

Curriculum Vita

Lindsey K. Lepley Ph.D., ATC

WORK ADDRESS

University of Michigan
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EDUCATION AND TRAINING

- 2014-2015 University of Kentucky; Lexington, KY
Postdoctoral training in muscle mechanics and physiology
- 2010-2014 University of Michigan; Ann Arbor, MI
Ph.D. in Kinesiology
Dissertation; *Targeting Quadriceps Weakness Following Anterior Cruciate Ligament Reconstruction*
- 2008-2009 University of Virginia; Charlottesville, VA
M.Ed., in Kinesiology
Thesis; *Effect of Acute Ankle Sprain on Motor Neuron Pool Excitability of Lower Leg Muscles*
- 2004-2008 Grand Valley State University; Allendale, MI
B.S. in Athletic Training

PROFESSIONAL EXPERIENCES

- 2019- pres University of Michigan; Ann Arbor, MI
Assistant Professor, School of Kinesiology, Athletic Training
- 2017-2019 University of Connecticut School of Medicine; Farmington, CT
Assistant Professor in the Department of Orthopaedic Surgery
- 2015-2019 University of Connecticut; Storrs, CT
Assistant Professor in the Department of Kinesiology, Athletic Training
- 2014-2015 University of Kentucky; Lexington, KY
Department of Rehabilitative Sciences, Postdoctoral Research Fellow
- 2010-2014 University of Michigan; Ann Arbor, MI
School of Kinesiology, Graduate Student Instructor
- 2008-2010 Physical Therapy @ACAC, Charlottesville, VA
Certified Athletic Trainer- outpatient care to orthopedic patients

FELLOWSHIPS

- 2014-2015 Postdoctoral Fellowship
Department of Rehabilitation Sciences; University of Kentucky
Amount: salary + research support
- 2013-2014 Predoctoral Fellowship
Rackham Graduate School; University of Michigan
Amount: salary + tuition

HONORS AND AWARDS

- 2019-2021 National Institute of Arthritis and Musculoskeletal and Skin Diseases, Loan Repayment Award
- 2018 National Institute of Health, Early Career Reviewer Program, Participant
- 2017 Training in Grantsmanship for Rehabilitation Research workshop, Participant
- 2016-2018 National Institute of Arthritis and Musculoskeletal and Skin Diseases, Loan Repayment Award
- 2016 NATAREF David H. Perrin Doctoral Dissertation Award
- 2016 NATAREF Research/Faculty Mentor Program
- 2015 New England ACSM New Investigator Award
- 2014 Univ. of Kentucky Center for Muscle Biology Postdoctoral Fellow Award
- 2014 Univ. of Michigan Paul A. Hunsicker Memorial Award
- 2013 Univ. of Michigan Shapiro/Malik/Forrest Award
- 2013 ACSM Biomechanics Interest Group Student Travel Award
- 2013 Univ. of Michigan Lucille M. Swift Honor Award
- 2012 ACSM Biomechanics Interest Group Student Research Award
- 2011 NATAREF Linda Weber Daniel Scholarship
- 2009 Univ. of Virginia David H. Perrin Athletic Training & Sport Medicine Award
- 2009 Physical Therapy @ ACAC Stretching Above and Beyond Award

PEER REVIEWED PUBLICATIONS

1. Harrison, LJ, **Lepley, LK**, Fuller, DK, & Caputo, JL. Cross-Over Effect of Balance Training After Knee Surgery: A Pilot Study. *Athletic Training & Sports Healthcare*. 2019;11(5):234-242.
2. Burland JP, Lepley AS, DiStefano LJ, **Lepley LK**. No Shortage of Disagreement Between Biomechanical and Clinical Hop Symmetry after Anterior Cruciate Ligament Reconstruction. *Clinical Biomechanics*. 2019;68:144-150. PMID: 31212209
3. Palmieri-Smith RM, Strickland MA, **Lepley LK**. Hamstring Muscle Activity after Primary Anterior Cruciate Ligament Reconstruction - A Protective Mechanism in Those Who Do Not Sustain a Secondary Injury? A Preliminary Study. *Sports Health: A Multidisciplinary Approach*. 2019;11(5)316-323. PMID:31194624
4. Lepley AS, Grooms DR, Burland JP, Davi SM, Kinsella-Shaw JM, **Lepley LK**. Systemic Alterations in Quadriceps Muscle Function Following Anterior Cruciate Ligament Reconstruction: Neural and Morphological Considerations. *Experimental Brain Research*. 2019;237(5)1267-1278. PMID:30852644
5. Burland JP, Lepley AS, Cormier M, DiStefano LJ, Arciero A, **Lepley LK**. Learned Helplessness after Anterior Cruciate Ligament Reconstruction: An Altered Neurocognitive State? *Sports Medicine*. 2019;49(5)647-657. PMID:30659498

6. Peckham KJ, DiStefano LJ, Root HJ, **Lepley LK**, Scarneo SE, Trigsted SM, Post EG, Brooks MA, McGuine TA, Bell DR. The Influence of Sport Specialization on Landing Error Scoring System in High School Athletes. *Athletic Training & Sports Health Care*. 2018;10(6):253-259.
7. **Lepley LK**, Grooms DR, Burland J Davi SM, Mosher J, Cornier M, Lepley AS. Eccentric Cross-Exercise After ACL Reconstruction: Novel Case Series to Enhance Neuroplasticity. *Physical Therapy in Sport*. 2018;34:55-65. PMID:302333234
8. **Lepley LK**, Davi SM, Butterfield TA, Shahbazmohamadi, S. JoVE Science Education Database. *Biomedical Engineering*. Visualization of Knee Joint Degeneration after Non-invasive ACL Injury in Rats. JoVE, Cambridge, MA, (2018). <https://www.jove.com/video/10477>
9. Curran MT, **Lepley LK**, Palmieri-Smith RM. Continued Improvements in Quadriceps Strength and Knee Biomechanical Symmetry After Conclusion of Post-Surgical ACL Reconstruction. *Journal of Athletic Training*. 2018;53(6)535-544. PMID:29975571
10. Blanchard AR, Taylor BA, Thompson PD, **Lepley LK**, White CM, Lamberti LM, Zaleski AL, Pescatello LS. The Influence of Resting Blood Pressure on Muscle Strength in Healthy Adults. *Blood Pressure Monitoring*. 2018;23(4)185-190. PMID:29738358
11. Johnson AK, Palmieri-Smith RM, **Lepley LK**. Contribution of Neural and Morphological Factors to Quadriceps Inter-Limb Asymmetry after Anterior Cruciate Ligament Reconstruction. *Journal of Athletic Training*. 2018;53(4)347-354. PMID:29652169
12. Digiacomio JE, Palmieri-Smith RM, Redman JA, **Lepley LK**. Examination of Knee Morphology after Secondary Ipsilateral ACL Injury Compared to Those That Have Not Reinjured: A Preliminary Study. *Journal of Sport Rehabilitation*. 2018;27(1):73-82. PMID: 28095169
13. **Lepley LK**, Lepley AS, Onate JA, Grooms DR. Eccentric Exercise to Enhance Neuromuscular Control. *Sports Health: A Multidisciplinary Approach*. 2017;9(4)333-340. PMID: 28571492
14. **Lepley LK** and Butterfield TA. Shifting the Current Clinical Perspective: Isolated Eccentric Exercise as an Effective Intervention to Promote the Recovery of Muscle After Injury. *Journal of Sports Rehabilitation*. 2017;26(5)122-130. PMID:28414268
15. Butterfield TA and **Lepley LK**. Eccentric Contractions: They Are Not So 'Odd' Anymore. *Journal of Sport Rehabilitation*. 2017;26(5)117-119. PMID:28414266
16. **Lepley LK**, McKeon PO, Fitzpatrick SG, Beckemyer CL, Uhl TL, Butterfield TA. Neuromuscular Alterations After Ankle Sprains: An Animal Model to Establish Causal Links After Injury. *Journal of Athletic Training*. 2016;51(10):797-805. PMID:27831747
17. **Lepley LK** and Palmieri-Smith RM. Pre-operative Quadriceps Activation is related to Post-operative Activation, Not Strength, In Patients Post-ACL Reconstruction. *Knee Surgery, Sports Traumatology, Arthroscopy*. 2016;24(1):236-246. PMID:25315083
18. **Lepley LK** and Palmieri-Smith RM. Quadriceps Strength, Muscle Activation Failure and Patient-Reported Function at the Time of Return-to-Activity in ACL Reconstructed Patients: A Cross-sectional Study. *Journal of Orthopedic & Sport Physical Therapy*. 2015;45(12):1017-1025. PMID:26471854

19. Thomas AC, **Lepley LK**, Wojtys EM, McLean SG, Palmieri-Smith RM. Effects of Neuromuscular Fatigue and Quadriceps Inhibition and Knee Biomechanics in Individuals post ACL Reconstruction and Healthy Adults. *Journal of Orthopedic & Sports Physical Therapy*. 2015;45(12):1042-1050. PMID:26471851
20. **Lepley LK**, Wojtys EM, Palmieri-Smith RM. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation Post-ACL Reconstruction to Improve Biomechanical Limb Symmetry After Anterior Cruciate Ligament Reconstruction. *Clinical Biomechanics*. 2015;30(7):738-747. PMID:25953255
21. **Lepley LK**, Wojtys EM, Palmieri-Smith RM. Does Concomitant Meniscectomy or Meniscal Repair Affect the Recovery of Quadriceps Function Post-ACL Reconstruction? *Knee Surgery, Sport Traumatology, Arthroscopy*. 2015;23(9):2756-2761. PMID:24906435
22. Palmieri-Smith RM and **Lepley LK**. Quadriceps Strength Asymmetry Following ACL Reconstruction Alters Knee Joint Biomechanics and Functional Performance at Time of Return to Activity. *The American Journal of Sports Medicine*. 2015;43(7):1662-1669. PMID:25883169
23. **Lepley LK**. Deficits in Quadriceps Strength and Patient Oriented Outcomes at Return-to-Activity Following ACL Reconstruction: A Review of the Current Literature. *Sports Health: A Multidisciplinary Approach*. 2015;7(3):231-238. PMID:26131300
24. **Lepley LK**, Wojtys EM, Palmieri-Smith RM. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation Post-ACL Reconstruction to Improve Quadriceps Function. *The Knee*. 2015;22(3):270-277. PMID:25819154. **NATAREF 2016 Doctoral Dissertation Award**
25. **Lepley LK** and Palmieri-Smith RM. Cross-Education Strength and Activation After Eccentric Exercise. *Journal of Athletic Training*. 2014;49(5):582-589. PMID:25117873
26. **Lepley LK** and Palmieri-Smith RM. Effect of Eccentric Strengthening After Anterior Cruciate Ligament Reconstruction on Quadriceps Strength. *Journal of Sports Rehabilitation*. 2013;22(2):150-156. PMID:23238230
27. **Lepley LK**, Thomas AC, McLean SG, Palmieri-Smith RM. Fatigue's Lack of Effect on Thigh-Muscle Activity in Anterior Cruciate Ligament-Reconstructed Patients During a Dynamic-Landing Task. *Journal of Sports Rehabilitation*. 2013;22(2):83-92. PMID:23069653
28. **Klykken LW**, Pietrosimone BG, Kim KM, Ingersoll CD, Hertel J. Motor-Neuron Pool Excitability of the Lower Leg Muscles After Acute Lateral Ankle Sprain. *Journal of Athletic Training*. 2011;46(3):263-269. PMID:21669095

Manuscripts in Press

1. Davi SM, Lepley AS, Denegar CR, Edgar CM, DiStefano LJ, **Lepley LK**. Influence of Naturally Occurring Patellar Tendon Damage and Pain on Quadriceps Dysfunction. *Journal of Athletic Training*. In press.
2. **Lepley LK**, Davi SM, Hunt ER, Burland JP, White MS, McCormick GY, Butterfield TA. Morphology and Anabolic Response of Skeletal Muscles Subjected to Eccentrically or Concentrically Biased Exercise. *Journal of Athletic Training*. In press.

- Schultz SJ, Schmitz RJ, Cameron KL, Ford KR, Grooms DR, **Lepley LK**, Meyer GD, Pietrosimone B. Anterior Cruciate Ligament Research Retreat VIII Summary Statement: An Update on Injury Risk Identification and Prevention Across the Anterior Cruciate Ligament Injury Continuum March 14-16, 2019, Greensboro, NC. *Journal of Athletic Training*. In press.
- Burland JP, Lepley AS, Cormier ML, DiStefano LJ, **Lepley LK**. Examining the influence of neuroplasticity on learned helplessness after ACLR: early versus late recovery. *Physical Therapy in Sport*. In press.

Published Invited / Non-Refereed Manuscripts

- Casa DJ, Hosokawa Y, Huggins RA, Stearns RL, Adams WM, Beltz EM, Belval LN, Curtis RM, DiStefano LJ, Eason CM, Fortunati AR, Iannicelli JP, Katch RK, Lepley AS, **Lepley LK**, Mazerolle SM, Pike AM, Rafeldt DA, Root HJ, Scarneo SE, Vandermark LW. (2016, January) "Concern Emerges About Proper Implementation of Consensus Statement Guidelines." [Letter to the Editor] *NATA News*, 8-9.

Manuscripts Submitted for Publication

- Burland JP, Howard JS, Lepley AS, DiStefano SJ, **Lepley LK**. What are our patients really telling us? Psychological constructs associated with patient-reported outcomes after ACLR. *Journal of Athletic Training*. In revision.
- Harrison, LJ, **Lepley LK**, Stevens, SL, Coons, JM, Fuller, DK., & Caputo, JL. The Relationship Between Functional Movement and Balance. *Journal of Sports Science*. In review.
- Lepley LK**, Davi SM, Burland JP, Lepley AS. Muscle atrophy after traumatic joint injury: implications for clinical practice. *Sports Medicine*. In revision.
- Butler CR, Allen KE, DiStefano LJ, **Lepley LK**. Protracted Cardiovascular Impairments After Anterior Cruciate Ligament Reconstruction: A Critically Appraised Topic. *Journal of Sport Rehabilitation*. In revision.
- Rush JL, **Lepley LK**, Davi SM, Lepley AS. The immediate effects of transcranial direct current stimulation on quadriceps muscle function in individuals with a history of anterior cruciate ligament reconstruction. *Journal of Sports Rehabilitation*. In revision.
- White MS, Horton ZW, Burland JP, Seeley MK, **Lepley LK**. Functional Analyses Reveal Underlying Asymmetries After Passing Return to Sport Criteria Following ACL Reconstruction. *Journal of Orthopaedic Research*. In review.
- Davi SM, Woxholdt CK, Rush JL, Lepley AS, **Lepley LK**. Alterations in Quadriceps Neurologic Complexity after Anterior Cruciate Ligament Reconstruction. *Medicine & Science in Sports & Exercise*. In review.
- Burland JP, Lepley AS, Frechette LM, **Lepley LK**. Inspecting the load absorbing phase after ACLR for alterations in knee mechanics and muscle activation strategies. *J Knee Surgery, Sports Traumatology, Arthroscopy*. In revision.
- Horton ZW, Page GL, Reese CS, **Lepley LK**, White MS. Template Priors in Bayesian Curve Registration. *Technometrics*. In review.
- Lepley AS, Ly MT, Grooms DR, Kinsella-Shaw JM, **Lepley LK**. Corticospinal tract structure and excitability in patients with anterior cruciate ligament reconstruction: A DTI and TMS study. Submitted for consideration to *Neurorehabilitation and Neural Repair*. In review.

Manuscripts in Preparation

1. White MS, Froeling M, Lepley AS and **Lepley LK**. Morphological changes of the quadriceps muscle following ACLR. Journal of Bone and Joint Surgery. In preparation.
2. Lepley AS, **Lepley LK**, Kinsella-Shaw JM, Grooms DR. Association between motor cortex activation and excitability of the quadriceps: An fMRI and TMS study. Experimental Brain Research. In preparation.

MEDIA INTERVIEWS

1. New Grant to Evaluate Muscle Extension Exercise in ACL Rehab – UCONN Today – June 2018
<https://today.uconn.edu/school-stories/new-grant-study-acl-rehabilitation/>
2. Putting prehab to the test highlights inconsistencies - Lower Extremity Review – March 2017
<http://lermagazine.com/article/putting-prehab-to-the-test-highlights-inconsistencies>

CONFERENCES PROCEEDINGS AND ABSTRACTS

1. Beltz EM, Denegar CR, Burland JP, Huggins RA, **Lepley LK**, DiStefano LJ. The Relationship between Training Load and Neuromuscular Control in Adolescent Female Basketball Athletes. National Athletic Trainers' Association Annual Meeting, Las Vegas, Nevada. June 27, 2019.
2. Rush JL, **Lepley LK**, Davi SM, Lepley AS. The Effects of Transcranial Direct Current Stimulation on Quadriceps Neural Activity After Anterior Cruciate Ligament Reconstruction. Submitted for consideration to the National Athletic Trainers' Association Annual Meeting, Las Vegas, Nevada. June 26, 2019.
3. Lepley AS, Grooms DR, Burland JP, Davi SM, Kinsella-Shaw JM, **Lepley LK**. Systemic Quadriceps Muscle Failure Following ACL Reconstruction: Neural and Morphological Considerations. National Athletic Trainers' Association Annual Meeting, Las Vegas, Nevada. June 26, 2019.
4. Burland JP, Lepley AS, Davi SM, DiStefano LJ, **Lepley LK**. How Does it all Measure Up? Interrelationships Between Biomechanical, Clinical Symmetry and Self-Reported Function after ACLR. National Athletic Trainers' Association Annual Meeting, Las Vegas, Nevada. June 26, 2019.
5. Butler CR, Curtis RM, Huggins RA, Benjamin CL, Sekiguchi Y, **Lepley LK**, Casa DJ. NCAA Preseason Demonstrates Greatest Impact on Heart Rate Variability, Training Load and Sleep In Men's Soccer. *American College of Sports Medicine Annual Meeting*. Orlando, Florida. May 30, 2019. Published in *Medicine & Science in Sports & Exercise* 49 No.5.S353.
6. Lepley AS, Froeling M, Davi SM, Burland JP, **Lepley LK**. Quadriceps Muscle Structure Following ACL Reconstruction: Influence on Muscle Weakness. ACL Research Retreat VIII, Greensboro, North Carolina. March 15, 2019.
7. **Lepley LK**, Froeling M, Davi SM, Burland JP, Curtis RM, Lepley AS. Investigating the Neural-Morphologic Link on Quadriceps Strength After ACLR. ACL Research Retreat VIII, Greensboro, North Carolina. March 15, 2019.
8. White MS, Burland JP, Davi SM, Lepley AS, **Lepley LK**. Hidden Asymmetries in ACLR Patients Who Pass Triple Hop Test Following ACLR. ACL Research Retreat VIII, Greensboro, North Carolina. March 15, 2019.
9. Burland JP, Howard JS, Lepley AS, DiStefano LJ, **Lepley LK**. What Are Our Patients Really Telling Us? Psychological Constructs Associated with Patient-Reported Outcomes after ACLR. ACL Research Retreat VIII, Greensboro, North Carolina. March 15, 2019.
10. Davi SM, Lepley AS, Burland JP, Curtis RM, **Lepley LK**. The Mediated Link: Evaluating Quadriceps Neuromechanics and Dynamic Muscle Function After ACLR. ACL Research Retreat VIII, Greensboro, North Carolina. March 15, 2019.
11. **Lepley LK**, Garibay EJ, Giampetruzzi NG, Milewski MD, Lloyd JR, Supernant D, Öunpuu S. Single Leg Long Hop Distance, Strength, and Landing Mechanics Symmetry Following ACL Reconstruction in Adolescent Athletes. *Combined Sections Meeting*. Washington D.C. January 23, 2019.
12. Harrison, LJ, **Lepley, LK**, Fuller, DK, & Caputo, JL. *The Relationship between Functional Movement and Balance*, at the Health and Human Performance Research Symposium, University of Houston, Houston, TX, October 23, 2018.

13. Lepley AS, Grooms DR, Burland JP, Davi SM, **Lepley LK**. Underlying contributors to quadriceps strength in anterior cruciate ligament reconstructed patients: morphological and neurological adaptations. *National Athletic Trainers' Association Annual Meeting*. New Orleans, Louisiana. June 28, 2018. 53(6s):S-189.
14. Burland JP, **Lepley LK**, Davi SM, Lepley AS. Quadriceps cross-sectional area, not neural activity, is associated with improved self-reported function after ACLR. *National Athletic Trainers' Association Annual Meeting*. New Orleans, Louisiana. June 28, 2018. 53(6s):S-188.
15. Davi SM, Lepley AS, Burland JP, Earp JE, **Lepley LK**. Elucidating the underlying architectural and neural mechanisms of strength loss that influence patient reported outcomes after ACL reconstruction. *National Athletic Trainers' Association Annual Meeting*. New Orleans, Louisiana. June 28, 2018. 53(6s):S-192.
16. **Lepley LK**, Davi SM, Woxholdt CK, Burland JP, Lepley AS. Investigating the underlying neurological factors that regulate quadriceps muscle activation after ACL reconstruction. *National Athletic Trainers' Association Annual Meeting*. New Orleans, Louisiana. June 28, 2018. 53(6s):S-192.
17. Lepley AS, **Lepley LK**, Burland JP, Davi SM, Grooms DR. Association between motor cortex activation and excitability of the quadriceps: An fMRI and TMS study. *American College of Sports Medicine Annual Meeting*. Minneapolis, Minnesota. June 1, 2018. Published in *Medicine & Science in Sports & Exercise* 49 No.5(S35):2306.
18. Davi SM, Lepley AS, Burland JP, **Lepley LK**. Examining the relationships between the mode of quadriceps contraction and clinical outcomes after ACL reconstruction. *American College of Sports Medicine Annual Meeting*. Minneapolis, Minnesota. May 2018. Published in *Medicine & Science in Sports & Exercise* 49 No.5(S35):239.
19. Burland JP, **Lepley LK**, DiStefano LJ, Davi SM, Lepley AS. Fear of reinjury is associated with knee Biomechanics during single limb landing after ACL reconstruction. *American College of Sports Medicine Annual Meeting*. Minneapolis, Minnesota. May 2018. Published in *Medicine & Science in Sports & Exercise* 49 No.5(S35):1091.
20. **Lepley LK**, Burland JP, Davi SM, Lepley AS. Lack of association between clinical measures of symmetry and knee loading mechanics after ACL reconstruction. *American College of Sports Medicine Annual Meeting*, Minneapolis, Minnesota. May 31, 2018. Published in *Medicine & Science in Sports & Exercise* 49 No.5(S35):1669.
21. Harrison, LJ, **Lepley, LK**, Fuller, DK, & Caputo, JL. Cross-over effect of balance training after knee surgery: A pilot study. Annual Meeting of the Southeast Chapter of the *American College of Sports Medicine*. Chattanooga, TN. March 08, 2018
22. **Lepley LK**, Garibay EJ, Milewski MD, Lloyd JR, Giampetruzzi NG, Supernant D, Nissen CW, Öunpuu S. Single Leg Hop Distance, Strength and, Landing Mechanics Symmetry Following ACL Reconstruction in Adolescent Athletes. *Pediatric Research in Sports Medicine Society*. Fort Lauderdale, FL January 25-27, 2018.
23. **Lepley LK**, Garibay EJ, Öunpuu S, Lloyd JR, Giampetruzzi NG, Supernant DB, Nissen CW, Milewski MD. Adolescent Strength Recovery After ACL Reconstruction: Time to Reconsider Return to Sport Guidelines? *Pediatric Research in Sports Medicine Society*. Fort Lauderdale, FL January 26, 2018.

24. Davi SM, Lepley AS, Denegar CR, Aerni G, DiStefano LJ, **Lepley LK**. Influence of Patellar Tendinopathy Compared With Anterior Knee Pain on Quadriceps Arthrogenic Muscle Inhibition. *National Athletic Trainers' Association Annual Meeting and Symposium*. Houston, TX. June 27, 2017. Published in *Journal of Athletic Training* 52(6S):107.
25. **Lepley LK**, Digiacoimo JE, Redman JA, Palmieri-Smith RM. Knee Morphology After Secondary Ipsilateral ACL Injury Compared to Those that Have Not Reinjured. *American College of Sport Medicine Annual Meeting*. Denver, CO. June 2, 2017. Published in *Medicine & Science in Sports & Exercise* 49(5S):680.
26. Curran MT, **Lepley LK**, Palmieri-Smith RM. Continued Improvements in Quadriceps Strength and Knee Biomechanical Symmetry over 18 months: Time to Reconsider the 6-Month Return-to-Activity Guidelines? *National Athletic Trainers' Association Annual Meeting and Symposium*. Baltimore, MD. June 23, 2016. Published in *Journal of Athletic Training* 51(6):247.
27. **Lepley LK**, McKeon PO, Fitzpatrick SG, Beckemyer CL, Uhl TL, Butterfield TA. Ankle Health Regulates Lower Extremity Muscle Behavior and Coordination in Freely Walking Rats. *American College of Sport Medicine Annual Meeting*. Boston, MA. June 3, 2016. Published in *Medicine & Science in Sports & Exercise* 48(5S):723.
28. Johnson AK, **Lepley LK**, Palmieri-Smith RM. Underlying Factors of Neural Activity that Regulate Torque Development after Anterior Cruciate Ligament Reconstruction. *American College of Sport Medicine Annual Meeting*. Boston, MA. June 2, 2016. Published in *Medicine & Science in Sports & Exercise* 48(5S):449.
29. Grooms DR, **Lepley LK**, Onate JA. Eccentric Exercise as a Mechanism to Address Neuroplasticity Associated with ACL Reconstruction: An Exploratory Study. *Great Lakes Athletic Trainers Association Annual Meeting and Symposium*. Chicago, IL. March 10, 2016.
30. Johnson AK, **Lepley LK**, Palmieri-Smith RM. Lower Extremity Torque Production Abilities after Anterior Cruciate Ligament Rehabilitation. *University of Michigan's 2015 Clinical and Translational Research Mentoring Forum*. Ann Arbor, MI. November 19, 2015.
31. **Lepley LK**, Wojtys EM, Palmieri-Smith RM. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation to Improve Knee Mechanics Post-ACL Reconstruction. *National Athletic Trainers' Association Annual Meeting and Symposium*. St Louis, MO. June 25, 2015. Published in *Journal of Athletic Training* 50(6):S-160.
32. **Lepley LK**, Palmieri-Smith RM. Quadriceps Strength, Not Volitional Muscle Activation, is the Primary Contributor to Physical Function Post-ACL Reconstruction. *American College of Sport Medicine Annual Meeting*. San Diego, CA. May 27, 2015. Published in *Medicine & Science in Sports & Exercise* 47(5S):90.
33. **Lepley LK**, Strickland MA, Palmieri-Smith RM. Alterations in Hamstring Activity at Return-to-Play Post-ACL: Protective Mechanism Among Patients that Do Not Reinjure? *ACL Research Retreat VII*. Greensboro, NC. March 21, 2015. Published in *Journal of Athletic Training* 50(10):1108.
34. **Lepley LK**, Palmieri-Smith RM. Quadriceps Strength, Not Volitional Muscle Activation, is the Primary Contributor to Physical Function Post-ACL Reconstruction. *Center for Muscle Biology Research Day*. Lexington, KY. October 30, 2014. **1st Place Poster- Postdoctoral Fellow Award**

35. **Lepley LK**, Wojtys EM, Palmieri-Smith RM. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation to Improve Quadriceps Function Post-ACL Reconstruction. *National Athletic Trainers' Association Annual Meeting and Symposium*. Indianapolis, IN. June 26, 2014. Published in *Journal of Athletic Training* 49(3):S-88. **Doctoral Student Oral Award Finalist**
36. **Lepley LK** and Palmieri-Smith RM. Concomitant Meniscectomy or Meniscal Repair Does Not Affect the Recovery of Quadriceps Function Post-ACL Reconstruction. *American College of Sport Medicine Annual Meeting*. Orlando, FL. May 28, 2014. Published in *Medicine & Science in Sports & Exercise* 46(5S):201.
37. **Lepley LK** and Palmieri-Smith RM. Preoperative Quadriceps Activation is Associated with Postoperative Activation, Not Strength, Following Anterior Cruciate Ligament Reconstruction. *National Athletic Trainers' Association Annual Meeting and Symposium*. Las Vegas, NV. June 26, 2013. Published in *Journal of Athletic Training* 48(3):S-37.
38. **Lepley LK** and Palmieri-Smith RM. Quadriceps Strength, Not Activation, Improves in the Unexercised Limb Following a Single-Legged Eccentric Exercise Program. *American College of Sport Medicine Annual Meeting*. Indianapolis, IN. May 30, 2013. Published in *Medicine & Science in Sports & Exercise* 45(5S):349.
39. **Lepley LK** and Palmieri-Smith RM. Quadriceps Strength is Associated with Sagittal Plane Knee Angles and Moments During a Dynamic Landing Following Anterior Cruciate Ligament Reconstruction. *National Athletic Trainers' Association Annual Meeting and Symposium*. St. Louis, MO. June 28, 2012. Published in *Journal of Athletic Training* 47(3):S-144.
40. **Lepley LK** and Palmieri-Smith RM. Pre-operative Quadriceps Strength is Associated with Post-operative Quadriceps Strength Following Anterior Cruciate Ligament Reconstruction. *American College of Sport Medicine Annual Meeting*. San Francisco, CA. May 31, 2012. Published in *Medicine & Science in Sports & Exercise* 44(5S):629.
41. **Klykken LW**, Thomas AC, McLean SG, Palmieri-Smith RM. Effects of Neuromuscular Fatigue on Knee Biomechanics and Muscle Activity in ACL Reconstructed Patients. *National Athletic Trainers' Association Annual Meeting and Symposium*. New Orleans, LA. June 22, 2011. Published in *Journal of Athletic Training* 46(3):S-107.
42. **Klykken LW**, Pietrosimone BG, Kim KM, Ingersoll CD, Hertel J. Effect of Acute Lateral Ankle Sprain on Motor Neuron Pool Excitability of the Soleus, Anterior Tibialis, Peroneus Longus. *National Athletic Trainers' Association Annual Meeting and Symposium*. Philadelphia, PA. June 23, 2010. Published in *Journal of Athletic Training* 45(3):S-13.

INVITED LECTURES AND SYMPOSIUM PRESENTATIONS

1. **Lepley LK.** The positive results of negative work: translating the science of eccentric exercise. Ohio Musculoskeletal and Neurological Institute Seminar Series. Ohio University. Athens, OH. September 4, 2019.
2. **Lepley LK.** Lengthening Your Perspective: Using Eccentric Exercise to Treat Neural and Morphological Deficits After Injury. *National Athletic Trainers' Association Annual Meeting and Symposium*. Las Vegas, NV. June 27, 2019.
3. **Lepley LK** and Blackburn JT. Not So Hidden Burden of PTOA: Risk Factors and Opportunities for Intervention. Athletic Trainers' Osteoarthritis Consortium Annual Meeting. Las Vegas, NV. June 24, 2019.
4. Lepley AS, Burland JP, **Lepley LK.** Mind Games: The Clinical Implications of ACL injury on Neurological Function. *New England American College of Sport Medicine Annual Meeting*. Providence, RI. November 8, 2018.
5. **Lepley LK.** We're not gonna take it: Rebelling Against the Current Prescriptive Approach after ACLR. *University of Kentucky, Division of Rehabilitation Science, Muscle Biology Forum*. Lexington, KY. October 31, 2018.
6. **Lepley LK.** Who we are, What we do, Where we're going: Sport Optimization and Rehabilitation (SOAR) Lab. *University of Connecticut Health Center Musculoskeletal Institute*. Farmington, CT. September 21, 2018.
7. Devaney L, Ingriselli J, **Lepley LK.** Combining Manual Therapy and Eccentric Exercise to Promote Lengthening in Athletes with Impaired Mobility. *National Athletic Trainers' Association Annual Meeting and Symposium*. New Orleans, LA. June 26, 2018.
8. **Lepley LK.** It's Morphin Time: Combating Abnormal Developments in Muscle Morphology After Joint Injury. *University of Connecticut, Grand Rounds*. Storrs, CT. March 23, 2018.
9. **Lepley LK** and Pietrosimone BG. Targeted Interventions to Improve Skeletal Muscle Function after ACL Reconstruction. University of Virginia 2017 Art & Science Sports Medicine Conference. Charlottesville, VA. June 08, 2017.
10. **Lepley LK.** It's Morphing Time: Combating Abnormal Developments in Muscle Morphology that Influence Recovery after Injury. University of Virginia 2017 Art & Science Sports Medicine Conference. Charlottesville, VA. June 08, 2017.
11. **Lepley LK.** Bench to Bedside: Restoring Muscle Function After Joint Injury. *University of Connecticut, Biomedical Engineering Seminar*. Storrs, CT. February 24, 2017.
12. **Lepley LK.** Challenging the Traditional Mode of Exercise Prescription After ACLR. *Connecticut Children's Medical Center*. Farmington, CT. January 05, 2016
13. **Lepley LK.** Cross-Exercise: Contralateral Limb Exercise to Promote Recovery of Neuromuscular Function in the Injured Limb. *University of Connecticut, Preceptor Training*. Storrs, CT. December 12, 2016. Approved Evidence Based Practice program by the Board of Certification.

14. **Lepley LK.** Cross-exercise: Alternative Rehabilitation Approach to Promote Immediate Recovery of Neurological Function? *University of Kentucky, Grand Rounds*. Lexington, KY. November 16, 2016.
15. **Lepley LK.** Cross-Education Training: Contralateral Limb Exercise to Promote Recovery of Neuromuscular Function in the Injured Limb. *National Athletic Trainers' Association Annual Meeting and Symposium*. Baltimore, MD. June 25, 2016.
16. **Lepley LK** and Palmieri-Smith RM. Maximizing muscle strength after ACL reconstruction: new insights to a clinical challenge. *National Athletic Trainers' Association Annual Meeting and Symposium*. Baltimore, MD. June 23, 2016.
17. **Lepley LK.** From bench to bedside: targeting muscle dysfunction after joint injury. *University of Connecticut, Animal Science Seminar Series*. Storrs, CT. February 26, 2016.
18. **Lepley LK.** Targeting muscle dysfunction after joint injury: new insights into a clinical challenge. *University of Connecticut, Grand Rounds*. Storrs, CT. October 22, 2014
19. **Lepley LK.** From bench to bedside: a translational research approach to restoring muscle function following joint injury. *University of Kentucky, Exercise Science Seminar Series Department of Kinesiology and Health Promotion*. Lexington, KY. April 3, 2015.
20. **Lepley LK.** Eccentric exercise as an intervention for muscle dysfunction after ACL injury. *University of Kentucky, Center for Muscle Biology*. Lexington, KY. March 12, 2015.
21. **Lepley LK.** Lost in translation? Using a rat model of ACL injury to promote clinical advancement. *University of Kentucky, Center for Muscle Biology*. Lexington, KY. September 24, 2014.
22. Thigpen CT, **Lepley LK**, Padua DA, Goerger BM, Bell DR. Systematic Rehabilitation, Return to Participation and Maintenance Following Traumatic Knee Joint Injury. *National Athletic Trainers' Association Annual Meeting and Symposium*. Las Vegas, NV. June 25, 2013.

EXTRAMURAL GRANTS (ONGOING)

Title: Influence of eccentric exercise on muscle and joint health following ACL injury (1K01AR071503-01A1)

Role: **Lepley, LK** (PI)

Mentors: Jepsen, Karl (primary), Brooks, Susan (co-mentor)

Source: National Institute of Arthritis, Musculoskeletal and Skin Disease Research (scored 20)

Period: 04/01/2018-03/31/2023

Amount: \$707,260 (direct + indirect)

Description: To provide the evidence-based data needed to support the incorporation of eccentric exercise into rehabilitation, we will establish a non-invasive, clinically-translatable, ACL injury in a rat model and describe the time course of biomechanical alterations, inflammatory response and PTOA progression (aim 1). We will then use this model to report the effectiveness of eccentric exercise to treat muscle weakness (aim 2) and promote bone and cartilage health after ACL injury (aim 3).

Title: MiACLR: Michigan initiative for ACL Rehabilitation (R01)

PI: Palmieri-Smith, RM

Role: **Lepley, LK** (Co-I)

Period: 09/01/2018-04/30/2023

Amount: \$3,024,036

Source: National Institute of Arthritis, Musculoskeletal and Skin Disease Research (scored 27, 16th percentile)

Description: To determine if high-intensity neuromuscular electrical stimulation combined with eccentric exercise and standard of care ACL rehabilitation is capable of improving muscle strength, cartilage health, and biomechanics following ACL reconstruction.

Title: The Effect of Fat Infiltration after Anterior Cruciate Ligament Reconstruction on Quadriceps Mechanics and Patient Reported Function

PI: Davi SM

Role: **Lepley LK** (mentor)

Source: Eastern Athletic Trainers' Association Research

Period: 07/15/2019-01/01/2021

Amount: \$10,000 (direct)

Description: To test the central hypothesis that a history of ACL reconstruction is associated with altered quadriceps mechanics, in concert with greater fat accumulation, that impede quadriceps function and are detrimental to patient reported outcomes.

EXTRAMURAL GRANTS (PENDING)

Title: Identifying the Stages of Neuromuscular Dysfunction after Anterior Cruciate Ligament Reconstruction

Role: **Lepley LK** (PI) and Grooms DR (PI)

Source: Source: National Institute of Arthritis, Musculoskeletal and Skin Disease Research

Period: 07/01/2020-06/30/2023

Amount: \$704,552 (direct + indirect)

Description: By using cutting-edge imaging technologies, we plan to serially capture detailed information about modifiable adaptations in brain and skeletal muscle anatomy that explain strength deficits to identify the stages of neuromuscular dysfunction after anterior cruciate ligament reconstruction during which patients are most likely to respond to targeted intervention.

Title: Understanding the Role of Minor Spliceosome in Amyotrophic Lateral Sclerosis

PI: Kanadia Rahul

Role: **Lepley LK** (Co-I)

Source: Source: National Institute of Health

Period: 07/01/2020-06/30/2025

Amount: \$2,365,422 (direct + indirect sub-award to UM \$475,003)

Description: To facilitate discovery of new therapeutic targets, the objective of this proposal is to understand the molecular and cellular underpinnings of motor neuron diseases.

EXTRAMURAL GRANTS (COMPLETED)

Title: Eccentric exercise to promote immediate beneficial adaptations to muscle

Role: **Lepley LK** (PI)

Mentor: Butterfield TA

Source: National Athletic Trainers' Association Research and Education Foundation, New Investigator Grant

Period: 07/01/2016-10/01/2019

Amount: \$22,998.47 (direct)

Description: To compare the cellular responses of vastus lateralis muscles that have been subjected to eccentrically or concentrically biased exercises *in vivo*.

Title: Eccentric Cross-Exercise: A Novel Approach to Promote Recovery of Muscle Strength and Lower Extremity Function after ACL Reconstruction.

Role: **Lepley LK** (PI)

Source: New England American College of Sports Medicine

Period: 10/15/2015- 10/31/2018

Amount: \$2,500 (direct)

Description: To examine the effectiveness of an eccentric cross-exercise intervention to improve neural excitability, muscle strength and lower extremity function in ACL reconstructed patient early after surgery.

Title: Quadriceps Inhibition after ACL injury: Neuromuscular and Functional Consequences

PI: Palmieri-Smith, RM

Role: **Lepley LK** (graduate research assistant)

Source: National Institute of Health, NIAMS (5-K08-053152-03)

Period: 2008 – 2012

Description: To determine the magnitude of quadriceps arthrogenic muscle inhibition necessary to alter lower extremity mechanics and to assess the feasibility of introducing NMES to reverse quadriceps weakness and restore knee kinematics.

Title: The effectiveness of a combined NMES and eccentric exercise intervention to improve quadriceps function and restore knee mechanics post-ACL reconstruction

Role: **Lepley LK** (PI)

Source: National Athletic Trainers' Association Research and Education Foundation

Period: 07/09/2013 – 05/02/2014

Amount: \$2,500 (direct)

Description: To examine the effectiveness of a combined neuromuscular electrical stimulation and eccentric exercise intervention to improve quadriceps activation, strength and knee flexion angles and moments during a dynamic landing task post-ACL reconstruction.

Title: Effect of acute lateral ankle sprain on motor neuron pool excitability of the lower leg muscles

Role: **Klykken, LW** (PI)

Source: National Athletic Trainers' Association Research and Education Foundation

Period: 12/12/2008 – 06/01/2009

Amount: \$1,000 (direct)

Description: To determine the effect of an acute lateral ankle sprain on the alpha motoneuron pool excitability of the soleus, peroneal longus, and anterior tibialis muscles.

EXTRAMURAL GRANTS (NOT FUNDED)

Title: Neuromuscular and Psychological Dysfunction: A novel Method for Evaluating Learned Helplessness after ACL Injury

PI: **Lepley, LK** and Burland JP

Source: Eastern Athletic Trainers' Association Inc.

Description: To determine if neural impairments initiate a cycle of learned helplessness after ACLR where alterations in biomechanics, strength, and self-reported function persist long after rehabilitation.

Title: Improving Soldier Readiness After Traumatic Joint Injury by Targeting Neuromuscular Deficits (ARA)

PI: **Lepley, LK** and Grooms DR

Source: Department of Defense (scored 2.0, excellent)

Description: The overall objective of this proposal is to longitudinally evaluate change in neural activity and muscle morphology after ACLR to elucidate the underlying neural and morphological mechanisms of strength loss that are needed to develop new more effective evidence-based rehabilitation strategies.

Title: NBPA & NBA Partnership with University of Connecticut for Wearable Device Validation and Review

PI: **Lepley, LK** and Casa DJ

Source: NBPA & NBA

Description: The overall objective of this proposal is to validate specific movement and biometric devices for the NBA and NBPA.

Title: Eccentric exercise in youth after ACL reconstruction: novel rehabilitation approach to targeting neuromuscular deficits

PI: **Lepley, LK**

Co-I: Grooms, DR

Source: Charles H. Hood Foundation Child Health Research Awards Program

Description: To test the ability of eccentric exercise after ACL reconstruction in youth to promote strength and physical function (aim 1) by targeting alterations in neural activity (aim 2) and muscle morphology (aim 3).

Title: MiACLR: Multi-center initiative for ACL rehabilitation (U34)

PI: Palmieri-Smith, RM

Role: **Lepley, LK** (Co-I)

Source: National Institute of Arthritis, Musculoskeletal and Skin Disease Research (scored 42, 32nd percentile)

Description: Clinical trial planning cooperative agreement to determine if high-intensity neuromuscular electrical stimulation combined with eccentric exercise and standard of care ACL rehabilitation is capable of improving muscle strength, cartilage health, and biomechanics following ACL reconstruction.

Title: Influence of patellar tendinopathy on neuromuscular function: new insights into a clinical challenge

PI: **Lepley, LK** (PI)

Co-Is: Lepley, AS; DiStefano, LJ; Denegar CR

Source: National Basketball Association and General Electric Healthcare

Description: To investigate potential neuromuscular abnormalities in patients with protracted patellar tendinopathy and the ability of an eccentric exercise intervention to ameliorate adaptations in neural activity, muscle and tendon structure.

Title: Neuroplastic mechanisms of eccentric strength training

PI: Grooms, DR

Role: **Lepley, LK** (Co-I)

Source: National Strength and Conditioning Association Foundation (submitted 03-15-2016)

Description: To determine the mechanisms underlying the unique neuroplastic adaptations associated with eccentric exercise in a healthy athletic cohort and in ACL reconstructed individuals.

Title: Comprehensive neural and morphological approach to identifying the origins of dysfunction following ACL reconstruction

PI: Lepley, AS

Co-Is: **Lepley, LK**; Kinsella-Shaw, JM

Source: Eastern Athletic Trainers' Association (submitted 03-15-2016)

Description: To determine the contributions of neural and morphological adaptations after ACL reconstruction to quadriceps weakness and clinical dysfunction.

INTRAMURAL GRANTS (ONGOING)

None

INTRAMURAL GRANTS (PENDING)

None

INTRAMURAL GRANTS (COMPLETED)

Title: Neural and Morphological Alterations After Non-Invasive ACL Rupture: Identifying Modifiable Risk Factors of Post-Traumatic Osteoarthritis

PI: **Lepley, LK** and Reed, SA

Source: Research Excellence Program, University of Connecticut

Amount: \$49,995 (direct)

Description: To longitudinally evaluate differences in neural activity, muscle morphology, and knee joint health between rats that have undergone our novel non-invasive ACL injury and control rats.

Title: Motor Control Deficits After ACL Reconstruction: Underlying Cortical Adaptations

PI: **Lepley, LK**, Lepley AS, Harrison S

CO-Is: Molfese PJ, Kinsella-Shaw JM

Source: The Connecticut Institute for the Brain and Cognitive Sciences (IBaCS) and the Institute for Collaboration on Health, Intervention, Policy (InCHIP) Seed Grant Competition, University of Connecticut

Amount: \$15,000 (direct)

Description: Investigate the underlying cortical adaptations supporting the observed change in the relative importance of vision and somatosensory information for ACLR patients.

Title: Contributions of Cortical Activation and Neural Excitability on Quadriceps Muscle Function in Patients with ACL Reconstruction

Source: The University of Connecticut's Brain Imaging Research Center

PI: Lepley AS

CO-Is: **Lepley LK** and Kinsella-Shaw JM

Period: 2016-2017

Amount: \$10,000 (20 hours MRI scan time)

Description: To determine the contributions of brain activation (motor, somatosensory and visual-motor cortices) and neural excitability (corticospinal and spinal reflexive pathways) on clinical measures of quadriceps function (muscle strength and voluntary activation).

Title: Eccentric exercise to promote muscle recovery and joint health after ACL injury

PI: **Lepley, LK**

Amount: \$2,500 (direct)

Source: Institute for Collaboration on Health, Intervention, and Policy; University of Connecticut

Description: To test the central hypothesis that a rehabilitation protocol heavily biased towards eccentric contractions will attenuate maladaptations in neural activity and muscle morphology and promote joint health better than the currently practiced standard of concentric exercise using a novel rodent model of non-invasive ACL rupture.

Title: Eccentric exercise to promote muscle function

Role: **Lepley, LK** and Butterfield, TA (Co-PIs)

Source: College of Health Sciences; University of Kentucky

Amount: \$5,000 (direct)

Description: To determine the dose-response of eccentric exercise on regulating protein synthesis and limiting micro-damage.

Title: Effectiveness of an eccentric exercise intervention to improve quadriceps strength post-ACL reconstruction

Role: **Lepley, LK** (PI)

Source: Rackham Graduate School; University of Michigan

Period: 09/04/2013 – 05/02/2014

Amount: \$3,000 (direct)

Description: To determine the effectiveness of an eccentric exercise intervention to improve quadriceps strength and knee mechanics in patients post-ACL reconstruction.

Title: Effect of NMES on quadriceps activation and knee joint mechanics in patients post-anterior cruciate ligament reconstruction

Role: **Lepley, LK** (PI)

Source: Rackham Graduate School; University of Michigan

Period: 01/12/2011 – 05/02/2014

Amount: \$1,500 (direct)

Description: To evaluate the effectiveness of neuromuscular electrical stimulation therapy to improve quadriceps activation and knee mechanics in patients post-ACL reconstruction.

INTRAMURAL GRANTS (NOT FUNDED)

Title: Perceptual-motor organizations in patients after anterior cruciate ligament reconstruction

CO-PIs: **Lepley LK**, Lepley AS, Harrison SJ

CO-I: Kinsella-Shaw JM and Molfese PJ

Period: 2016-2018

Amount: \$20,000 (direct)

Source: The Connecticut Institute for the Brain and Cognitive Sciences

Description: To investigate differences in structural brain connectivity between participants with ACL reconstruction and controls, and to understand the functional differences in cortical activation during perceptual inter-knee coordination tasks.

Title: Team Science Initiative for Human Movement Science

PI: Harrison SJ, **Lepley, LK**, Morgan K

Source: Research Excellence Program, University of Connecticut

Amount: \$50,000 (direct)

Description: To lay the groundwork for our human movement science team science initiative via the collaborative study of action.

TEACHING

University of Michigan

2013	Human Musculoskeletal Anatomy Lab (MVS 231)
2012	Prevention and Care of Athletic Injuries (AT 115)
2011, 2013	Clinical Evaluation of Lower Extremity Athletic Injuries Lab (AT 217)
2011	Functional Human Anatomy Lab (ATPE 310)
2010-2012	Clinical Evaluation of Upper Extremity Athletic Injuries Lab (AT 212)
2010-2012	Rehabilitation of Athletic Injuries Lab (AT 362)
2019	Beyond the Benchtop: Translating Neuromechanics to Performance and Injury Recovery (KINESLGY 513) *curriculum developed*

University of Connecticut

2018	Senior Thesis in Psychology (PSYCH 4197W)
2017-2018	Honors Thesis (KINS 3697W)
2016-2018	Independent Study for Undergrads (KINS 3099)
2016-2017	Therapeutic Interventions I (KINS 3102)
2016-2018	Neuromuscular Function & Effects of Injury (KINS 6535) *curriculum developed*
2016-2018	Functional Anatomy for Athletic Trainers (KINS 3120)
2015-2017	Health and Medicine (KINS 3170)
2015	Physiological Systems in Human Performance (KINS 4500)

University of Kentucky

2015	Muscle Mechanics (AT 700)
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MENTORING

Doctoral Students

1. Davi, Steven. Characterizing Changes in Quadriceps Neuromechanics After Anterior Cruciate Ligament Reconstruction. **Chair** (University of Connecticut). *Current student.*
2. White, McKenzie. **Chair** (University of Michigan). *Current student.*
3. Butler, Cody. **Committee Member** (University of Connecticut). *Current student.*
4. Hunt, Emily. **Committee Member** (University of Kentucky). *Current student.*
5. Burland, Julie. Disruptions in Physical and Neurocognitive Wellness after Anterior Cruciate Ligament Reconstruction. **Chair** (University of Connecticut). *Completed. Current Postdoctoral fellow at Harvard.*
6. Cutis, Ryan. Establishing an Injury Determinant Framework for NCAA Division I Soccer. **Committee Member** (University of Connecticut). *Completed.*
7. Harrison, Layci. Balance: Relationship to Functional Movement and Training to Minimize Asymmetry. **Committee Member** (Middle Tennessee State University). *Completed.*
8. Beltz, Eleanor. Modifiable Risk Factors Contributing to Neuromuscular Control in Adolescent Female Basketball Athletes. **Committee Member** (University of Connecticut). *Completed.*

Masters Students

1. Allen, Kirsten. **Chair** (University of Connecticut). *Current student.*
2. Walker, Johnny. Influence of Eccentric Exercise on Hamstrings Neuromuscular Function in Patients after ACL Reconstruction. **Committee Member** (University of Toledo). *Current student.*
3. Rush, Justin. **Co-Chair**. (University of Connecticut). *Completed. Current PhD student University of Toledo.*
4. Gerhart, Taylor. Exploring the Medical Model Organizational Structure on the Collegiate Athletic Trainers Quality of Life: A Case Study. **Committee Member** (University of Connecticut). *Completed.*
5. Driscoll, Colleen. Hip Muscle Activity during Functional Movement Assessment. **Committee Member** (University of Connecticut). *Completed.*
6. Peckham, Kyle. The Influence of Sport Specialization on Neuromuscular Control in High School Athletes. **Committee Member** (University of Connecticut). *Completed.*
7. Davi, Steven. Neuromuscular Alterations in Patients with Patellar Tendinopathy. **Co-Chair** (University of Connecticut). *Completed.*
8. Johnson, Alexa. Underlying Factors of Neural Activity that Regulate Torque Development after Anterior Cruciate Ligament Reconstruction. **Committee Member** (University of Michigan). *Completed.*

9. Blanchard, Adam. Resting Blood Pressure and Muscle Strength in Healthy Men and Women. **Committee Member** (University of Connecticut). *Completed.*
10. Fitzpatrick, Shane. Ankle Health Regulates Lower Extremity Muscle Behavior and Coordination in Walking Rats. **Committee Member** (University of Kentucky). *Completed.*

Physical Therapy Doctoral Research Projects

1. McCormick, Grace. Eccentric Exercise to Promote Immediate Beneficial Adaptations to Muscle. **Chair** (University of Connecticut). *Current student.*
2. Frechette, Laura. Chronic Adaptations in Knee Biomechanics and Neuromuscular Function After ACL Reconstruction. **Chair** (University of Connecticut). *Current student.*
3. Mosher, Jennifer. Eccentric Cross-Exercise After ACL Reconstruction: Case Series Investigation of a Novel Approach to Enhance Recovery of Neuroplasticity. **Chair** (University of Connecticut). *Completed.*
4. Digiacomio, Jessica. Do Alterations in Knee Morphology Differ Between Patients that Have Experienced a Secondary ACL Injury and Those That Do Not? **Chair** (University of Connecticut). *Completed.*
5. Woxholdt, Colleen. Analyzing the Neural Contributors to Poor Muscle Activation After ACL Reconstruction. **Chair** (University of Connecticut). *Completed.*

Undergraduate Research Projects

1. Csordas, David. Lost in Translation? Examining the Effect of a Non-Invasive ACL Injury on Muscle Activation. **Honors Thesis - Advisor** (University of Connecticut). *Completed.*
2. Porto, Gustavo. The Effect of Age and Sex on Non-Invasive Anterior Cruciate Ligament Tear Mechanism. **Honors Thesis - Advisor** (University of Connecticut). *Completed.*
3. Burke, Margaret. Learned Helplessness and the use of Transcranial Direct Current Stimulus in ACLR Patients. **Honors Thesis - Advisor** (University of Connecticut). *Completed.*
4. Dragotta, Kristen. Investigating the Underlying Neurological Factors that Regulate Force Production After ACL Reconstruction. **Honors Thesis - Advisor** (University of Connecticut). *Completed.*
5. Cofield, Kaitlyn. Analyzing the Influence of Barriers and Facilitators on Perceived Function vs. Physical Function after Anterior Cruciate Ligament Reconstruction. **Honors Thesis - Advisor** (University of Connecticut). *Completed.*
6. Redman, John. How Does Knee Morphology Contribute to ACL Re-injury? **Committee Member** (University of Michigan). *Completed.*
7. Stortini, Nicole. Pre-operative Quadriceps Strength is Associated with Post-operative Quadriceps Strength, Not Hop Distance Following ACL Reconstruction. **Committee Member** (University of Michigan). *Completed.*
8. Strickland, MA. Alterations in Hamstring Activity at Return-To-Play Post-ACLR: Protective Mechanism Among Patients That Do Not Reinjure? **Committee Member** (University of Michigan). *Completed.*

9. Hilu, Sarah. The Effectiveness of Neuromuscular Electrical Stimulation to Promote the Recovery of Quadriceps Strength. **Committee Member** (University of Michigan). *Completed.*

High School Research Projects

1. Marimon, Lauren. Kinesiophobia and pain negatively affect ACL recovery. Glastonbury High School Advanced Research Program. **Primary Mentor** (Glastonbury High School, Glastonbury CT). *Completed.*

PROFESSIONAL CERTIFICATIONS

2015-pres	State of Connecticut, Controlled Substance Laboratory License; 0001125
2015-pres	Connecticut Dept. of Public Health, Licensed Athletic Trainer; 1081
2015-pres	American Society of Biomechanics; 5023
2010-2014	Michigan Dept of Community Health, Licensed Athletic Trainer; 2601000081
2009-pres	National Provider Identification Number; 1720229537
2008-2010	Virginia Board of Medicine, Licensed Athletic Trainer; 0126001277
2008-2010	Virginia High School League Certified Measurer; CM750
2008-pres	Board Certified Athletic Trainer; 050802079
2007-pres	National Athletic Trainer's Association; 1012916
2006-pres	American Red Cross CPR/AED Professional Rescuer Certification
2005-pres	American Red Cross First Aid Certified

PROFESSIONAL SERVICE ACTIVITIES

Manuscript Reviewer

2019-pres	Journal of Musculoskeletal and Neuronal Interactions
2019-pres	International Journal of Athletic Therapy & Training
2019-pres	Sports Medicine
2017-pres	Frontiers in Physiology
2016-pres	Muscle & Nerve
2015-pres	Journal of Science and Medicine in Sport
2015-pres	Journal of Orthopaedic Research
2015-pres	American Journal of Sports Medicine
2015-pres	Medicine & Science in Sports & Exercise
2015-pres	BioMed Central Musculoskeletal Disorders
2014-pres	BioMed Research International
2014-pres	Clinical Biomechanics
2014-pres	Physical Therapy in Sport
2014-pres	Knee Surgery Sport Traumatology Arthroscopy
2013-pres	Clinical Journal of Sport Medicine
2012-pres	Journal of Sports Rehabilitation
2012-pres	Athletic Training & Sports Health Care
2011-pres	Sports Health: A Multidisciplinary Approach
2011-pres	Journal of Athletic Training

Affiliations

2019-pres	University of Michigan, Michigan Integrative Musculoskeletal Health Core Center (NIAMS P30), Member
2016-pres	Athletic Trainers' Osteoarthritis Consortium, Promoting Collaborations Committee Member
2016-2019	University of Connecticut, Center for Advancing Pain Management, Member
2016-2019	University of Connecticut, Institute for Brain and Cognitive Sciences, Member
2014-2019	University of Connecticut, Institute for Collaboration on Health, Intervention, and Policy, Member

Grant Application Reviewer

2017-pres National Athletic Trainers' Association Research and Education Foundation
2016-2019 University of Connecticut, Institute for Collaboration on Health, Intervention, and Policy,
Seed Grants
2016-2019 University of Connecticut, Institute for Collaboration on Health, Intervention, and
Policy, Grant Proposal Incubator, Advisory Board Member
2015-2019 University of Connecticut, UConn IDEA Grants