Paediatrics, "Lower Extremity Fractures – Top 10 Things You Need to Know". Toronto, ON, Jan 16th, 2019
- Canadian Orthopaedic Resident Review in Paediatrics, "Lower Extremity Fractures – Top 10 Things You Need to Know". Toronto, ON, Jan 15th, 2020
- "Paediatric Supracondylar Fractures – Keys to Making the Correct Diagnosis on Xray From Radiographs through Treatment algorithms", Ontario Orthopaedic Association, Toronto, Nov 9, 2019
- Pediatric Update – CHEO Refresher Course, "Pediatric Sports Medicine Physical Exam – Hands On Workshop", Ottawa, ON, Nov 1, 2019
- COA Basic Science Course, "Functional Anatomy of Joints", Oct 21, 2019
- COA Basic Science Course, "Functional Anatomy of Muscle and Tendon", Oct 21, 2019
- Canadian Orthopaedic Association, Pediatric Sports Medicine Instructional Course Lecture, "Adolescent FAI, Diagnosis and Treatment", Montreal, QC, June 2019
- 13th Symposium on Joint-Preserving and Minimally Invasive Surgery of the Hip, "Are kids too involved in sports? The current status on the development of FAI Morphology and Syndrome", Québec City, QC, June 2019
- 13th Symposium on Joint-Preserving and Minimally Invasive Surgery of the Hip, "A Surgeon's View of Pre-Arthritic Hip Disease", Québec City, QC, June 2019
- CHEO Dept of Surgery Grand Rounds, "The AO Pediatric Femur Fracture Study – CHEO's Role and Success", Ottawa, March 2019
- Ste-Justine Pediatric Review Course, "Adolescent Femoroacetabular Impingement and Sports Hip Conditions", Montreal, QC, Feb 2019
- Ste-Justine Pediatric Review Course, "Paediatric Shoulder Instability", Montreal, QC, Feb 2019
- Ste-Justine Pediatric Review Course, "The Young Athlete", Montreal, QC, Feb 2019
- Canadian Orthopaedic Resident Review in Paediatrics, "Lower Extremity Fractures – Top 10 Things You Need to Know". Toronto, ON, Jan 16th, 2019
- "Developing a clinical and research focus on the adolescent hip", Keynote Speaker - Bone and Joint Canada and the US Bone and Joint Initiative Young investigator initiative (Yii) workshop, Toronto, Nov 9, 2018
- "Paediatric Supracondylar Fractures – Tips & Tricks", Ontario Orthopaedic Association, Toronto, Nov 2, 2018
- "Academic Orthopaedics in the Developing World", Ontario Orthopaedic Association, Toronto, Nov 2, 2018

COA Basic Science Course, "Functional Anatomy of Joints", Oct 22, 2018

COA Basic Science Course, "Functional Anatomy of Muscle and Tendon", Oct 22, 2018

National Capital Knee Symposium, "Paediatric ACL Injuries", Oct 18, 2018, Ottawa

National Capital Knee Symposium, "Paediatric Patellofemoral Instability", Oct 18, 2018, Ottawa

COA Pediatric MSK Infection Symposium, "Pediatric Septic Arthritis – Current Treatments and Trends", Canadian Orthopaedic Association Mtg, Victoria, BC, June, 2018

COA Canadian Pediatric Orthopaedic Study Group, June 2018 – "Building a pediatric orthopaedic research centre from the ground up", Canadian Orthopaedic Association Mtg, Victoria, BC, June, 2018

Hip Conditions in the Young Adult: A Practical Course. MacMaster Hip Preservation course, "Hip Pain in the Pediatric and Adolescent population: Diagnosis and Treatment", Niagara-on-the-Lake, ON, May 26th, 2018

Ste-Justine Pediatric Review Course, "Paediatric Shoulder Instability", Montreal, QC, Mar 2018

Ste-Justine Pediatric Review Course, "The Young Athlete", Montreal, QC, Mar 2018

Canadian Orthopaedic Resident Review in Paediatrics, "Lower Extremity Fractures – Top 10 Things You Need to Know". Toronto, ON, Jan 17th, 2018

Physical Medicine and Rehabilitation, University of Ottawa, Departmental Grand Rounds, "FAI – An update on current concepts in diagnosis, management, and rehabilitation", Ottawa, ON, Oct 20, 2017

International Society for Hip Arthroscopy, "2017 Travelling Fellowship Summary", Santiago, Chile, October 14, 2017

Association d'Orthopedie du Quebec – Visiting Professor – "Hip Arthroscopy – What's new", Gatineau, QC, Sept 29, 2017

Association d'Orthopedie du Quebec – Visiting Professor – "Osteochondral lesions of the knee, approaches and techniques", Gatineau, QC, Sept 29, 2017

COA Basic Science Course, Functional Anatomy of Joints, Oct 2017

COA Basic Science Course, Functional Anatomy of Muscle and Tendon, Oct 2017

Pediatric Update – CHEO Refresher Course, "Pediatric Sports Medicine Update", Ottawa, ON, Oct 21, 2017

Horsens Hospital Orthopaedic Grand Rounds, "Canadian Orthopaedics, and the ISHA Travelling Fellowship", Horsens, Denmark, Sept 19, 2017

Ottawa Hip Preservation Symposium, "Hip Arthroscopy in the Very Young", Ottawa, ON, June 14, 2017

Ste-Justine Pediatric Review Course, "Paediatric Shoulder Instability", Montreal, QC, Mar 2017

Ste-Justine Pediatric Review Course, "The Young Athlete", Montreal, QC, Mar 2017

Professional Society Memberships

2020 – Present	International Pediatric Knee Anatomy Study Group – Research Group Member
2018 – Present	Research in Osteochondritis Dissecans of the Knee (ROCK) – Research Group Member
2015 – Present	Pediatric Research in Sports Medicine (PRISM) – Member
2013 – Present	Pediatric Orthopaedic Society of North America – Member
2013 – Present	American Orthopaedic Society for Sports Medicine – Member
2009 – Present	Arthroscopy Association of North America – Member
2008 – Present	American Academy of Orthopaedic Surgeons – Member
2008 – Present	Canadian Orthopaedic Association –Member
2008 – 2013	Canadian Orthopaedic Residents Association

2004 – 2013 Canadian Academy of Sports and Exercise Medicine – Member
2004 – 2013 Canadian Medical Association - Member
2013 – 2017 Massachusetts Medical Society – Out-of-State Member
2014 – 2015 Doctors of BC - Member

Multi-Centre Study Leadership/Overview

AO Pediatric Femur Fracture Study, 15 centre international multi-centre study, Largest prospective pediatric femur fracture study to date
Role: Site PI for CHEO/Ottawa, Responsible for largest clinical contribution and recruitment in the study

HIPPARTI/HARP Study, Hip Arthroscopy Placebo controlled RCT, Oslo, Norway, PI: May Arna Risberg,
Role: Member of study development, review, and monitoring ctte

FIRST Study, Hip Arthroscopy RCT, MacMaster University, PI: Olufemi Ayeni
Role: Chair of Adjudication & Review Committee.

SBoCK Study, Simple Bone Cysts in Kids study, Large multi-centre international RCT testing treatment arms in bone cysts.
Role: Site PI

Vacuum Assisted Closure Study, Dr. Joel Werier, PI
Role: Chair of study DSMB Committee

Knowledge Translation / Community Engagement / Media

inCourage Interview – April 1st, 2020

“How to keep your kids safely active...And out of the emergency room”

<https://www.incourage.com/how-to-keep-your-kids-safely-active-and-out-of-the-emergency-room/>

CTV Evening News – Jan 9th, 2020

“Mobility Assistance Funding through Social Work at CHEO” Segment on lower extremity surgery and bracing for a young patient

<https://youtu.be/wVDtjijm1Es>

CTV Evening News – Sept 17th, 2019

“Getting back on the ice...” Segment on hip surgery for a young female athlete

https://ottawa.ctvnews.ca/video?clipId=1781746&binId=1.1164511&playlistPageNum=1#_gus&_qucid=&_gup=twitter&_gsc=sy4BMnK

Impact Magazine – Oct 3rd, 2018

“Overtraining risks for young athletes” by Liane Angerman

<http://impactmagazine.ca/news-views/first-impact/overtraining-risks-for-young-athletes/>

CTV – Ottawa AM – Sept 11, 2018

Interviewed by host Henry Buriss regarding early youth sports involvement and specialization

CBC – The National – July 13th, 2018

<https://www.cbc.ca/news/thenational/risk-for-single-sport-kids-supported-by-medical-evidence-1.4747122>

Interview on the medical risks with early sport specialization

CBC – Online Article – July 19th, 2018

<https://www.cbc.ca/news/health/early-sport-specialization-risks-1.4749083>

“Single-sport kids feeling the strain of specialization, experts say”

CBC Radio Syndication – 12 Radio interviews, Coast-to-coast – July 23rd, 2018

Interview on the medical risks with early sport specialization

Sydney, Australia, Macquarie Sports Radio - July 24th, 2018

Interview on the medical risks with early sport specialization

Hacking Health Ottawa Program Launch, Health Innovators Panel, Shopify Headquarters, Jan 31st, 2018

<https://www.hackathon.com/event/hip613--health-innovation-platform-launch-2018-41543395414>

Ottawa Citizen, Andrew Duffy – August 22, 2017

<https://ottawacitizen.com/news/local-news/young-hockey-player-faces-long-painful-wait-for-hip-surgery-at-cheo>

“Young hockey player faces long, painful wait for hip surgery at CHEO”

Exercise is Medicine – Community engagement workshop/seminar. LiquidGym, Ottawa, Feb 2017

https://www.exerciseismedicine.org/canada/support_page.php/success-stories/