

KRISTEN BARTON, MD, PhD, MSc, BSc (Hons), CSEP-CEP

Orthopaedic Surgery Residency, Schulich School of Medicine and Dentistry, Western University

e: kbarto@uwo.ca

w: www.kristenbarton.com

A. EDUCATION

1. **Orthopaedic Surgery Residency**, Schulich School of Medicine and Dentistry, Western University, 07/2019-06/2024
2. **MD/PhD in Medicine (Medical Sciences)**, Leaders in Medicine Program, Cumming School of Medicine, University of Calgary, 09/2012-06/2019; PhD completed 12/2016, MD completed 06/2019, supervisors: Dr. David Hart & Dr. Nigel Shrive (formerly Dr. Cyril Frank)
3. **Clinical Exercise Physiologist Certification**, Canadian Society for Exercise Physiology, 11/2013
4. **MSc in Kinesiology (Biomechanics)**, University of Calgary, 05/2011-06/2012; supervisors: Dr. Cyril Frank & Dr. Tannin Schmidt
5. **BSc (Honours) in Kinesiology**; Major in Health and Exercise Physiology; University of Calgary, 09/2008-04/2011; courses from Athabasca University, University of Aberdeen, and University of Victoria contributed to BSc degree

B. THESES (n=3)

1. **PhD in Medicine**: Use of a Glucocorticoid to Mitigate Post-Traumatic Osteoarthritis Development in the Ovine Knee. Medical Sciences Graduate Program, Cumming School of Medicine, University of Calgary, Calgary, Canada, December 1, 2016. Supervisors: Dr. David Hart and Dr. Nigel Shrive (formerly Dr. Cyril Frank).
2. **MSc in Kinesiology**: Characterization of Proteoglycan 4 and Hyaluronan Composition and Function in a Post-Knee Injury Ovine Model. Faculty of Kinesiology, University of Calgary, Calgary, Canada, June 15, 2012. Supervisors: Dr. Cyril Frank and Dr. Tannin Schmidt.
3. **BSc (Honours) in Kinesiology**: Characterization of Proteoglycan 4 and Hyaluronan Composition in Ovine Synovial Fluid Following Knee Surgery. Faculty of Kinesiology, Calgary, Alberta, Canada, April 30, 2011. Supervisors: Dr. Cyril Frank and Dr. Tannin Schmidt.

C. PUBLICATIONS (n=19)

1. **Barton, K.I.**, Heard, B.J., Kroker, A., Sevick, J.L., Raymond, D., Chung, M., Achari, Y., Martin, C.R., Frank, C.B., Boyd, S., Shrive, N.G., Hart, D.A. (2020). Structural Consequences of a Partial Anterior Cruciate Ligament Injury on Remaining Joint Integrity: Evidence for Ligament and Bone Changes Over Time in an Ovine Model. *American Journal of Sports Medicine*, submitted (AMJSPORTS-302349).
2. **Barton, K.I.**, Hazenbiller, O., Freeman, G., Ball, M., Aboutaha, A., Puloski, S., Monument, M.J. (2019). Surgical Decision Making in the Management of Metastatic Bone Disease: Matching Patient Expectations with Surgical Goals. *Quality of Life Research*, submitted (QURE-D-19-01363).
3. Heard, B.J., Abubacker, S., **Barton, K.I.**, Chung, M., Martin, C.R., Schmidt, T.A., Shrive, N.G., Hart, D.A. (2019). A Single Intra-Operative Administration of Hyaluronic Acid and Dexamethasone in the Prevention of Post-Traumatic Osteoarthritis in the Rabbit Stifle Joint. *Journal of Orthopedic Research*, submitted (JOR-19-0767).
4. **Barton, K.I.**, Prince, P., Vallerand, V., Roberts, L., Leduc-Pessah, H., Urrego, D., Yipp, B., Hollenberg, M., Rabi, D.M., Beck, P. (2019). The Development of the Business in Medicine Seminar Series Curriculum: Building and Enhancing Entrepreneurial Skills in Medical Students. *Canadian Medical Education Journal*, in revision (CMEJ-56936).

5. **Barton, K.I.**, Donovan, L., Giroux, I., Miller, D., Mottola, M., McManus, R. (2019). Glycated Hemoglobin Measurements at 3, 12, and 24 Months Postpartum After Gestational Diabetes. *Clinical Investigative Medicine*, 42(4): Epub ahead of print. DOI: 10.25011/cim.v42i4.33343.
6. Heard, B.J., **Barton, K.I.**, Agbojo, K., Chung, M., Sevick, J.L., Bader, T.J., Martin, C.R., Shrive, N.G., Hart, D.A. (2019). Molecular Response of Rabbit Menisci to Surgically Induced Hemarthrosis and Single Intra-Articular Dexamethasone Treatment. *Journal of Orthopedic Research*, 37(9):2043-2052. DOI: 10.1002/jor.24346.
7. **Barton, K.I.**, Shekarforoush M., Heard, B.J., Sevick, J.L., Martin, C.R., Frank, C.B., Hart, D.A., Shrive, N.G. (2019). Three-Dimensional In Vivo Kinematics and Finite Helical Axis Variables of the Ovine Stifle Joint Following Partial Anterior Cruciate Ligament Transection. *Journal of Biomechanics*, S0021-9290(19)30199-X. DOI: 10.1016/j.jbiomech.2019.03.021.
8. Shekarforoush M., **Barton, K.I.**, Beveridge, J.E., Scott, M., Martin, C.R., Muench, G., Heard, B.J., Sevick, J.L., Hart, D.A., Frank, C.B., Shrive, N.G. (2018). Alterations in Joint Angular Velocity Following Traumatic Knee Injury in Ovine Models. *Annals of Biomedical Engineering*, 47(3):790-801. DOI: 10.1007/s10439-019-02203-6.
9. **Barton, K.I.**, Ma, X., Babadagli, E., Zhou, E., Tonial, N., Newell, C., Ishaque, A., Leduc-Pessah, H., Marvasti, T.B., Mirali, S., Levit, A., Kumar, S., Steadman, P., Cook, E.K., Abraham, J. (2018). Scientific Overview of CSCI-CITAC Annual General Meeting and 2017 Young Investigators' Forum. *Clinical Investigative Medicine*, 41(3):E156-E164. DOI: 10.25011/cim.v41i3.31020.
10. **Barton, K.I.**, Ma, X., Pietrobon, A., Capozzi, L.C., Abraham, K.J. (2018). Newsletter Fall 2018: Clinician Investigator Trainee Association of Canada (CITAC). *Clinical Investigative Medicine*, 41(3):E127-E129. DOI: 10.25011/cim.v41i3.30702.
11. **Barton, K.I.**, Capozzi, L.C., Aker, G., Yipp, B., Hollenberg, M., Rabi, D.M., Beck, P. (2018). The Need for an Executive Leadership Curriculum in Scientist-Clinician Training Programs. *Clinical Investigative Medicine*, 41(3):E144-E147. DOI: 10.25011/cim.v41i3.30855.
12. **Barton, K.I.**, Heard, B.J., Sevick, J.L., Martin, C.R., Shekarforoush M., Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2018). Post-Traumatic Osteoarthritis Development and Progression in an Ovine Model of Partial Anterior Cruciate Ligament Transection and Effect of Repeated Intra-Articular Methylprednisolone Acetate Injections on Early Disease. *American Journal of Sports Medicine*, 46(7):1596-1605. DOI: doi.org/10.1177/0363546518765098.
13. Zhou, T.E., Zaslavsky, K., **Barton, K.I.**, Abraham, K.J., Bortolussi, R. (2018). Newsletter Spring 2018: Clinician Investigator Trainee Association of Canada (CITAC). *Clinical Investigative Medicine*, 41(1):E1-E4. DOI: 10.25011/cim.v41i1.29457.
14. Zhou, T.E., **Barton, K.I.**, Cook E., Benesch, M.G.K, Jette, N., Moderie, C., Ondrusova, K., Lees, C., Steadman, P.E., Marvasti, T.B., Mirali, S., Liu, P., Babadagli, E., Abraham, K.J., Zaslavsky, K. (2017). Scientific Overview of CSCI-CITAC Annual General Meeting and 2016 Young Investigators' Forum. *Clinical Investigative Medicine*, 39(5):E142-E149.
15. Shekarforoush M., **Barton, K.I.**, Atarod, M., Heard, B.J., Sevick, J.L, Martin, C.R., Hart, D.A., Frank, C.B., Shrive, N.G. (2017). An Explicit Method for Analysis of Three-Dimensional Linear and Angular Velocity of a Joint, with Specific Application to the Knee Joint. *Journal of Medical and Biological Engineering*, 38(2): 273-283. DOI: 10.1007/s40846-017-0298-1.
16. **Barton, K.I.**, Heard, B.J., Chung, M., Sevick, J.L., Martin, C.R., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2016). Location and Gene Specific Effects of Methylprednisolone Acetate on Mitigating IL-1 β Induced Inflammation in Mature Ovine Explant Knee Tissue. *Inflammation Research*, 66(3):239-248. DOI: 10.1007/s00011-016-1009-z.
17. **Barton, K.I.**, Shekarforoush M., Heard, B.J., Sevick, J.L., Vakil, P., Atarod, M., Martin, C.R., Achari, Y., Hart, D.A., Frank, C.B., Shrive, N.G. (2016). Use of Pre-Clinical Surgically Induced Models to Understand Biomechanical and Biological Consequences of PTOA Development. *Journal of Orthopedic Research*, 35(3):454-465. DOI: 10.1002/jor.23322.
18. Heard, B.J., **Barton, K.I.**, Chung, M., Achari, Y., Shrive, N.G., Frank, C.B., Hart, D.A. (2015). A Single Intra-Articular Dexamethasone Injection Immediately Post-Surgery in a Rabbit Model Mitigates Early Inflammatory Responses and Post Traumatic Osteoarthritis-like Alterations. *Journal of Orthopedic Research*, 33(12):1826-34. DOI: 10.1002/jor.22972.
19. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. (2013). Characterization of Proteoglycan 4 and Hyaluronan Composition and Function in a Post-Knee Injury Ovine Model. *Journal of Orthopedic Research*, 31(10):1549-54. DOI 10.1002/jor.22399.

D. PUBLISHED ABSTRACTS (n=26)

1. Oswald, J., **Barton, K.I.**, Smith, E., Mazzei, D., Kania-Richmond, A., Martin, C.R., Schneider, P., Marshall, D., Hart, D., Whittaker, J. (2020). A comparison between a standardized (GLA:D™ Canada) and an individualized (JointEffort) exercise program on functional mobility, quality of life, and pain management in knee osteoarthritis (OA) patients. *Canadian Society of Sport and Exercise Medicine*, 781.
2. **Barton, K.I.**, Seeger, R., Akierman, S., Kania-Richmond, A. (2020). Application of Wearable Technology and Vivametrica Analytics to Support Outcomes of Total Knee Arthroplasty in Alberta. *Canadian Orthopedic Association*, 233.
3. **Barton, K.I.**, Seeger, R., Akierman, S., Kania-Richmond, A. (2020). Application of Wearable Technology and Vivametrica Analytics to Support Outcomes of Total Knee Arthroplasty in Alberta. *Orthopedic Research Society*, 2269.

4. **Barton, K.I.**, Hazenbiller, O., Ball, M., Freeman, G., Aboutaha, A., Puloski, S.P., Monument, M.J. (2019). Surgical decision making in the management of metastatic bone disease: Matching patient expectations with surgical goals – quantitative analysis. *Canadian Orthopedic Association*, 319.
5. **Barton, K.I.**, Heard, B.J., Sevick, J.L., Chung, M., Martin, C.R., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2018). Transection of the anterior-medial band of the anterior cruciate ligament leads to ligament degenerative changes in the intact posterior-lateral band in an ovine model. *Canadian Orthopedic Association*, 92.
6. Shekarforoush M., Beveridge, J.E., **Barton, K.I.**, Heard, B.J., Sevick, J.L., Martin, C.R., Hart, D.A., Frank, C.B., Shrive, N.G. (2018). The magnitude of change in joint angular velocity after injury correlates with osteoarthritis development: A longitudinal in vivo study in two sheep models. *Transactions Orthopedic Research Society*, 43:1400.
7. Capozzi, L.C., **Barton, K.I.**, Aker, G., Hollenberg, M., Yipp, B.G., Rabi, D., Beck, P.L. (2017). Cultivating effective leadership skills with professional executive coaching for the leaders in medicine students. *Leaders in Medicine Symposium*.
8. **Barton, K.I.**, Shekarforoush, M., Heard, B.J., Sevick, J., Martin, C.R., Frank, C.B., Hart, D.A., Shrive, N.G. (2017). *In vivo* kinematics of the ovine knee joint following partial anterior cruciate ligament transection. *International Society of Biomechanics*, P338.
9. **Barton, K.I.**, Raymond, D.A., Kroker, A., Heard, B.J., Sevick, J., Chakravarty, D., Martin, C.R., Frank, C.B., Boyd, S.K., Shrive, N.G., Hart, D.A. (2017). Bone mineral density alterations significantly correlate with longer term gross morphological changes in the tibial plateaus in an ovine model of post traumatic osteoarthritis. *Transactions Orthopedic Research Society*, 42:1743.
10. **Barton, K.I.**, Donovan, L., Giroux, I., Miller, D., Mottola, M., Rosas-Arellano, P., McManus, R. (2016). Families defeating diabetes (FDD): Hemoglobin A1C results at 3, 12, and 24 months. *Canadian Journal of Diabetes*, 40(Suppl 5): S69. DOI: <http://dx.doi.org/10.1016/j.jcjd.2016.08.196>
11. Shekarforoush, M., **Barton, K.I.**, Atarod, M., Heard, B.J., Sevick, J., Hart, D.A., Shrive, N.G. (2016). Alterations in the relative surface velocity of joint following anterior cruciate ligament injury in a sheep model. *Canadian Medical and Biomedical Engineering Conference*, 39.
12. **Barton, K.I.**, Donovan, L., Giroux, I., Miller, D., Mottola, M., Rosas-Arellano, P., McManus, R. (2016). Families defeating diabetes (FDD): Hemoglobin A1C testing at 3 and 12 months. *American Diabetes Association*, 65(Suppl 1): A358.
13. Quan, K.K., **Barton, K.I.**, Chung, M., Heard, B. J., Achari, Y., Shrive, N.G., Hart, D.A. (2016). Histological changes in the ovine patellar tendon following idealized anterior cruciate ligament reconstruction surgery. *Osteoarthritis and Cartilage*, 24(Suppl 1): S411-412. DOI: <http://dx.doi.org/10.1016/j.joca.2016.01.741>
14. **Barton, K.I.**, Chung, M., Achari, Y., Shrive, N.G., Hart, D.A. (2016). Glucocorticoids effectively inhibit IL-1 β induced metalloproteinase expression in tibial plateau articular cartilage in a sheep model. *Osteoarthritis and Cartilage*, 24(Suppl 1): S504. DOI: <http://dx.doi.org/10.1016/j.joca.2016.01.921>
15. Heard, B.J., **Barton, K.I.**, Abubacker, S., Chung, M., Achari, Y., Schmidt, T.A., Shrive, N.G., Hart, D.A. (2016). Hyaluronic Acid and Dexamethasone interact in vivo to influence their individual ability to protect cartilage in a rabbit model of post-traumatic osteoarthritis. *Transactions Orthopedic Research Society*, 41:2218.
16. **Barton, K.I.**, Norman, J.L., Heard, B.J., Shekarforoush, M., Atarod, M., Sevick, J., Achari, Y., Frank, C.B., Hart, D.A., Shrive, N.G. (2016). Long term in vivo kinematics of the ovine stifle joint following Anterior Cruciate Ligament transection. *Transactions Orthopedic Research Society*, 41:1792.
17. Shrive, N.G., Achari, Y., Atarod, M., **Barton, K.I.**, Beveridge, J., Heard, B.J., Huebner, K., Schmidt, T.A., Frank, C.B., Hart, D.A. (2015). Causes of the initiation and progression of post-traumatic osteoarthritis. *World Congress on Controversies, Debate & Consensus in Bone, Muscle & Joint Diseases*.
18. Heard, B.J., **Barton, K.I.**, Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2015). Administration of a single intraarticular dose of dexamethasone mitigates the impact of PTOA-like changes: a histologic study in a rabbit model. *Osteoarthritis and Cartilage*, 23:667. DOI: <http://dx.doi.org/10.1016/j.joca.2015.02.739>
19. **Barton, K.I.**, Chung, M., Heard, B.J., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2015). Mediation of inflammation induced early protease activation in knee joint explants through timely intervention with glucocorticoids. *Osteoarthritis and Cartilage*, 23:412. DOI: <http://dx.doi.org/10.1016/j.joca.2015.02.484>
20. **Barton, K.I.**, Heard, B.J., Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2015). Doctoral thesis update: analysis of articular cartilage after anterior cruciate ligament^[SEP] reconstructive surgery with dexamethasone treatment. Proceedings from the 6th Annual University of Calgary Leaders in Medicine Research Symposium. *Clinical & Investigative Medicine*, 38(6):E318-50.
21. **Barton, K.I.**, Wiebe, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2014). Patterns of meniscal pathology following concurrent transection of cruciate and collateral ligaments. *Knee Surgery, Sport Traumatology, and Arthroscopy*, P05-1108.
22. **Barton, K.I.**, Heard, B.J., Solbak, N.M., Chung, M., Achari, Y., Shrive, N.G., Hart, D.A., Frank, C.B. (2014). Synovial tissue exhibits molecular heterogeneity in response to intraarticular knee joint surgery. *Osteoarthritis and Cartilage*, 22:820. DOI: <http://dx.doi.org/10.1016/j.joca.2014.02.855>
23. **Barton, K.I.**, Wiebe, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. (2014). Comparative evaluations of matrix alterations in the ovine menisci following joint injury or reconstructive surgery. *Osteoarthritis and Cartilage*, 22:550. DOI: <http://dx.doi.org/10.1016/j.joca.2014.02.585>

24. Heard, B.J., **Barton, K.I.**, Chung, M., Achari, Y., Shrive, N.G., Frank, C.B., Hart, D.A. (2014). A Single administration of dexamethasone may protect tibial plateau cartilage in a mechanically stable surgical model of post traumatic osteoarthritis. *Osteoarthritis and Cartilage*, 22: S372. DOI: <http://dx.doi.org/10.1016/j.joca.2014.02.692>
25. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. (2014). Controlling inflammation to prevent the development of osteoarthritis following reconstruction anterior cruciate ligament and drill hole surgery. *Clinical Investigative Medicine*, 37(5).
26. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. (2012). Characterization of lubricant composition in a post-knee injury model. *Transactions Orthopedic Research Society*, 37:794.

E. ORAL PRESENTATIONS (n=31 total; 21 local, 9 national, and 1 international)

1. **Barton, K.I.**, Hazenbiller, O., Ball, M., Freeman, G., Aboutaha, A., Puloski, S.P., Monument, M.J. Surgical Decision Making in the Management of Metastatic Bone Disease: Matching Patient Expectations with Surgical Goals – Quantitative Analysis. *Canadian Orthopedic Association*, Montreal, Canada, June 19-22, 2019.
2. **Barton, K.I.**, Heard, B.J., Sevick, J.L., Chung, M., Martin, C.R., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Transection of the anterior-medial band of the anterior cruciate ligament leads to ligament degenerative changes in the intact posterior-lateral band in an ovine model. *Canadian Orthopedic Association*, Victoria, Canada, June 20-23, 2018.
3. Hazenbiller, O., **Barton, K.I.**, Aboutaha, A., Ball, M., Puloski, S.P., Monument, M.J. Engaging metastatic bone disease patients as patient research partners with the goal of improving and aligning surgical decision making with patients' goals and expectations. *Alberta SPOR Support Unit Summer Institute*, Calgary, Canada, May 14-16, 2018.
4. **Barton, K.I.** Application of wearable technology and Vivametrica analytics to support outcomes of knee total joint arthroplasty in Alberta. Leaders in Medicine Research in Progress, University of Calgary, Calgary, Canada, January 9, 2018.
5. **Barton, K.I.** View from the field panel. Sport Injury Prevention Centre. Invited Speaker. University of Calgary, Calgary, Canada, June 23, 2017.
6. **Barton, K.I.**, Shekarforoush, M., Heard, B.J., Sevick, J., Martin, C.R., Frank, C.B., Hart, D.A., Shrive, N.G. *In vivo* kinematics of the ovine knee joint following partial anterior cruciate ligament transection. *International Society of Biomechanics*, Brisbane, Australia, July 23-27, 2017.
7. **Barton, K.I.**, Hewison, C., Thompson, N. The development of a readiness interview tool for patients to improve conversation on modifiable risk factors prior to total joint arthroplasty. *Alberta Health Services Bone and Joint Health Strategic Clinical Network Obesity Workshop*, Alberta Health Services, Leduc, Canada, June 14, 2017.
8. **Barton, K.I.**, Shekarforoush, M., Heard, B.J., Sevick, J., Martin, C.R., Frank, C.B., Hart, D.A., Shrive, N.G. *In vivo* kinematics of the ovine knee joint following arthroscopic partial anterior cruciate ligament transection. *Surgeons' Day Research Symposium* (Dr. Peter Cruse Award for the Best Surgery-Related Research by a Medical Student Oral Presentation). Invited Speaker. University of Calgary, Calgary, Canada, June 2, 2017.
9. **Barton, K.I.** Doctors behaving badly: disruptive physician behavior. Leaders in Medicine Research in Progress, University of Calgary, Calgary, Canada, January 10, 2017.
10. **Barton, K.I.** Use of a Glucocorticoid to mitigate post-traumatic osteoarthritis development in the ovine knee. Thesis Defence Seminar, McCaig Institute for Bone and Joint Health, Cumming School of Medicine at the University of Calgary, Calgary, Canada, December 1, 2016.
11. **Barton, K.I.** Use of a glucocorticoid to mitigate post-traumatic osteoarthritis development in the ovine knee. Human Performance Laboratory Seminar Series, Faculty of Kinesiology at the University of Calgary, Calgary, Canada, November 24, 2016.
12. **Barton, K.I.** Alternative options after graduation. Invited Speaker. Grad Day 2016, University of Calgary, Canada, January 30, 2016.
13. **Barton, K.I.** Scholarship applications: Lunch and learn. Invited Speaker for the Kinesiology and Biomedical Engineering Student's Associations, University of Calgary, Calgary, Canada, September 22, 2015.
14. **Barton, K.I.**, Chung, M., Heard, B.J., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Attempts to mitigate inflammation-induced early proteinase activation in ovine knee cartilage explants through timely intervention with glucocorticoids. McCaig Institute for Bone & Joint Health Symposium, Faculty of Medicine at the University of Calgary, Calgary, Canada, May 8, 2015.
15. **Barton, K.I.** Career paths. Invited Speaker. THRIVE Program, University of Calgary, Calgary, Canada, March 16, 2015.
16. **Barton, K.I.** Graduate school and scholarship opportunities. Invited Speaker. Scholars Academy, University of Calgary, Canada, February 24, 2015.
17. **Barton, K.I.** Research update: mediation of inflammation induced inflammatory and degradative molecules in knee joint explants through intervention with Depo-Medrol. McCaig Institute for Bone & Joint Health Seminar, Cumming School of Medicine, University of Calgary, Calgary, Canada, February 4, 2015.

18. **Barton, K.I.**, Heard, B., Solbak, N., Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Controlling inflammation to prevent the development of osteoarthritis following reconstruction anterior cruciate ligament and drill hole surgery. *Bone and Joint Injury & Repair Conference*. London, Canada. January 16-17, 2014.
19. **Barton, K.I.** Getting involved in undergraduate research. Invited Speaker. Undergraduate Research Night, University of Calgary, Calgary, Canada, November 22, 2013.
20. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Reconstruction of the anterior cruciate ligament with dexamethasone treatment in an ovine model. *NSERC CREATE Symposium*, Banff, Alberta, Canada, October 25, 2013.
21. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Preventing the development of osteoarthritis following reconstruction of the anterior cruciate ligament with dexamethasone treatment. *Campus Alberta Student Conference on Health*, Banff, Canada, September 6-7, 2013.
22. **Barton, K.I.** Learning beyond the classroom. Invited Speaker. Strategic Enrollment Management Summit, University of Windsor, Calgary, Canada, May 6, 2013.
23. **Barton, K.I.** Leadership through sports and coaching. Invited Speaker. Leadership Exchange at the University of Calgary, Calgary, Canada, April 6, 2013.
24. **Barton, K.I.** The role of ACL injury in the development of post-traumatic osteoarthritis. McCaig Institute for Bone & Joint Health, Faculty of Medicine at the University of Calgary, Calgary, Canada, March 6, 2013.
25. **Barton, K.I.**, Frank, C.B. Development of osteoarthritis following reconstruction of the anterior cruciate ligament: A proposal. *NSERC CREATE Symposium*, Banff, Alberta, Canada, October 19, 2012.
26. **Barton, K.I.** Characterization of proteoglycan 4 and hyaluronan composition and function in a post-knee injury ovine model. Thesis Defence, McCaig Institute for Bone and Joint Health, Faculty of Medicine at the University of Calgary, Calgary, Canada, June 15, 2012.
27. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. Characterization of lubricant composition in a post-knee injury model. Human Performance Laboratory Seminar Series, Faculty of Kinesiology at the University of Calgary, Calgary, Canada, May 10, 2012.
28. **Barton, K.I.**, Frank, C.B., Schmidt, T.A. Characterization of lubricant composition in a post-knee injury model. NSERC CREATE Symposium, Banff, Alberta, Canada, October 21, 2011.
29. **Barton, K.I.**, Frank, C.B., Schmidt, T.A. Characterization of proteoglycan 4 and hyaluronan composition in ovine synovial fluid following knee surgery. *Faculty of Kinesiology Undergraduate Honours Symposium*, Calgary, Alberta, Canada, April 30, 2011.
30. **Barton, K.I.**, Frank, C.B., Schmidt, T.A. Characterization of proteoglycan 4 and hyaluronan composition in ovine synovial fluid following knee surgery. *Bertha Rosenstadt National Undergraduate Research Conference in Physical Education and Kinesiology*, Faculty of Physical Education and Health, University of Toronto, Toronto, Canada, March 25, 2011.
31. **Barton, K.I.**, Frank, C.B., Schmidt, T.A. Development of an assay for proteoglycan 4 quantification in synovial fluid. The Markin Undergraduate Student Research Program in Health and Wellness Research Symposium, Roger Jackson Center for Health and Wellness at the University of Calgary, Calgary, Canada, January 26, 2010.

F. POSTER PRESENTATIONS (n=36 total; 12 local, 8 national, and 16 international)

1. Oswald, J., **Barton, K.I.**, Smith, E., Mazzei, D., Kania-Richmond, A., Martin, C.R., Schneider, P., Marshall, D., Hart, D., Whittaker, J. A comparison between a standardized (GLA:D™ Canada) and an individualized (JointEffort) exercise program on functional mobility, quality of life, and pain management in knee osteoarthritis (OA) patients. *Canadian Society of Sport and Exercise Medicine*, Banff, Canada, May 1, 2020.
2. **Barton, K.I.**, Seeger, R., Akierman, S., Kania-Richmond, A. Application of Wearable Technology and Vivametrica Analytics to Support Outcomes of Total Knee Arthroplasty in Alberta. *Canadian Orthopedic Association*, Halifax, Canada, May 1, 2020.
3. **Barton, K.I.**, Seeger, R., Akierman, S., Kania-Richmond, A. Application of Wearable Technology and Vivametrica Analytics to Support Outcomes of Total Knee Arthroplasty in Alberta. *Orthopedic Research Society*. Phoenix, USA, February 8-11, 2020.
4. **Barton, K.I.**, Heard, B.J., Sevick, J.L., Chung, M., Martin, C.R., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Transection of the anterior-medial band of the anterior cruciate ligament leads to ligament degenerative changes in the intact posterior-lateral band in an ovine model. *Surgeons' Day Research Symposium* (Dr. Peter Cruse Award Honorable Mention for the Best Surgery-Related Research by a Medical Student Oral Presentation). University of Calgary, Calgary, Canada, June 15, 2018.
5. Shekarforoush M., Beveridge, J.E., **Barton, K.I.**, Heard, B.J., Sevick, J.L., Martin, C.R., Hart, D.A., Frank, C.B., Shrive, N.G. The magnitude of change in joint angular velocity after injury correlates with osteoarthritis development: A longitudinal *in vivo* study in two sheep models. *Orthopedic Research Society*. New Orleans, USA, March 10-13, 2018.
6. Capozzi, L.C., **Barton, K.I.**, Aker, G., Hollenberg, M., Yipp, B.G., Rabi, D., Beck, P.L. Cultivating effective leadership skills with professional executive coaching for the leaders in medicine students. *Leaders in Medicine Symposium*, Calgary, Alberta, Canada, November 3, 2017.

7. **Barton, K.I.**, Shekarforoush, M., Heard, B.J., Sevick, J., Martin, C.R., Frank, C.B., Hart, D.A., Shrive, N.G. *In vivo* kinematics of the ovine knee joint following partial anterior cruciate ligament transection. *International Society of Biomechanics*, Brisbane, Australia, July 23-27, 2017.
8. **Barton, K.I.**, Hewison, C., Thompson, N. The development of a readiness interview tool for patients to improve conversation on modifiable risk factors prior to total joint arthroplasty. *Alberta Health Services Bone and Joint Health Strategic Clinical Network Obesity Workshop*, Alberta Health Services, Leduc, Canada, June 14, 2017.
9. **Barton, K.I.**, Raymond, D.A., Kroker, A., Heard, B.J., Sevick, J.L., Chakravarty, D., Martin, C.R., Frank, C.B., Boyd, S.K., Shrive, N.G., Hart, D.A. Bone mineral density alterations significantly correlate with longer term gross morphological changes in the tibial plateaus in an ovine model of post traumatic osteoarthritis, *Orthopedic Research Society*. San Diego, USA, March 19-22, 2017.
10. **Barton, K.I.**, Heard, B.J., Sevick, J., Chung, M., Achari, Y., Martin, C.R., Frank, C.B., Shrive, N.G., Hart, D.A. Combined gross morphological joint damage is progressive in a long term partial anterior cruciate ligament transection ovine model. *Leaders in Medicine Symposium*, Calgary, Alberta, Canada, October 28, 2016.
11. **Barton, K.I.**, Donovan, L., Giroux, I., Miller, D., Mottola, M., Rosas-Arellano, P., McManus, R. Families defeating diabetes (FDD): Hemoglobin A1C results at 3, 12, and 24 months. *Canadian Diabetes Association*, Ottawa, Ontario, Canada, October 26-28, 2016.
12. **Barton, K.I.**, Donovan, L., Giroux, I., Miller, D., Mottola, M., Rosas-Arellano, P., McManus, R. Families defeating diabetes (FDD): Hemoglobin A1C testing at 3 and 12 months. *American Diabetes Association Annual Meeting*. New Orleans, USA, June 10-14, 2016.
13. Quan, K.K., **Barton, K.I.**, Chung, M., Heard, B. J., Achari, Y., Shrive, N.G., Hart, D.A. Histological changes in the ovine patellar tendon following idealized anterior cruciate ligament reconstruction surgery. *Osteoarthritis Research Society International*. Amsterdam, Netherlands, March 31-April 3, 2016.
14. **Barton, K.I.**, Chung, M., Achari, Y., Shrive, N.G., Hart, D.A. Glucocorticoids effectively inhibit IL-1 β induced metalloproteinase expression in tibial plateau articular cartilage in a sheep model. *Osteoarthritis Research Society International*. Amsterdam, Netherlands, March 31-April 3, 2016.
15. Heard, B.J., **Barton, K.I.**, Abubacker, S., Chung, M., Achari, Y., Schmidt, T.A., Shrive, N.G., Hart, D.A. A single administration of hyaluronic acid with dexamethasone to protect cartilage in a rabbit model of post-traumatic osteoarthritis. *Orthopedic Research Society*. Orlando, USA, March 5-8, 2016.
16. **Barton, K.I.**, Norman, J.L., Heard, B.J., Shekarforoush, M., Atarod, M., Sevick, J., Achari, Y., Frank, C.B., Hart, D.A., Shrive, N.G. Long term *in vivo* kinematics of the ovine stifle joint following anterior cruciate ligament transection. *Orthopedic Research Society*. Orlando, USA, March 5-8, 2016.
17. **Barton, K.I.**, Norman, J.L., Heard, B.J., Shekarforoush, M., Atarod, M., Sevick, J.L., Achari, Y., Frank, C.B., Hart, D.A., Shrive, N.G. Long term *in vivo* kinematics of the ovine stifle joint following anterior cruciate ligament transection. *Leaders in Medicine Symposium*, Calgary, Alberta, Canada, October 30, 2015.
18. **Barton, K.I.**, Chung, M., Heard, B.J., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Attempts to mitigate inflammation-induced early proteinase activation in ovine knee cartilage explants through timely intervention with glucocorticoids. *Canadian Student Health Research Forum*. Winnipeg, Canada, June 2-4, 2015.
19. Heard, B.J., **Barton, K.I.**, Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Administration of a single intraarticular dose of dexamethasone mitigates the impact of PTOA-like changes: a histologic study in a rabbit model. *Osteoarthritis Research Society International*. Seattle, United States, April 30-May 3, 2015.
20. **Barton, K.I.**, Chung, M., Heard, B.J., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Mediation of inflammation induced early protease activation in knee joint explants through timely intervention with glucocorticoids. *Osteoarthritis Research Society International*. Seattle, United States, April 30-May 3, 2015.
21. **Barton, K.I.**, Heard, B.J., Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Gross morphological and histological analysis of articular cartilage after anterior cruciate ligament^[SEP] reconstructive surgery with dexamethasone treatment. *Canadian Society for Clinic Investigation – Clinician Investigator Trainee Association of Canada Annual Meeting*. Toronto, Canada, November 24-26, 2014.
22. **Barton, K.I.**, Heard, B.J., Chung, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Doctoral thesis update: Analysis of articular cartilage after anterior cruciate ligament^[SEP] reconstructive surgery with dexamethasone treatment. *Leaders in Medicine Symposium*, Calgary, Alberta, Canada, November 14, 2014.
23. **Barton, K.I.**, Wiebe, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Patterns of meniscal pathology following concurrent transection of cruciate and collateral ligaments. *European Society for Sport Traumatology, Knee Surgery, and Arthroscopy*. Amsterdam, Netherlands, May 14-17, 2014.
24. **Barton, K.I.**, Heard, B.J., Solbak, N.M., Chung, M., Achari, Y., Shrive, N.G., Hart, D.A., Frank, C.B. Synovial tissue exhibits molecular heterogeneity in response to intraarticular knee joint surgery. *Osteoarthritis Research Society International*. Paris, France, April 24-27, 2014.
25. **Barton, K.I.**, Wiebe, M., Achari, Y., Frank, C.B., Shrive, N.G., Hart, D.A. Comparative evaluations of matrix alterations in the ovine menisci following joint injury or reconstructive surgery. *Osteoarthritis Research Society International*. Paris, France, April 24-27, 2014.

26. Heard, B.J., **Barton, K.I.**, Chung, M., Achari, Y., Shrive, N.G., Frank, C.B., Hart, D.A. A single administration of dexamethasone may protect tibial plateau cartilage in a mechanically stable surgical model of post-traumatic osteoarthritis. *Osteoarthritis Research Society International*. Paris, France, April 24-27, 2014.
27. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Controlling inflammation to prevent the development of osteoarthritis following reconstruction anterior cruciate ligament and drill hole surgery. *Leaders in Medicine Symposium*, Calgary, Alberta, Canada, November 8, 2013.
28. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Preventing the development of osteoarthritis following reconstruction of the anterior cruciate ligament with dexamethasone treatment. 14th *Alberta Biomedical Engineering Conference*, Banff, Alberta, Canada, October 25-27, 2013.
29. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Preventing the development of osteoarthritis following reconstruction of the anterior cruciate ligament and drill hole surgery with dexamethasone treatment. *Alberta Innovates Health Solutions Osteoarthritis Team Alberta Meeting*, Edmonton, Canada, September 17-18, 2013.
30. Wilson, H., **Barton, K.I.**, Heard, B.J., Hart, D.A. Effective reconstruction of the knee ACL: Role of inflammation. *Heritage Youth Researcher Summer Program Symposium*, Calgary, Canada, August 15, 2013.
31. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Idealized reconstruction of the anterior cruciate ligament and dexamethasone treatment: A proposal. *Biomedical Basis of Human Performance International Workshop*, Calgary, Canada, June 4-7, 2013.
32. **Barton, K.I.**, Frank, C.B., Shrive, N.G., Hart, D.A. Preventing the development of osteoarthritis following reconstruction of the anterior cruciate ligament. *Canadian Connective Tissue Conference*, Montreal, Canada, May 29-June 1, 2013.
33. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. Characterization of lubricant composition in a post-knee injury model. *Alberta Graduate Conference*, University of Alberta, Edmonton, Canada, May 3-5, 2012.
34. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. Characterization of lubricant composition in a post-knee injury model. *Orthopedic Research Society*, San Francisco, California, United States, February 3-7, 2012.
35. **Barton, K.I.**, Ludwig, T.E., Achari, Y., Shrive, N.G., Frank, C.B., Schmidt, T.A. Characterization of lubricant composition in a post-knee injury model. *Alberta Biomedical Engineering Conference*, Banff, Alberta, Canada, October 21-23, 2011.
36. **Barton, K.I.**, Frank, C.B., Schmidt, T.A. Characterization of lubricant composition and cartilage boundary lubricating ability of ovine synovial fluid following ACL transection surgery. *Students' Union Undergraduate Student Research Symposium*, University of Calgary, Calgary, Canada, November 25, 2010.

G. INTERVIEWS

1. University of Calgary President's Award for Excellence in Student Leadership, UToday, 06/2019
<https://www.ucalgary.ca/utoday/issue/2019-06-03/class-2019-ucalgarys-2019-presidents-award-winners>
<https://www.ucalgary.ca/presidentsaward/recipients/2019/barton>
2. ASTech Foundation Leaders of Tomorrow Award, ASTech Foundation, UToday, Metro News, 11/2017
<http://www.astechnetwork.ca/awards/this-year/2017-finalists>
<http://www.astechnetwork.ca/archives/indexofpastwinners/barton-kristen>
<https://www.ucalgary.ca/utoday/issue/2017-11-08/ucalgary-wins-three-prestigious-astechnetwork-awards>
<http://www.pressreader.com/canada/starmetro-calgary/20171120/281492161616753>
3. Sandra Banner Student Award for Leadership, Canadian Resident Matching Service, 04/2017 <https://www.carms.ca/events-awards/sandra-banner-student-award-for-leadership/previous-winners/>
4. Bone and Joint Health Strategic Clinical Network Student Competition Winner, 04/2017
<https://albertaboneandjoint.com/bjh-scnc-cumming-medicine-student-competition-obesity-osteoarthritis/>
5. Vaniers Kristen Barton Researches Inflammation Control in Knee Injuries, UToday, 08/2014
<https://www.ucalgary.ca/utoday/issue/2014-08-29/vaniers-kristen-barton-researches-inflammation-control-knee-injuries>
6. Masterful Save, UToday, 09/2012
<http://www.ucalgary.ca/news/utoday/november29-2012/master>
7. Keeper has Healthy Outlook, Calgary Herald, 05/2012 (print)
8. Campus Report, Calgary Herald, 09/2012 (print)
9. Representing the Best of the University of Calgary, UToday, 04/2012
<http://www.ucalgary.ca/news/utoday/april26-2012/grad-ambassadors>
10. A Shot to the Knees?, University of Calgary UToday, 02/2010
https://www.ucalgary.ca/usrp/about/usrp_in_news/kristen_barton

H. OPERATING GRANTS (n=6; total of \$238,274 awarded)

1. Canadian Orthopaedic Research Legacy (CORL) Grant (\$20,000); received special 2019 Carroll A. Laurin Award for Excellence in Clinical Research. Project: Surgical decision making in the management of metastatic bone disease: matching patient expectations with surgical goals; Investigators: K.I. Barton, B. Lanting, & T. Appleton; 03/2018-02/2020; Canadian Orthopaedic Foundation
2. Canadian Institutes of Health Research Patient-Oriented Research Collaboration Grant (\$40,000); Project: Surgical decision making in the management of metastatic bone disease: matching patient expectations with surgical goals; Investigators: M.J. Monument, S. Puloski, K.I. Barton, & O. Hazenbiller; 03/2018-02/2019; Canadian Institutes of Health Research
3. Cancer Strategic Clinical Network Cancer Control Alberta Seed Grant (\$23,300); Project: Surgical decision making in the management of metastatic bone disease; Investigators: M.J. Monument, S. Puloski, K.I. Barton, & O. Hazenbiller; 01/2018-01/2019; Alberta Health Services Cancer Strategic Clinical Network
4. McCaig Institute for Bone and Joint Health Encore Catalyst Operating Grant (\$30,000); Project: A comparison between a standardized (GLA:D™ Canada) and an individualized (JointEffort) exercise program on functional mobility, quality of life, pain management, and inflammatory biomarkers in knee osteoarthritis patients. Investigators: J. Whittaker, K.I. Barton, D.A. Hart, A. Kania-Richmond, E. Smith, C.R. Martin, & P. Schneider; 09/2017-02/2019; McCaig Institute for Bone and Joint Health
5. Alberta Innovates Accelerating Innovations into Care Grant (\$105,274); Project: Application of wearable technology and Vivametrica analytics to support outcomes of total knee joint arthroplasty in Alberta; Investigators: K.I. Barton, & A. Kania-Richmond; 09/2017-03/2019; Alberta Innovates
6. Canadian MSK Rehab Research Network Pilot Grant Program (\$10,000); Project: Consequences of ankle sprain injury in youth sport: implications for post-traumatic ankle osteoarthritis; Investigators: C. Emery, G. Kuntze, J. Jaremko, J. Ronsky, L. Carlesso, T. Birmingham; Collaborators: C. Toomey, K.I. Barton, O. Owwoeye; 04/2017-05/2018; Canadian MSK Rehab Research Network

I. RESIDENT RESEARCH FUNDING (n=1; total of \$5,000 awarded)

1. Western University Department of Surgery Resident Research Grant (\$5,000); 12/2019-11/2020; Western University Department of Surgery

J. MEDICAL STUDENT RESEARCH FUNDING (n=1; total of \$5,000 awarded)

1. Mach-Gaensslen Foundation of Canada Student Grant (\$5,000); 03/2017-10/2017; Mach-Gaensslen Foundation of Canada

K. GRADUATE RESEARCH FUNDING (n=15; total of \$651,425 awarded)

1. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme Biomedical Engineering Incentive Award (\$1,000); 09/2014-09/2015; Natural Sciences and Engineering Research Council of Canada – CRSNG
2. Vanier Canada Graduate Scholarship (\$150,000; \$50,000/year for 3 years); 09/2014-12/2016; Vanier Canada Graduate Scholarships; Canadian Institutes for Health Research; Government of Canada
3. Alberta Innovates Health Solutions MD/PhD Clinician Researcher Student Scholarship (\$192,000; \$32,000/year for 6 years; \$12,000/year while holding the Vanier Canada Graduate Scholarship); 09/2013-08/2019; Alberta Innovates Health Solutions
4. Alberta Advisory Board on Recreation for the Disabled Graduate Scholarship (\$3,000); 08/2013; Alberta Recreation and Parks Association
5. Alberta Innovates Health Solutions PhD Graduate Student Scholarship (\$96,000; \$32,000/year for 3 years) (Transferred to MD/PhD Scholarship); 09/2013-08/2016; Alberta Innovates Health Solutions
6. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme Biomedical Engineering Incentive Award (\$1,000); 09/2013-09/2014; Natural Sciences and Engineering Research Council of Canada – CRSNG
7. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme Biomedical Engineering Doctoral Scholarship (\$42,000; \$21,000/year for 2 years) (Declined); 09/2013-09/2015; Natural Sciences and Engineering Research Council of Canada – CRSNG

8. Alberta Innovates Technology Futures PhD Graduate Student Scholarship (\$94,500; \$31,500/year for 3 years) (Declined); 09/2013-08/2016; Alberta Innovates Technology Futures
9. Alberta Innovates Health Solutions Osteoarthritis Team Grant PhD Trainee Award (\$12,000) (Declined); 09/2013-03/2014; Alberta Innovates Health Solutions Osteoarthritis Team Grant
10. Queen Elizabeth II Scholarship (\$5,000); 03/2013; Faculty of Graduate Studies, Government of Alberta
11. Achievers in Medicine Medical Science Recruitment Scholarship (\$25,000); 09/2012-08/2013; University of Calgary, Faculty of Medicine
12. Alberta Innovates Health Solutions Osteoarthritis Team Grant PhD Trainee Award (\$12,000) (Declined); 09/2011-04/2012; Alberta Innovates Health Solutions Osteoarthritis Team Grant
13. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme (NSERC-CREATE) Biomedical Engineering Incentive Award (\$3,000); 09/2011-04/2012; Natural Sciences and Engineering Research Council of Canada – CRSNG
14. Queen Elizabeth II Scholarship (\$10,800); 09/2011-04/2012; Faculty of Graduate Studies, Government of Alberta
15. Vera A. Ross Graduate Scholarship (\$4,125); 09/2011-12/2011; University of Calgary, Faculty of Kinesiology

L. UNDERGRADUATE RESEARCH FUNDING (n=10; total of \$58,000 awarded)

1. Alberta Innovates Health Solutions Undergraduate Summer Studentship (Declined) (\$6,000); 05/2011-08/2011; Alberta Innovates Health Solutions
2. Markin Undergraduate Student Research Program in Health and Wellness Summer Studentship (Declined) (\$6,000); 05/2011-08/2011; Markin Undergraduate Student Research Program in Health and Wellness
3. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme (NSERC-CREATE) Biomedical Engineering Undergraduate Summer Studentship (Declined) (\$6,000); 05/2011-08/2011; Natural Sciences and Engineering Research Council of Canada – CRSNG
4. Alberta Heritage Foundation for Medical Research Undergraduate Summer Studentship (\$6,000); 07/2010-08/2010; Alberta Heritage Foundation for Medical Research
5. Markin Undergraduate Student Research Program in Health and Wellness Summer Studentship (Declined) (\$6,000); 05/2010-08/2010; Markin Undergraduate Student Research Program in Health and Wellness
6. Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Studentship (Declined) (\$6,000); 05/2010-08/2010; Natural Sciences and Engineering Research Council of Canada
7. Markin Undergraduate Student Research Program in Health and Wellness Fall Studentship (\$4,000); 10/2009-03/2010; Markin Undergraduate Student Research Program in Health and Wellness
8. Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Studentship (\$6,000); 05/2009-08/2009; Natural Sciences and Engineering Research Council of Canada
9. Health Quality Council of Alberta Summer Studentship (\$6,000); 05/2009-08/2009; Health Quality Council of Alberta
10. Markin Undergraduate Student Research Program in Health and Wellness Summer Studentship (Declined) (\$6,000); 05/2009-08/2009; Markin Undergraduate Student Research Program in Health and Wellness

M. HONOURS & AWARDS (n=83; total of \$139,570 awarded)

Personal leadership, academic, athletic, and volunteerism/citizenship honours and awards are listed. In addition, personal conference travel awards and group project grants are listed.

1. University of Calgary President's Award for Excellence in Student Leadership; 06/2019
2. University of Calgary Achievers in Medical Science Leaders in Medicine Scholarship (\$30,000) (Declined); 05/2019
3. University of Calgary Surgeon's Day Research Symposium Best Poster in Basic Science Research (\$250); 06/2018
4. University of Calgary Dr. Peter Cruse Memorial Award Honorable Mention; 05/2018
5. Avenue Calgary Magazine Top 40 Under 40 Finalist; 04/2018
6. The Hunter Hub for Entrepreneurship Project Grant (\$2,000); 11/2017
7. 2017 Alberta, Science, and Technology (ASTech) Foundation Leaders of Tomorrow Award (\$10,000); 11/2017
8. Alberta Health Services Bone and Joint Health Strategic Clinical Network Obesity Workshop Poster Presentation Award (First Prize; \$300); 06/2017
9. University of Calgary Dr. Peter Cruse Memorial Award (Best Surgery-Related Research by a Medical Student Oral Presentation; \$150); 05/2017

10. University of Calgary Faculty of Graduate Studies Student Career & Professional Development Curriculum Grant (\$8,500); 05/2017
11. Canadian Residency Matching Service Sandra Banner Student Award for Leadership (\$3,000); 03/2017
12. MD Financial Management Canadian Federation of Medical Students MD Financial Student Leadership Award (\$2,000); 03/2017
13. Alberta Health Services Bone and Joint Health Strategic Clinical Network Student Competition Winner: Arthroplasty for Patients with Obesity (\$450); 03/2017
14. University of Calgary Dr. Lydia Sikora Memorial Award (\$5,000); 02/2017
15. University of Calgary Graduate Students' Association Academic Project Support Grant (\$1500); 11/2016
16. University of Calgary Medical Science Graduate Program Publication Award (\$250); 11/2016
17. University of Calgary Leadership and Student Engagement Student Activities Fund Award (\$600); 11/2016
18. University of Calgary Achievers in Medicine Medical Science Research Excellence Award (\$10,500; \$3,500/year; awarded 3 years consecutively); 09/2014-08/2017
19. University of Calgary Medical Science Graduate Program Publication Award (\$250); 06/2016
20. University of Calgary Medical Science Graduate Program Service Award (\$250); 04/2016
21. University of Calgary Graduate Students' Association Volunteer Award for Outstanding Contribution; 04/2016
22. University of Calgary Faculty of Graduate Studies Travel Award (\$1,000); 04/2016
23. University of Calgary Medical Science Graduate Program Travel Award (\$750); 04/2016
24. University of Calgary Medical Science Graduate Program Travel Award (\$750); 03/2016
25. Alberta Graduate Citizenship Award (\$10,000; \$2,000/year; awarded 5 years consecutively); 09/2011-04/2016
26. Canadian Institutes of Health Research Travel Award (\$1,000); 05/2015
27. University of Calgary Graduate Students' Association Leadership Award (\$5,000); 04/2015
28. University of Calgary Graduate Students' Association Award for Outstanding Contribution; 04/2015
29. University of Calgary Graduate Students' Association Professional Development Grant (\$350); 04/2015
30. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme Biomedical Engineering Travel Award (\$500); 02/2015
31. University of Calgary Leaders in Medicine Travel Award (\$1,000); 11/2014
32. University of Calgary Medical Science Graduate Program Annual Program Specific Award (\$2,550); 07/2014
33. Alberta Innovates Health Solutions Osteoarthritis Team Grant Travel Award (\$500); 07/2014
34. Kappa Kappa Gamma Foundation of Canada Scholarship (\$5,000); 06/2014
35. Alberta Innovates Health Solutions Osteoarthritis Team Grant Travel Award (\$1,000); 03/2014
36. University of Calgary Medical Science Graduate Program Travel Award (\$1,500); 05/2014
37. University of Calgary Medical Science Graduate Program Travel Award (\$1,500); 04/2014
38. Natural Sciences and Engineering Research Council of Canada Collaborative Research and Training Experience Programme Biomedical Engineering Travel Award (\$750); 02/2014
39. University of Calgary Medical Science Graduate Program Travel Award (\$1,220); 01/2014
40. Western University Bone and Joint Injury and Repair Conference Travel Award (\$500); 01/2014
41. University of Calgary 5th Leaders in Medicine Symposium Best Poster Presentation Award (\$100); 11/2013
42. Alberta Biomedical Engineering Conference Poster Presentation Award (First Prize; \$175); 10/2013
43. University of Calgary Medical Science Graduate Program Annual Program Specific Award (\$2,550); 08/2013
44. University of Calgary Medical Science Graduate Program Publication Award (\$500); 06/2013
45. University of Calgary Dinos Athletics Murray Fraser Volunteer of the Year Award; 04/2013
46. Dr. Gary McPherson Leadership Scholarship (\$2,000); 02/2013
47. Canadian Interuniversity Sport College Sports Information Directors of America Capital One Academic All-America District Team for Women's Soccer; 10/2012
48. Canadian Interuniversity Sport Academic All-Canadian (awarded 5 years consecutively); 09/2008-04/2013
49. Jimmie Condon Athletic Scholarship (\$9,000; \$1,800/year; awarded 5 years consecutively); 09/2008-04/2013
50. University of Calgary Alberta Graduate Conference Travel Award (\$250); 05/2012
51. University of Calgary Dinos Athletics Women's Soccer Coaches Player of the Year Award; 05/2012
52. Alberta Innovates Health Solutions Osteoarthritis Team Grant Travel Award (\$800); 02/2012
53. University of Calgary Faculty of Graduate Studies Travel Award (\$500); 02/2012
54. University of Calgary Faculty of Graduate Studies Scholarship (\$750); 01/2012-04/2012
55. University of Calgary Graduate Student's Association Class Ambassador; 09/2011-04/2012
56. University of Calgary Dinos Athletics Women's Soccer Award (\$125); 09/2011-04/2012
57. University of Calgary Faculty of Graduate Studies Scholarship (\$500); 05/2011-08/2011
58. University of Calgary David Keith Davies Scholarship (\$1,500); 01/2011-04/2011
59. University of Calgary Dinos Athletics Gauntlet Extra Effort Award; 04/2011
60. University of Calgary Kinesiology Undergraduate Dean's List (awarded 3 years consecutively); 09/2008-04/2011

61. University of Calgary Undergraduate Merit Award (\$1,000); 01/2010-04/2011
62. University of Calgary International Exchange Student Scholarship (\$1,000); 01/2010-04/2011
63. University of Calgary 4+1 Integrated BSc/MSc in Kinesiology Dean's Tuition Scholarship (\$2,500); 09/2010-12/2010
64. Alberta Advanced Education and Technology Jason Lang Scholarship (\$1,000); 01/2010-04/2010
65. Alberta Advanced Education and Technology Frances Camyre Memorial Bursary (\$1,500); 01/2010-04/2010
66. Calgary Women's Soccer Association Athletic Scholarship (\$1,000); 01/2010-04/2010
67. Lou Goodwin University Athletic Board Bursary (\$1250); 01/2010-04/2010
68. Imperial Oil Student Scholarship (\$1,000); 09/2007-04/2008
69. Alexander Rutherford Student Scholarship (\$2,500); 09/2007-04/2008

N. TEACHING EXPERIENCE AND PROGRAM DEVELOPMENT (n=9; total of \$26,323 awarded in scholarship)

1. Business in Leaders in Medicine Seminar Series Graduate Assistant (Non-Teaching) for Program Development, 07/2017-06/2018 (\$2,224)
2. Medical Science Molecular Biology/Bioinformatics 408 Graduate Teaching Assistant, 09/2014-04/2015 (\$8,763)
3. Medical Science Molecular Biology/Bioinformatics 408 Graduate Teaching Assistant, 09/2013-04/2014 (\$8,763)
4. Kinesiology Socio-Cultural Perspectives in Sport 245 Graduate Teaching Assistant, 01/2013-04/2013 (\$2,191)
5. University of Calgary Student's Union Tutor, 09/2012-present
6. Kinesiology 203 (Health, Fitness, Performance) Graduate Teaching Assistant, 09/2011-04/2012 (\$4,381)
7. Kinesiology 203 (Health, Fitness, Performance) Lecturer, 10/2011 and 02/2012
8. Kinesiology 433 (Health and Physical Activity) Guest Lecturer, 10/2011
9. Teaching Assistantship Preparedness Workshop for Graduate Students Certificate, 09/2011

O. MENTORING EXPERIENCE (n=17 total)

Mentored 1 research associate, 1 research assistant, 11 undergraduate research students, 1 undergraduate student, 2 practicum students, and 2 high school students (2013-2018).

1. Joint Effort Research Assistant (J. Oswald), 01/2019-present
2. Vivametrica Study Research Associate (T. Seegar), 03/2018-present
3. University of Calgary Leadership and Student Engagement Sophomore Leadership Program Mentor, 11/2017-present
4. McCaig Institute Undergraduate Summer Student (H. Veeraghanta), 02/2018-09/2018
5. NSERC CREATE Undergraduate Summer Students (K. Agbojo, J. Salt, and D. Chakravarty), 05/2016-08/2016
6. Active Living Joint Effort Practicum Students (J. O'Brien and D. Hyde-Lay), 01/2016-04/2016
7. Markin Undergraduate Student Research Program Fall/Winter Student (T. Kemp), 10/2015-04/2016
8. Alberta Innovates Health Solutions Undergraduate Summer Student (K. Quan), 05/2015-08/2015
9. NSERC CREATE Undergraduate Summer Student (J. Norman), 05/2015-08/2015
10. Alberta Innovates Health Solutions Heritage Youth Researcher Summer Program (E. Evans), 07/2014-08/2014
11. McCaig Institute Undergraduate Summer Student (N. Quinn), 05/2014-08/2014
12. NSERC CREATE Undergraduate Summer Student (J. Reynolds), 05/2014-08/2014
13. McCaig Institute Undergraduate Summer Student (M. Wiebe), 05/2013-08/2013
14. Alberta Innovates Health Solutions Heritage Youth Researcher Summer Program (H. Wilson), 07/2013-08/2013

P. WORK EXPERIENCE (n=13)

1. Sport Injury Prevention Centre Certified Exercise Physiologist, Faculty of Kinesiology, University of Calgary, 02/2015-05/2016
2. Joint Effort Program Certified Exercise Physiologist, Active Living, Faculty of Kinesiology, University of Calgary, 01/2014-present
3. Rehabilitation and Fitness Program for Persons with Physical Disabilities, Active Living, Faculty of Kinesiology, University of Calgary, 01/2013-04/2016
4. Research Assistant for Dr. Ron Sigal, Exercise Stress Testing and Type II Diabetes: A Data Linkage Study, Endocrinology and Metabolism, Department of Obstetrics and Gynecology, University of Calgary, 05/2013-09/2013
5. North American Prodromal Longitudinal Study Program Trainer for Dr. Nicole Culos-Reed, Faculty of Kinesiology, Health & Wellness Laboratory, University of Calgary, 02/2013-05/2013

6. Research Coordinator for Dr. Lois Donovan, Families Defeating Diabetes Study, Endocrinology and Metabolism, Department of Obstetrics and Gynecology, University of Calgary, 10/2012-07/2016
7. Summer Studentship (AHFMR) on Characterization of Proteoglycan 4 and Hyaluronan Composition in a Post-Knee Injury Ovine Model with Dr. Cy Frank/Dr. Tannin Schmidt's Laboratory, 05/2010-08/2010
8. Fall/Winter Studentship (USRP) on the Development of a Proteoglycan 4 Assay for Synovial Fluid with Dr. Cy Frank/Dr. Tannin Schmidt's Laboratory, 10/2009-03/2010
9. Summer Studentship (NSERC) on Early Dietary Programming in a Rat Model with Dr. Raylene Reimer's Laboratory, 05/2009-08/2009
10. Redwater Rustic Grille, 05/2008-08/2008
11. University of Victoria Event Staff, 09/2007-04/2008
12. Costco Employee, 06/2007-07/2007
13. Northwest Community Church Nursery Leader, 09/2005-01/2007

Q. ACADEMIC AND COMMUNITY LEADERSHIP EXPERIENCE (n=72)

1. Western University Department of Surgery Mentorship Program Mentor, 07/2019-present
2. University of Calgary Leadership and Student Engagement Sophomore Leadership Program Mentor, 11/2017-present
3. Amaris Adoption and Family Support Services Family Mentor, 10/2017-present
4. The Arthritis Society Education Facilitator, 05/2017-present
5. Leaders in Medicine Student Executive Chair, 01/2017-01/2018
6. Clinician Investigator Trainee Association of Canada Executive Vice President Internal, 12/2016-12/2018
7. Health Promotion and Disease Prevention Curriculum Review Project Research Assistant, 11/2016-03/2017
8. McCaig Institute for Bone and Joint Health TELUS Spark Wood Forum Volunteer, 11/2016
9. Leaders in Medicine Mentorship Program Volunteer, 09/2016-04/2019
10. University of Calgary Thrive Centre Stride for Thrive Volunteer, 09/2016
11. Undergraduate Medical Education Student Academic Review Committee, 09/2016-05/2019
12. Undergraduate Medical Education Resident and Medical Student Appeals Committee, 09/2016-05/2019
13. Leaders in Medicine Student Executive Co-Chair, 06/2016-12/2016
14. Sport Injury Prevention Centre External Advisory Board Member, 04/2016-present
15. University of Calgary Teaching Awards Adjudication Committee, 01/2016-02/2016
16. University of Calgary Non-Academic Misconduct Appeal Committee, 11/2015-present
17. McCaig Institute for Bone and Joint Health Director Search and Selection Committee, 10/2015-12/2015
18. Cumming School of Medicine Faculty Council Committee, 05/2015-04/2016
19. Cumming School of Medicine Executive Faculty Council Member, 05/2015-04/2016
20. Graduate Students Association Orientation Volunteer, 09/2015
21. University of Calgary Graduate Leaders Circle Mentorship Program Volunteer, 08/2015-04/2019
22. McCaig Institute Buddy Program Volunteer, 06/2015-present
23. Medical Science Graduate Students Association Communication Coordinator, 05/2015-04/2016
24. Council of Foothills Departmental Graduate Associations Chair, 05/2015-04/2016
25. Leaders in Medicine Research in Progress Coordinator, 04/2015-04/2016
26. University of Calgary Scholars Academy Graduate Student Leaders Discussion Panel, 02/2015
27. Canadian Orthopedic Foundation Move, Breathe, Namaste Yoga Fundraiser Volunteer, 02/2015
28. Faculty Tenure and Promotions Committee for the Cumming School of Medicine, 11/2014-12/2014
29. Graduate Students Association Senior Leadership Team, 09/2014-04/2016
30. Graduate Students Association Finance Standing Committee Chair, 07/2014-04/2016
31. Campus Alberta Student Conference on Health Committee Member, 06/2014-09/2014
32. Medical Science Graduate Students Association Co-Chair, 05/2014-04/2015
33. Council of Foothills Departmental Graduate Associations Co-Chair, 05/2014-04/2015
34. Leaders in Medicine Visiting Speaker Seminar Coordinator, 05/2014-04/2015
35. Arthritis Research Foundation Power of Movement Volunteer, 03/2014
36. Rockpointe Church Youth Leader, 02/2014-06/2014
37. Graduate Students Association Judicial Board Member, 10/2013-04/2014
38. Ronald McDonald House Teen Mentorship Program Volunteer, 09/2013-09/2016
39. Leaders in Medicine Symposium Committee, 09/2013-11/2013

40. Faculty of Medicine Symposium Committee, 08/2013-05/2014
41. Graduate Students Association Awards Committee, 07/2013-04/2014
42. Graduate Students Association Academic Standing Committee, 07/2013-04/2015
43. University of Calgary Dinos Women's Soccer Assistant Coach, 06/2013-12/2017
44. Faculty of Medicine Get Ready to Get Hired Event Communications Coordinator, 06/2013-11/2014
45. Medical Science Graduate Students Association Chair, 05/2013-05/2014
46. Medical Science Graduate Students Association Member at Large, 05/2013-07/2013
47. Canadian Cancer Society Relay for Life at the University of Calgary Event Volunteer Sports Coordinator, 04/2013
48. University of Calgary Dinos Women's Soccer Management Team, 02/2013-04/2013
49. University of Calgary Active Living Joint (Knee/Hip) Effort Program Volunteer, 01/2013-12/2013
50. University of Calgary General Surgery Residency Year 1 Examiner, 10/2012, 10/2013, 10/2014, 10/2015
51. Kinesiology Science in Seconds Event Manager, 09/2012-11/2012
52. Canadian Breast Cancer Foundation Event Manager, 10/2011, 10/2012, 10/2013, 10/2014, 10/2015, 10/2017
53. McCaig Institute Seminar Series Organizing Committee, 06/2012-06/2014
54. NSERC CREATE Symposium Committee, 06/2012-10/2014
55. Alberta Innovates Health Solutions Alberta Osteoarthritis Team Trainees Leaders Committee, 05/2012-04/2015
56. Kinesiology Graduate Students Association Vice President Academic, 04/2012-05/2013
57. University of Calgary Dinos Student Athletic Advisory Chair, 04/2012-04/2013
58. Kids Cancer Care Foundation of Alberta Pediatric Oncology PEER Volunteer, 12/2012-09/2014
59. University of Calgary Health and Wellness Lab THRIVE Center Volunteer, 08/2011-09/2014
60. Big Brothers Big Sisters Calgary Dinos Student Coordinator, 05/2011-04/2012
61. University of Calgary Dinos Student Athletic Advisory Executive Director, 04/2011-04/2012
62. University of Calgary Dinos Women's Soccer Leadership Captain, 01/2011-04/2013
63. Centre Street Church Mission Trip Leader, Mexico, 07/2011
64. Soccer 4 Hope Soccer Camps, South Africa, 05/2011
65. University of Calgary YMCA Personal Trainer Volunteer, 07/2010-01/2012
66. Projects Abroad Medical Placement, Ghana, 07/2010
67. Centre Street Church Lifegroup Leader, 09/2008-09/2011
68. Centre Street Church Nursery, 05/2008-09/2011
69. Big Brothers Big Sisters Calgary in School Mentor, 09/2008-04/2012
70. Foothills Hospital Orthopedic Trauma Unit Research Student, 01/2008-01/2010
71. University of Calgary Sports Medicine Center Physiotherapy Clinic, 01/2008-04/2008
72. Centre Street Church Mission Trip, Mexico, 03/2007

R. PROFESSIONAL EXPERIENCE (n=6)

1. Professional Association of Residents of Ontario Leadership Program, 10/2019-09/2021
2. Advanced Trauma Life Support Certification, American College of Surgeons, 07/2019
3. Advanced Cardiac Life Support Certification, Heart and Stroke Foundation, 05/2019
4. Founder, Joint Management Program Design and Training (www.kristenbarton.com), an innovative online exercise programming resource for young adults (18-35 years old) that have sustained previous knee injuries or individuals with hip and knee osteoarthritis. We offer individualized exercise programming, with the goal of mitigating pain related to the development of post-traumatic osteoarthritis. Founded 05/2017.
5. GLA:D (Good Life with osteoArthritis in Denmark®) Canada Training Course, 01/2017
6. Women in Leadership Canada Mentorship Program, 02/2015-10/2015

S. MEMBERSHIP (n=6)

1. Arthroscopy Association of Canada Associate Member, October 2019-present
2. College of Physicians and Surgeons of Ontario, July 2019-present
3. Ontario Medical Association, July 2019-present
4. Canadian Orthopedic Association Associate Member, June 2019-present

5. Canadian Medical Association, July 2016-present
6. Orthopedic Research Society Associate Member, February 2012-present

T. EXTRA CURRICULAR EXPERIENCE (n=12)

1. Women in Leadership Canada Mentorship Program, 02/2015-10/2015
2. Lululemon Seawheeze Half Marathon, 08/2015
3. Banff to Jasper Team Relay (260km), 06/2014
4. Maui Marathon (42.4km), 09/2013
5. Calgary Scotiabank Half Marathon (21.2km), 05/2013
6. Callies Major Women's Soccer Team, 04/2009-04/2016
7. University of Calgary Dinos Women's Varsity Soccer Team, 09/2008-04/2013
8. North Hill Curling Club Saturday Night Mixed Team, 09/2009-09/2017
9. University of Aberdeen Women's Soccer Team, 01/2010-06/2010
10. Aberdeen F.C. Women's Soccer Team, 01/2010-06/2010
11. NSD Saints Major Women's Soccer Team, 05/2008-04/2009
12. University of Victoria Vikes Women's Varsity Soccer Team, 09/2007-04/2008