

Riann M. Palmieri-Smith, PhD, ATC, FNATA, FNAK
Curriculum Vitae

School of Kinesiology
University of Michigan
830 N. University Avenue
Ann Arbor, MI 48109-1048

Phone: (734) 615-3154
Fax: (734) 936-1925
Email: riannp@umich.edu

Education

Ph.D.	University of Virginia	Sports Medicine/Athletic Training	2004
M.S.	Indiana State University	Athletic Training	2000
B.S.	California University of Pennsylvania	Athletic Training	1999

Professional Experience

Professor, Athletic Training, School of Kinesiology, University of Michigan, 2021-present
Co-Chair, IRB Health and Behavioral Sciences, University of Michigan, 2021-present
Associate Professor, Athletic Training, School of Kinesiology, University of Michigan, 2010-2021
Program Area Chair, Athletic Training, School of Kinesiology, University of Michigan, 2004-present
Associate Professor, Dept. of Orthopaedic Surgery, University of Michigan, 2010-present
Assistant Professor, Athletic Training, School of Kinesiology, University of Michigan, 2004-2010
Adjunct Associate Professor, Movement Science, School of Kinesiology, U. of Michigan, 2010-2021
Adjunct Assistant Professor, Movement Science, School of Kinesiology, U. of Michigan, 2005-2010
Director of Athletic Training Education, School of Kinesiology, U. of Michigan, 2004-2006
Assistant Professor, Dept. of Human Services, Curry School of Education, U. of Virginia, 2004
Doctoral Fellow in Sports Medicine, Dept. of Human Services, Curry School of Education, U. of Virginia, 2002-2003
Doctoral Fellow in Life Science, Dept. of Athletic Training, Indiana State University, 2000-2002
Graduate Assistant Athletic Trainer, Dept. of Athletic Training, Indiana State University, 1999-2000
Research Assistant, West Virginia University, 1997-1999

Honors and Awards

Fellow, National Academy of Kinesiology, 2023, Fellow #638
Fellow, National Athletic Trainers' Association, 2017
Loan Repayment Award, National Institutes of Health, 2010-2012
Loan Repayment Award, National Institutes of Health, 2008-2010
New Investigator Award, National Athletic Trainers' Research and Education Foundation, 2007
Loan Repayment Award, National Institutes of Health, 2006-2008
Second runner-up Clint Thompson Manuscript Award, Journal of Athletic Training, 2004
Outstanding Alumni Award, Department of Health Science and Sports Studies, California University of Pennsylvania, 2005
Young Professional Alumni Award, College of Health and Human Performance, Indiana State University, 2005
David H. Perrin Dissertation Award, National Athletic Trainers' Research and Education Foundation, 2005
Outstanding Doctoral Student Oral Presentation, National Athletic Trainers' Research and Education Foundation, 2004

Outstanding Masters Student Oral Presentation, National Athletic Trainers' Research and Education Foundation, 2004 (Student's Mentor)

Graduate Award, Indiana State University 6th Annual Research Showcase, 2002

Outstanding Graduate Student Award, Indiana State University Department of Athletic Training, 2000

Outstanding Senior Student Athletic Trainer, California University of Pennsylvania, 1999

Presidential Scholar, California University of Pennsylvania, 1997-1999

Peer Reviewed Publications (reverse chronological order; * represents graduate student or post-doc I mentored)

1. Crone AJ, Johnson AK, Recchia R, Tayfur A, Wojtys EM, Krishnan C, **Palmieri-Smith RM**. Decoupling speed matters: Optimizing gait mechanics after anterior cruciate ligament reconstruction with Split-belt adaptation training of the healthy leg. *Clin Biomech*. 2026; 137: 106872.
2. White MS, Garcia, SA, Pang Y, Casey CL, **Palmieri-Smith RM**, Lepley LK. Patellofemoral Cartilage Changes Are Not Associated with Quadriceps Metrics after ACLR with Patellar Tendon Autografts. *J Orthop Res*. 2025; 43:1432-1441.
3. Tayfur B*, Johnson AK, **Palmieri-Smith RM**. Compromised quadriceps and hamstring force control, not maximal strength, is associated with gait biomechanics at 9 months following ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc*. 2025; 33: 4466-4474.
4. Rodriguez KM*, **Palmieri-Smith RM**, Krishnan C. Operant Upconditioning of the Quadriceps Motor Evoked Torque as a Means to Improve Quadriceps Function After ACL Reconstruction. *Sports Health*. 2025; 17: 1293-1305.
5. Johnson AK, Recchia R, Tayfur A, Krishnan C, **Palmieri-Smith RM**. Speeding Up or Slowing Down: The Effect of Decoupling Speed on Knee Biomechanics and Limb Loading during Split-Belt Treadmill Training in Persons with ACL Reconstruction. *Am J Sports Med*. 2025; 53: 2591-2599.
6. Gardi A, Rodriguez KM, Augestein T, **Palmieri-Smith RM**, Krishnan C. No evidence of hysteresis in quadriceps or hamstring active motor evoked potentials. *Restorative Neurology and Neuroscience*. 2024; 42: 2591-2599.
7. Garcia SA, Pamukoff DN, Dennis J, **Palmieri-Smith RM**. Inter-joint coordination and lower limb support in those with ACL reconstruction. *J Biomech*. 2025; 186:112727.
8. Rodriguez KM*, Moon KM, **Palmieri-Smith RM**, Krishnan C. Conditioning of Motor Evoked Responses following Anterior Cruciate Ligament Reconstruction: Effects of Stimulus Intensity. *Sports Health*. 2025; 17: 281-290.
9. Rodriguez KM*, Krishnan C, **Palmieri-Smith RM**. Number of conditioning trials, but not stimulus intensity, influences operant conditioning of brain responses after total knee arthroplasty. *Knee Surg Sports Traum Arthrosc*. 2025; 33: 967-976.
10. Johnson AK, McCollin T, Garcia SA, Krishnan C, **Palmieri-Smith RM**. The relationship between knee joint effusion and quadriceps strength and activation after anterior cruciate ligament (ACL) injury and reconstruction. *J Athl Train*; 60: 502-509.
11. White MS*, Mancini LM, Stoneback L, **Palmieri-Smith RM**, Lepley LK. Chronic Adaptions in Quadriceps Fascicle Mechanics Are Related to Altered Knee Biomechanics After Anterior Cruciate Ligament Reconstruction. *J Appl Biomech*; 2024; 40: 346-355.
12. White MS*, Ogier AC, Chenevert TL, Zucker E, Stoneback L, Michel CP, **Palmieri-Smith RM**, Lepley LK. Beyond weakness: Exploring intramuscular fat and quadriceps atrophy in ACLR recovery. *J Orthop Res*. 2024; 42: 2485-2494.

13. Garcia SM*, White MS*, Gallegos J, Balza I, Kahan S, **Palmieri-Smith RM**. Associations between body mass index, gait mechanics, and in vivo cartilage function after exercise in those with anterior cruciate ligament reconstruction. *Am J Sports Med*. 2024;52: 3295-3305.
14. Garcia SM*, White MS*, Gallegos J, Balza I, Kahan S, **Palmieri-Smith RM**. Associations between body mass index, gait mechanics, and cartilage thickness in those with ACL reconstruction. *Med Sci Sport Exerc*. 2024;56: 1805-1815.
15. Tayfur B,* Ritsche P, Sunderlik O, Wheeler M, Ramirez E, Leuteneker J, Faude O, Franchi MV, Johnson AK, **Palmieri-Smith R**. Automatic Segmentation of Quadriceps Femoris Cross-Sectional Area in Ultrasound Images: Development and Validation of Convolutional Neural Networks in People With Anterior Cruciate Ligament Injury and Surgery. *Ultrasound Med Biol*. 2024; 51: 364-372.
16. Tayfur B,* Johnson AK, **Palmieri-Smith RM**. Changes in quadriceps rate of torque development after anterior cruciate ligament reconstruction and association to single-legged hop distance. *Sports Health*. 2024; 16: 808-816.
17. Johnson AK, Rodriguez KM, Lepley AS, **Palmieri-Smith RM**. Quadriceps torque complexity before and after anterior cruciate ligament reconstruction. *J Sci Med Sport*. 2023; 26(10):533-538.
18. White MS*, **Palmieri-Smith RM**, Lepley LK. Open-sourced semi-automatic program for ultrasound assessments of femoral trochlear cartilage health. *Comput Methods Biomech Biomed Engin*. 2024;27:531-7.
19. Garcia S*, Pamukoff DN, Johnson AK, **Palmieri-Smith RM**. Joint and limb loading during gait in adults with ACL reconstruction: comparison between single-step and cumulative load metrics. *Med Sci Sport Exerc*. 2023;55:1706-16.
20. Garcia S*, Johnson AK, Orzame M, **Palmieri-Smith RM**. Biomechanical effects of manipulating preferred cadence during treadmill walking in patients with anterior cruciate ligament reconstruction. *Sports Health*; 2024: 16: 420-428.
21. Garcia SA*, Johnson AK*, Brown SR*, Washabaugh EP, Krishnan C†, **Palmieri-Smith RM†**. Dynamic knee stiffness during waking is increased in individuals with ACL reconstruction. *J Biomech*. 2023;146:111400. †co-corresponding authors
22. Krishnan C, Johnson AK, **Palmieri-Smith RM**. Mechanical Factors Contributing to Altered Knee Extension Moment during Gait after ACL Reconstruction: A Longitudinal Analysis. *Med Sci Sport Exerc*. 2022;54(12):2208-2215.
23. Rodriguez KM*, **Palmieri-Smith RM**, Krishnan C. Quadriceps motor evoked torque is a reliable measure of corticospinal excitability in individuals with ACL reconstruction. *J Electromyog Kines*. 2022;67:102700.
24. **Palmieri-Smith RM†**, Brown S*, Wojtys EM, Krishnan C†. Functional resistance training improves thigh muscle strength after ACL reconstruction: A randomized clinical trial. *Med Sci Sports Exerc*. 2022; 54: 1729-1737. †co-corresponding authors
25. Johnson AK*, Brown SR*, **Palmieri-Smith RM†**, Krishnan C†. Functional resistance training after ACL reconstruction improves knee angle and moment symmetry during gait: a randomized controlled trial. *Arthroscopy*. 2022;38(11):3043-3045. †co-corresponding authors
26. Washabaugh EP, Brown SR*, **Palmieri-Smith RM**, Krishnan C. Functional resistance training differentially alters gait kinetics after ACL reconstruction. A pilot study. *Sports Health*. In press.
27. **Palmieri-Smith RM**, Garcia SA*, Rodriguez KM*, Krishnan C. Electrically-evoked torque at rest is strongly related to quadriceps muscle size in patients with anterior cruciate ligament reconstruction. *Measurement in Phys Ed Exer Sci*. 2022;26(3):199-206.
28. Rodriguez KM*, Curran MT, **Palmieri-Smith RM**. The influence of sex and BMI on cartilage metabolism biomarkers in patients after anterior cruciate ligament injury and reconstruction. *J Athl Train*. 2022; 57(5):478-84.

29. Garcia SA*, Brown SR*, Kojic M, Krishnan CM, **Palmieri-Smith RM**. Gait asymmetries are more apparent at faster walking speeds in individuals early after ACL reconstruction. *J Orthop Res*. 2022; 40(1): 219-230.
30. **Palmieri-Smith RM**, Curran MT*, Garcia SA*, Krishnan C. Factors that predict sagittal plane knee biomechanical symmetry after ACL reconstruction: A decision tree analysis. *Sports Health*. 2022;14(2):167-175.
31. Kim H, **Palmieri-Smith RM**, Kipp K. Muscle synergies in people with chronic ankle instability during anticipated and unanticipated cutting tasks. *J Athl Train*. 2023; 58(2): 143-152.
32. Kim H, **Palmieri-Smith RM**, Kipp K. Peak forces and force generating capacities of lower extremity muscle during dynamic tasks in people with and without chronic ankle instability. *Sports Biomech*. 2022; 21: 487-500.
33. Kim H, **Palmieri-Smith RM**, Kipp K. Muscle force contributions to ankle joint contact forces during an unanticipated cutting task in people with chronic ankle instability. *J Biomech*. 2021; 124: 110566.
34. Pang Y, **Palmieri-Smith RM**, Maerz T. An efficient R1rho dispersion imaging method for human knee cartilage using constant magnetization prepared turbo-FLASH. *NMR Biomed*. 2021; 34(6):e4500.
35. Rodriguez KM*, **Palmieri-Smith RM**, Krishnan C. How does anterior cruciate ligament reconstruction affect the functioning of the brain and spinal cord? A systematic review with meta-analysis. *J Sport Health Sci*. 2021; 10(2):172-81.
36. **Palmieri-Smith RM**, Mack CD, Brophy RH, Owen BD, Herzog MM, Beynon BD, Spindler KP, Wojtyk EM; NFL Musculoskeletal Research Committee. Epidemiology of Anterior Cruciate Ligament Tears in the National Football League. *Am J Sports Med*. 2021; 49(7): 1786-93.
37. Kim H, **Palmieri-Smith RM**, Kipp K. Time-frequency analysis of muscle activation patterns in people with chronic ankle instability during landing and cutting tasks. *Gait Posture*. 2020; 82: 203-208.
38. Rodriguez KM*, Garcia SA*, Spino C, Wojtyk EM, Bedi A, Lepley LK, Pang Y, Ruffino B, Bolley T, Kellum J, Swartout A, **Palmieri-Smith RM**. Michigan Initiative for Anterior Cruciate Ligament Rehabilitation (MiACLR): A Protocol for a Randomized Clinical Trial. 2020; 100(12):2154-64.
39. Garcia SA*, Rodriguez KM*, Krishnan C, **Palmieri-Smith RM**. Type of measurement used influences central and peripheral contributions to quadriceps weakness after anterior cruciate ligament reconstruction. *Phys Ther Sport*. 2020; 46: 14-22.
40. Brown SA*, Dutt-Mazumder A, Washabaugh EP, Wojtyk EM, **Palmieri-Smith RM**, Krishnan CK. Functional resistance training to improve knee strength and function after acute anterior cruciate ligament reconstruction: A case study. *Sports Health*. 2021;13(2): 136-41.
41. Rodriguez KM*, **Palmieri-Smith RM**, Krishnan C. Alterations in the Neural Excitability of the Quadriceps Muscle after Anterior Cruciate Ligament Reconstruction: A Systematic Review and Meta-Analysis. *J Sport Health Sci*. 2021; 10(2):172-81.
42. Curran MT*, Bedi A, Kujawa M, **Palmieri-Smith RM**. A cross-sectional examination of quadriceps strength, biomechanical function, and functional performance from 9 to 24 months after Anterior Cruciate Ligament Reconstruction. *Am J Sports Med*. 2020;48(10):2438-46.
43. Garcia SA*, Rodriguez KM*, Brown SR*, **Palmieri-Smith RM**, Krishnan C. Estimates of voluntary activation in individuals with anterior cruciate ligament reconstruction: Effects of type of stimulator, number of stimuli, and quantification technique. *J Sport Health Sci*. 2020;46:14-22.
44. Garcia SA*, Curran MT*, **Palmieri-Smith RM**. Longitudinal assessment of quadriceps muscle morphology before and after anterior cruciate ligament reconstruction and its associations with patient-reported outcomes. *Sports Health*. 2020; 12(3): 271-8.
45. Curran MT*, Bedi A, Mendias CL, Wojtyk EM, Kujawa MV, **Palmieri-Smith RM**. Blood flow restriction training applied with high-intensity exercise does not improve quadriceps muscle

function after anterior cruciate ligament reconstruction: A randomized controlled trial. *Am J Sports Med.* 2020; 48(4): 835-37.

46. **Palmieri-Smith RM**; Strickland M; 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.* 2019;11(4): 316-323.
47. Krishnan C, Washabaugh EP, Dutt-Mazumder A, Brown SR, Wojtys EM, **Palmieri-Smith RM**. Conditioning brain responses to improve quadriceps function in an individual with anterior cruciate ligament reconstruction. *Sports Health.* 2019; 11(4): 306-15.
48. Pang Y, **Palmieri-Smith RM**, Malyarenko DI, Swanson SD, Chenevert TL. A unique anisotropic R2 of collagen degeneration (ARCADE) mapping as an effective composite relaxation metric (R2-R1p) in human knee cartilage study. *Magn Reson Med.* 2019; 81: 3766-3774.
49. Curran MT*, Lepley LK, **Palmieri-Smith RM**. Continued improvements in quadriceps strength and biomechanical symmetry of the knee after postoperative anterior cruciate ligament reconstruction rehabilitation: is it time to reconsider the 6-month return-to-activity criteria? *J Athl Train.* 2018; 53: 535-544.
50. Digiacoio JE, **Palmieri-Smith RM**, Redman JA, Lepley LK. Examination of knee morphology after secondary ipsilateral ACL injury compared with those who have not been reinjured: A preliminary study. 2018. *J Sport Rehabil.* 27: 73-82.
51. Johnson AK*, **Palmieri-Smith RM**, Lepley LK. Contribution of neuromuscular factors to quadriceps asymmetry after anterior cruciate ligament reconstruction. 2018. *J Athl Train.* 53: 347-354.
52. Lapointe AP, Nolasco LA, Sosnowski, Andrews E, Martini DN, **Palmieri-Smith RM**, Gates D, Broglio SP. Kinematic differences during a jump cut maneuver between individuals with and without a concussion history. *Intern J of Psychophys.* 2017.
53. Thomas AC*, **Palmieri-Smith RM**. Knee frontal-plane biomechanics in adults with or without bone marrow edema-like lesions after anterior cruciate ligament injury. *J Athl Train.* 2017; 42: 581-86.
54. **Palmieri-Smith RM**, Cameron KL, DiStefano LJ, Driban JB, Pietrosimone B, Thomas AC, Tourville TW, Consortium ATO. The Role of athletic trainers in preventing and managing posttraumatic osteoarthritis in physically active populations: a consensus statement of the athletic trainers' osteoarthritis consortium. *J Athl Train.* 2017; 52: 610-23.
55. Thomas AC, Hubbard-Turner T, Wikstrom EA, **Palmieri-Smith RM**. Epidemiology of posttraumatic osteoarthritis. *J Athl Train.* 2017; 52: 491-496.
56. **Palmieri-Smith RM**, Potter HS, Wojtys EM. Early cartilage changes after ACL injury: Evaluation with imaging and serum biomarkers – A pilot study. *Arthroscopy.* 2016; 32: 1309-18.
57. Lepley LK* and **Palmieri-Smith RM**. Pre-operative quadriceps activation is related to post-operative activation, not strength, in patients post-ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc.* 2016; 24: 236-46.
58. Thomas AC*, Wojtys EM, Brandon C, **Palmieri-Smith RM**. Muscle atrophy contributes to quadriceps weakness after ACL reconstruction. *J Sci Med Sport.* 2016; 19:7-11.
59. Thomas AC,* McLean SG, **Palmieri-Smith RM**. Effects of Neuromuscular Fatigue and Quadriceps Inhibition on Knee Biomechanics. *J Orthop Sports Phys Ther.* 2015; 45: 1042-50.
60. 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. *J Orthop Sports Phys Ther.* 2015; 45:1017-25.
61. Lepley LK*, Wojtys EM, **Palmieri-Smith RM**. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation Post-ACL Reconstruction to Improve Knee Mechanics. *Clin Biomech.* 2015; 30: 738-47.

62. Lepley LK*, Wojtys EW, **Palmieri-Smith RM**. Does concomitant meniscectomy or meniscal repair affect the recovery of quadriceps function post-ACL reconstruction? *Knee Surg Sports Traumatol Arthrosc*. 2015; 23: 2756-61.
63. Lepley LK*, Wojtys EW, **Palmieri-Smith RM**. Combination of eccentric exercise and neuromuscular electrical stimulation post-ACL reconstruction to improve quadriceps function. *Knee*. 2015; 22:270-7.
64. **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. *Am J Sports Med*. 2015; 43:1662-9.
65. Lepley LK* and **Palmieri-Smith RM**. Cross-education strength and activation after eccentric exercise. *J Athl Train*. 2014; 49: 582-9.
66. Brown TN*, McLean SG, **Palmieri-Smith RM**. Associations between lower limb muscle activation strategies and resultant multi-planar knee kinetics during single leg landings. *J Sci Med Sport*. 2014;17: 408-13.
67. Brown TN*, **Palmieri-Smith RM**, McLean SG. Comparative adaptation of lower limb biomechanics during unilateral and bilateral landings after different neuromuscular-based ACL injury prevention protocols. *J Strength Cond Res*. 2014; 28: 2859-71.
68. Beaulieu ML*, **Palmieri-Smith RM**. Real-time feedback on knee abduction moment does not improve frontal-plane knee mechanics during jump landings. *Scan J Med Sci Sports*. 2014; 24: 692-699.
69. Kipp K*, **Palmieri-Smith RM**. Differences in kinematic control of ankle joint motions in people with chronic ankle instability. *Clin Biomech*. 2013; 48: 186-91.
70. **Palmieri-Smith RM**, Villwock M, Downie B, Hecht G, Zernicke R. Pain and Effusion on Quadriceps Activation and Strength. *J Athl Train*. 2013;48:186-91.
71. Lepley LK* and **Palmieri-Smith RM**. Effect of eccentric strengthening following anterior cruciate ligament reconstruction on quadriceps strength. *J Sport Rehabil*. 2013;22:150-6.
72. Lepley LK*, Thomas AC, McLean SG, **Palmieri-Smith RM**. Fatigue's lack of effect on thigh-muscle activity in ACL reconstructed patients during a dynamic landing task. *J Sport Rehabil*. 22:83-92.
73. Kipp K*, Brown TN, McLean SG, **Palmieri-Smith RM**. Decision-making and experience level influence frontal plane knee joint biomechanics during a cutting maneuver. *J Appl Biomech*. 2013;29: 756-62.
74. Thomas AC*, Wojtys EM, **Palmieri-Smith RM**. Lower extremity muscle strength following ACL injury and reconstruction. *J Athl Train*. 2013; 48:610-20.
75. Kipp K* and **Palmieri-Smith RM**. Principal component based analysis of biomechanical inter-trial variability in individuals with chronic ankle instability. *Clin Biomch*. 2012; 27: 706-10.
76. Thomas AC*, **Palmieri-Smith RM**, McLean SG. Isolated hip and ankle fatigue are unlikely risk factors for ACL injury. *Scand J Med Sci Sports*. 2011; 21: 359-68.
77. Kipp K*, McLean SG, **Palmieri-Smith RM**. Patterns of hip flexion motion predict frontal and transverse plane knee torques during a single-leg land-and-cut maneuver. *Clin Biomech*. 2011; 26:504-8.
78. **Palmieri-Smith RM**, Thomas AC, Karvonen-Gutierrez, Sowers MF. A clinical trial of neuromuscular electrical stimulation in improving quadriceps strength and activation among women with mild and moderate osteoarthritis. *Phys Ther*. 2010; 144:1-52.
79. **Palmieri-Smith RM**, Thomas AC, Karvonen-Gutierrez, Sowers MF. Isometric Quadriceps Strength in Women with Mild, Moderate, and Severe Knee Osteoarthritis. *Am J Phys Med Rehab*. 2010;89:541-8.
80. Thomas AC*, McLean SG, **Palmieri-Smith RM**. Quadriceps and Hamstrings Fatigue Alters Hip and Knee Mechanics. *J Appl Biomech*. 2010; 26:159-170.

81. Thomas AC*, Sowers M, Karvonen-Gutierrez C, **Palmieri-Smith RM**. Lack of quadriceps dysfunction in women with early knee osteoarthritis. *J Orthop Res*. 2010; 28: 595-9.
82. Hopkins JT, Brown TN, Christensen L, **Palmieri-Smith RM**. Deficits in peroneal latency and electromechanical delay in patients with functional ankle instability. *J Orthop Res*. 2009; 27: 1541-6.
83. Brown TN*, **Palmieri-Smith RM**, McLean SG. Sex and limb differences in hip and knee kinematics and kinetics during anticipated and unanticipated jump landings: implications for anterior cruciate ligament injury. *Br J Sports Med*. 2009; 43: 1049-56.
84. Sowers M, Karvonen-Gutierrez CA, **Palmieri-Smith RM**, Jacobson JA, Jiang Y, Ashton-Miller JA. Knee osteoarthritis in obese women with cardiometabolic clustering. *Arthritis Rheum*. 2009;61(10):1328-1336.
85. **Palmieri-Smith RM** and Thomas AC. A neuromuscular mechanism of post-traumatic osteoarthritis associated with ACL injury. *Exerc Sci Sport Rev*. 2009;37(3): 147-153.
86. **Palmieri-Smith RM**, McLean SG, Ashton-Miller JA, Wojtys EM. Lateral quadriceps and hamstring co-contraction contributes to greater knee abduction loads in females. *J Athl Train*. 2009;44(3): 256-263.
87. **Palmieri-Smith RM**, Hopkins JT, Brown TN. Peroneal activation deficits in persons with functional ankle instability. *Am J Sports Med*. 2009;37(5): 982-9.
88. Zernicke RF, Antle KA, McLean SG, **Palmieri-Smith RM**, Ashton-Miller JA, Wojtys EM. Play at your own risk: Sport and the injury epidemic. *J Intercollegiate Sport*. 2009; 2: 42-63.
89. **Palmieri-Smith RM**, Wojtys EM, Ashton-Miller JA. Association between preparatory muscle activation and peak knee valgus angle. *J Electromyogr Kinesiol*. 2008;18(6): 973-9.
90. **Palmieri-Smith RM**, Thomas AC, Wojtys EM. Maximizing Quadriceps Function after ACL reconstruction. *Clin Sports Medicine*. 2008; 27: 405-24. (Invited)
91. Hart JM, Garrison JC, **Palmieri-Smith RM**, Kerrigan DC, Ingersoll CD. Lower Extremity Joint Moments of Collegiate Soccer Players Differ Between Genders During a Forward Jump. *J Sport Rehabil*. 2008;17(2):137-47.
92. Bowman TG, **Palmieri-Smith RM**. Humeral Head Epiphyseal Plate Fracture in a Collegiate Track and Field Decathlete: A Case Study. *J Sport Rehabil*. 2008; 17(1): 76-83.
93. Berg CL, Hart JM, Cross KM, **Palmieri-Smith RM**, Ingersoll CD. Cryotherapy Does Not Effect Peroneal Reaction Following Sudden Inversion. *J Sport Rehabil*. 2007; 16(4): 285-294.
94. **Palmieri-Smith RM**, Kreinbrink J, Ashton-Miller JA, Wojtys EM. Quadriceps inhibition induced by an experimental knee joint effusion affects knee joint mechanics during a single-legged drop landing. *Am J Sports Med*. 2007; 35(8): 1269-1275.
95. Hart JM, Garrison JC, Kerrigan DC, **Palmieri-Smith RM**, Ingersoll CD. Gender Differences In Gluteus Medius Muscle Activity Exist In Soccer Players Performing A Forward Jump. *Res Sports Med*. 2007;15(2):147-55.
96. Agel J, **Palmieri-Smith RM**, Dick R, Wojtys EM, Marshall SW. Descriptive epidemiology of collegiate women's volleyball injuries: national collegiate athletic association injury surveillance system, 1988-1998 through 2003-2004. *J Athl Train*. 2007; 42: 295-302.
97. **Palmieri-Smith RM**, Leonard JL, Garrison, JC, Weltman AL, Ingersoll CD. Peripheral joint cooling increases spinal reflex excitability and serum norepinephrine. *Int J Neurosci*. 2007; 117:229-42.
98. Bowman TG, Hart JM, **Palmieri RM**, McGuire BA, Ingersoll CD. A functional fatiguing protocol and deceleration time of the shoulder from an internal rotation perturbation. *J Athl Train*. 2006; 41: 275-279.
99. Russell KA, **Palmieri RM**, Zinder SM, Ingersoll CD. Gender differences in valgus knee angle during a single-leg landing. *J Athl Train*. 2006;41:166-171.
100. **Palmieri RM**, Garrison JC, Leonard JL, Weltman AL, Edwards JE, Ingersoll CD. The effects of focal ankle joint cooling on local and core temperature. *J Athl Train*. 2006;41: 185-188.

101. Sowers MF, Jannausch ML, Gross M, Karvonen CA, **Palmieri RM**, Crutchfield M, Richards-McCullough K. Performance-based Physical Functioning in African American and Caucasian Women at Mid-Life: Considering Body Composition, Leg Strength, and Knee Osteoarthritis. *Am J Epidemiol.* 2006;163:950-8.
102. McVey ED, **Palmieri RM**, Docherty CL, Zinder SM, Ingersoll CD. Arthrogenic muscle inhibition is present in patients exhibiting functional ankle instability. *Foot Ankle Intl.* 2005;26(12): 1055-1061.
103. Garrison JC, Hart JM, **Palmieri RM**, Kerrigan DC, Boxer J, Ingersoll CD. Comparison of knee joint moments in male and female college soccer players during a single-leg landing. *J Sport Rehabil.* 2005;14(4): 332-337.
104. **Palmieri RM**, Tom JA, Weltman AL, Edwards JE, Saliba EN, Mistry DJ, Ingersoll CD. Pre-synaptic modulation of quadriceps arthrogenic muscle inhibition. *Knee Surg Sports Traumatol Arthrosc.* 2005;13:370-6.
105. **Palmieri RM** and Ingersoll CD. Intersession reliability of a protocol to assess paired reflex depression in the vastus medialis. *Int J Neurosci.* 2005;115: 735-40.
106. Garrison JC, Hart JM, **Palmieri RM**, Kerrigan DC, Ingersoll CD. Lower extremity EMG does not differ between male and female collegiate soccer players during single-leg landing. *J Sport Rehabil.* 2005;14: 48-57.
107. **Palmieri RM**, Tom JA, Weltman AL, Edwards JE, Saliba EN, Mistry DJ, Ingersoll CD. Soleus arthrogenic muscle response induced by an experimental knee joint effusion is mediated by pre- and post-synaptic spinal mechanisms. *J Electromyogr Kinesiol.* 2004; 14: 631-640.
108. **Palmieri RM**, Ingersoll CD, Hoffman MA. The Hoffmann Reflex: Methodological considerations and applications for use in sports medicine research. *J Athl Train.* 2004; 39: 268-277.
109. **Palmieri RM**, Weltman AL, Tom JA, Edwards JE, Saliba EN, Mistry DJ, Ingersoll CD. Plasma catecholamine concentration is not related to the soleus arthrogenic muscle response induced by an experimental knee joint effusion. *Neurosci Letters.* 2004; 366: 76-79.
110. Stone MB, **Palmieri RM**, Ingersoll CD. The Role of Nonsteroidal Anti-inflammatory Drugs for the Treatment of Delayed Onset Muscle Soreness in Sport. *International SportMed Journal.* 2004; 8: 147-154.
111. **Palmieri RM**, Ingersoll CD, Hoffman MA, Cordova ML, Porter DA, Edwards JE, Babington JP, Krause BA, Stone MB. Arthrogenic muscle response to a simulated ankle joint effusion. *Br J Sports Med.* 2004; 38:26-30.
112. Hopkins JT and **Palmieri RM**. Effects of ankle joint effusion on lower leg function. *Clin J Sports Med.* 2004; 4:1-7.
113. **Palmieri RM**, Ingersoll CD, Edwards JE, Hoffman MA, Stone MB, Babington JP, Cordova ML. Arthrogenic muscle inhibition is not present in the limb contralateral to a simulated knee joint effusion. *Am J Phys Med Rehabil.* 2003; 82:910-916.
114. Stone MB, Stemmans CA, Edwards JE, Ingersoll CD, **Palmieri RM**, Krause BA. Certified athletic trainers' perception of exercise associated muscle cramps. *J Sport Rehabil.* 2003; 12:333-342.
115. Stone MB, Vaughan MA, Ingersoll CD, Edwards JE, Babington JP, **Palmieri RM**, Cordova ML, Krause BA. A single dose of ginkgo biloba does not affect soleus motoneuron pool excitability. *J Strength Cond Res.* 2003; 17: 587-589.
116. **Palmieri RM**, Ingersoll CD, Cordova ML, Kinzey SJ, Stone MB, Krause BA. Artificial knee joint effusion improves postural steadiness in healthy subjects. *Arch Phys Med Rehabil.* 2003; 84: 1076-1079.
117. Stone MB, Edwards JE, Ingersoll CD, Babington JP, **Palmieri RM**. Intrasection and intersession reliability of an electrical method to induce muscle cramp. *Muscle Nerve.* 2003;1:122-123.

118. Hoffman MA, **Palmieri RM**, Ingersoll CD. Simultaneous Hoffmann reflex measurements in multiple muscles around the ankle. *Int J Neurosci*. 2003; 113: 39-46.
119. **Palmieri RM**, Ingersoll CD, Stone MB, Krause BA. Center-of-pressure parameters used in the assessment of postural control. *J Sport Rehabil*. 2002;11: 51-66.
120. **Palmieri RM**, Hoffman MA, Ingersoll CD. Intersession reliability for H-reflex measurements arising from the soleus, peroneal, and tibialis anterior musculature. *Int J Neurosci*. 2002; 112: 841-850.
121. **Palmieri RM**, Ingersoll CD, Cordova ML, Kinzey SJ. Prolonged ankle brace application does not affect the spectral qualities of postural control. *J Athl Train*. 2002;37:269-274.
122. Cordova ML, Ingersoll CD, **Palmieri RM**. Efficacy of prophylactic ankle support: An experimental perspective. *J Athl Train*. 2002; 37: 458-462.

Manuscripts Under Review (reverse chronological order)

1. Tayfur B, Johnson AK, Angelini M, Swartout A, Bolley T, Kellum J, Brejank C, Lepley LK, Powell C, Wojtys EM, Bedi A, Snyder-Mackler L, **Palmieri-Smith RM**. Effectiveness of high-intensity neuromuscular electrical stimulation and eccentric exercise on quadriceps strength following anterior cruciate ligament reconstruction: Results from the MiACLR trial. In Revision.
2. Palmieri-Smith RM, Lepley LK, Tayfur B, Angelini M, Johnson AK. Reconsidering “Higher Is Better”: NMES Intensity and Quadriceps Strength After ACL Reconstruction—An Updated Meta-Analysis and Secondary Analysis of the MiACLR Trial. In Review.
- 3.

Non-Peer Reviewed Publications (reverse chronological order)

1. Norte GE, Sherman DA, Rush JL, Ingersoll CD, Bodkin SG, Snyder-Mackler L, Grindstaff TL, Burland JP, Hopkins JT, Blackburn T, Chaput M, Konishi Y, Rice DA, Hart JM, Harkey MS, Zarzycki R, **Palmieri-Smith RM**, Lepley LK, Lepley AS, Pamukoff DN, Park J, Lisee C, Pietrosimone B, Thomas AC, Goetschius J, Tourville TW, Kidgell DJ, Kuenze CM. Advancing Clinical Evaluation and Treatment of Arthrogenic Muscle Inhibition: A Need for Validation and Innovation—Letter to the Editor. *Am J Sports Med*. 2024; 52: NP34-NP36.
2. **Palmieri-Smith RM**. Celebrating the Advancement of the Athletic Training Profession Over the Past 10 Years: Highlights of Key Achievements Made by the National Athletic Trainers Association. *Sports Health*. 2018; 10(3): 205-207.
3. **Palmieri RM**. Leadership in the Academy: Junior Faculty as Program Directors. *Journal of Athletic Training*. 2005; 40: 4.
4. Ingersoll CD, **Palmieri RM**, Hopkins JT. A Joint Dilemma. *Rehabilitation Management*. 2003;16: 38-42.

Published Abstracts/Presentations

1. Crone AJ, Rodriguez, KM, **Palmieri-Smith RM**, Krishnan CM. Role of changes in corticospinal excitability on persistent quadriceps weakness after total knee arthroplasty. American Physical Therapy Association Combined Sections Meeting, Houston TX. 2025. (Poster Presentation)
2. Crone A, Johnson AK, Recchia R, Tayfur A, Krishnan C, **Palmieri-Smith RM**. De-Coupling Speed Matters: Optimizing Gait Mechanics Post-ACLR with Split-Belt Adaptation Training of the Non-ACL Leg. American Physical Therapy Association Combined Sections Meeting, Houston TX. 2025. (Podium Presentation).
3. Recchia R, Feyerick, C, Walter K, Johnson AK, **Palmieri-Smith RM**. Knee and Limb Loading Asymmetries Differ Between Tasks after ACL Reconstruction. Free Communication Poster Presentation. American College of Sports Medicine Annual Meeting. Atlanta, GA 2025.

4. Johnson, AK, Mahoney, R, Recchia, R, Conway, F, Tayfur, B, **Palmieri-Smith, RM**. Functional Demand Increases with Task Difficulty Following ACL Reconstruction. Rapid Fire Platform Presentation. American College of Sports Medicine Annual Meeting. Atlanta, GA 2025.
5. Johnson AK, Mahoney R, Tayfur B, **Palmieri-Smith RM**. Functional Demand During Walking Does Not Differ Between Limbs After Anterior Cruciate Ligament Reconstruction. American Society of Biomechanics. Madison, WI. August 5th – August 8th, 2024.
6. Garcia, SA, White M, **Palmieri-Smith RM**. Between limb differences in gait complexity and associations with cartilage deformation in individuals with ACL-reconstruction. American Society of Biomechanics. Madison, WI. August 5th – August 8th, 2024.
7. White M, Garcia SA, Pang Y, Casey CM, **Palmieri-Smith RM**, Lepley LK. Alterations in patellofemoral cartilage composition are not associated with quadriceps size or strength following ACL reconstruction. American Society of Biomechanics. Madison, WI. August 5th– August 8th, 2024.
8. Garcia SA, Dennis JD, Pamukoff DN, **Palmieri-Smith RM**. Alterations in inter-joint coordination and lower-limb support in those with ACL-Reconstruction. *American College of Sports Medicine Conference*. May 28th – May 31st, 2024.
9. **Palmieri-Smith RM**, Johnson AK, Krishnan C. Effects of De-coupling speed during split-belt treadmill training on knee loading after ACL reconstruction. Boston, MA. APTA Combined Sections Meeting. Feb 15-17, 2024. (Podium Presentation)
10. Tayfur B, Johnson AK, **Palmieri-Smith RM**. It's not fun, but it works. Understanding the neuromuscular electrical stimulation experience following ACL reconstruction. Boston, MA. APTA Combined Sections Meeting. Feb 15-17, 2024.
11. Garcia SA, White M, Kahan S, Gallegos J, Balza I, **Palmieri-Smith RM**. Body mass index and walking biomechanics predict trochlear cartilage strain in individuals with anterior cruciate ligament reconstruction. *American Society of Biomechanics Conference*. August 8th – August 11th, 2023. (Podium Presentation).
12. Gallegos J, Balza I, Garcia SA, White M, Kahan S, **Palmieri-Smith RM**. Sex differences in walking biomechanics and femoral cartilage properties in those with anterior cruciate ligament reconstruction. *American Society of Biomechanics Conference*. August 8th – August 11th, 2023. (Podium Presentation).
13. Balza I, Gallegos J, Garcia SA, White M, Kahan S, **Palmieri-Smith RM**. Differences in walking biomechanics and cartilage function during sloped and leveled walking in persons with anterior cruciate ligament reconstruction. *American Society of Biomechanics Conference*. August 8th – August 11th, 2023. (Podium Presentation).
14. Barnett Z, Tayfur B, Recchia R, Johnson AK, Palmieri-Smith RM. Quadriceps strength but not muscle size is related to underloading during walking in ACL-injured individuals. American Society of Biomechanics Annual Meeting. August 9-11, 2023. Knoxville, TN.
15. Recchia R, McCollin T, Angelini M, Johnson AK, Palmieri-Smith RM. Knee effusion and pain are not related to quadriceps avoidance gait in individuals with ACL injury. American Society of Biomechanics Annual Meeting. August 9-11, 2023. Knoxville, TN.
16. Johnson AK, Palmieri-Smith RM. Knee excursion is related to dynamic postural stability after ACL reconstruction. American Society of Biomechanics Annual Meeting. August 9-11, 2023.
17. Tayfur B, Ritsche P, Sunderlik O, Wheeler M, Ramirez E, Leuteneker J, Faude J, Franchi MV, Johnson AK, Palmieri-Smith RM. Automatic segmentation of quadriceps femoris cross-sectional area in ultrasound images: Validation in people with anterior cruciate ligament injury. American Society of Biomechanics Annual Meeting. August 9-11, 2023. Knoxville, TN.

18. Garcia SA, White M, Kahan S, Balza I, Gallegos J, **Palmieri-Smith RM**. Ultrasonographic assessment of trochlear cartilage before and after incline walking in persons with anterior cruciate ligament reconstruction. *American College of Sports Medicine*. May 30th – June 3rd, 2023.
19. Tayfur, Johnson AK, Palmieri-Smith RM. Rate of torque development deficits of the quadriceps femoris muscle before and after ACLR: A prospective cohort study with a 9-month follow-up. Orthopedic Research Society Annual Meeting. February 10-14 2023. Dallas, TX.
20. Garcia SA, Kromberg J, Palmieri-Smith RM. Manipulating cadence acutely alters knee mechanics in patients with anterior cruciate ligament reconstruction. *American College of Sports Medicine*. May 31st – June 4th, 2022.
21. Johnson AK, **Palmieri-Smith RM**, Krishnan C. Knee flexion angle and vertical ground reaction force predicts knee extension moments during gait after anterior cruciate ligament reconstruction. Presented at: North American Congress of Biomechanics, August 2022.
22. Garcia SA, Pamukoff DN, Johnson AK, Orzame M, **Palmieri-Smith RM**. Changes in cumulative load in response to acute step length modifications in persons with ACL-reconstruction. *North American Congress on Biomechanics*. August 21ST – 25TH, 2022.
23. Johnson AK, Rodriguez KM, **Palmieri-Smith RM**. Quadriceps torque complexity before and after ACL reconstruction. 2021 ASB Annual meeting.
24. Garcia SA, Johnson AK, Brown SR, Washabaugh SP, Krishnan C, Palmieri-Smith RM. Alterations in knee quasi-stiffness during early and midstance after ACLR. 2021 ASB Annual Meeting.
25. Garcia SA, Brown SR, Koje M, Krishnan CM, **Palmieri-Smith RM**. Gait asymmetries are more apparent at faster walking speeds in individuals early after ACL reconstruction. 2020 Virtual ASB Meeting.
26. Rodriguez KM, Garcia SA, **Palmieri-Smith RM**. Quadriceps muscle morphology predicts vertical ground reaction forces following ACL injury. 2020 Virtual ASB Meeting.
27. Curran MT, Bedi A, Mendias CL, Wojtys EM, Kujawa M, **Palmieri-Smith RM**. Blood Flow Restriction Training Does Not Improve Quadriceps Strength After Anterior Cruciate Ligament Reconstruction. *Ortho J Sports Med*. 7:(5S). Presented at: American Orthopaedics Society for Sports Medicine Annual Meeting. Boston, MA. July 19, 2019.
28. Garcia SA, Curran MT, **Palmieri-Smith RM**. Associations Between Muscle Morphology Measured with Ultrasonography and Self-Reported Function Following Anterior Cruciate Ligament Reconstruction. *Med Sci Sport Exerc*. 51;(6):968-969. Presented at: American College of Sport Medicine Annual Meeting. Orlando, FL. June 1, 2019.
29. Pang Y, **Palmieri-Smith RM**. An efficient alternative to magnetic resonance (MR) composite relaxation (R2-R1 rho) mapping in human knee cartilage study at 3T. *Osteoarthritis Cartilage*. 2019; 27: S33-339. Presented at: Osteoarthritis Research Society World Congress. Toronto, CA. May 2019.
30. Brown SR, Dutt-Mazumder A, Washabaugh EP, Garcia SA, **Palmieri-Smith RM**, Krishnan C. Quadriceps weakness is associated with gait kinetic deficits in individuals with acute ACL-Reconstruction. Presented at: International Society of Biomechanics Meeting. Calgary, Canada. August 2, 2019. ISB Program, page 837.
31. Garcia SA, Brown SR, Dutt-Mazumder, Washabaugh EP, **Palmieri-Smith RM**, Krishnan C. Acute effects of functional resistance training on Gait Kinetics in Individual with ACL Reconstruction. Presented at: International Society of Biomechanics Meeting. Calgary, Canada. August 2, 2019. ISB Program, page 840.
32. Rodriguez KM, Curran MT, Johnson AK, **Palmieri-Smith RM**. Y Balance Scores are Related to Quadriceps Strength at Return to Activity Following ACL reconstruction. Presented at: International Society of Biomechanics Meeting August 4, 2019. Calgary, Canada.
33. Lepley LK, Digiacoio 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 *Med Sci Sport Exerc* 49(5S):680.

34. 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? *NATA Annual Meeting and Symposium*. Baltimore, MD. June 2016.
35. **Palmieri-Smith RM**, Wojtys EM, Potter HG. Early Cartilage Changes Following ACL Injury/Reconstruction: Evaluation with Imaging and Serum Biomarkers. *J Athl Train*. 2015; 50: S-160. Presented at: *NATA Annual Meeting and Symposium*. St. Louis, MO, June 25, 2015
36. Lepley LK, Wojtys EM, **Palmieri-Smith RM**. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation to Improve Knee Mechanics Post-ACL Reconstruction. *J Athl Train*. 2015; 50: S-160. Presented at: *NATA Annual Meeting and Symposium*. St. Louis, MO, June 25, 2015
37. Failla M, Snyder-Mackler L, **Palmieri-Smith RM**. Comparison of Quadriceps Activation and Outcomes by Graft Type at Time of Return to Activity after ACLR. *Combined Sections Meeting of the American Physical Therapy Association*. Indianapolis, IN. February 2015.
38. Lepley LK, **Palmieri-Smith RM**. Quadriceps Strength, Not Volitional Muscle Activation, is The Primary Contributor to Physical Function Post-ACL Reconstruction. *University of Kentucky Center for Muscle Biology Research Day*. Lexington, KY. October 30, 2014.
39. 64. Lepley LK, Wojtys EM, **Palmieri-Smith RM**. Combination of Eccentric Exercise and Neuromuscular Electrical Stimulation to Improve Quadriceps Function Post-ACL reconstruction. *J Athl Train*. 2014; 49(3): S-88. Presented at: *NATA Annual Meeting and Symposium*. Indianapolis, IN. June 26, 2014.
40. Lepley LK and **Palmieri-Smith RM**. Concomitant Meniscectomy or Meniscal Repair Does Not Affect the Recovery of Quadriceps Function Post-ACL Reconstruction. *Med Sci Sport Exerc*. 2014; 49: S-201. Presented at: *ACSM Annual Meeting*. Orlando, FL. May 28, 2014.
41. Lepley LK, **Palmieri-Smith RM**. Preoperative quadriceps activation is associated with postoperative activation, not strength, following ACL reconstruction. *J Athl Train*. 2013; 48: S-37. Presented at: *NATA Annual Meeting and Symposium*. Las Vegas, NV. June 26, 2013
42. Lepley LK, **Palmieri-Smith RM**. Quadriceps strength, not activation, improves in the unexercised limb following a single-legged eccentric exercise program. *Med Sci Sport Exerc*. 2013; 45(5S):349. Presented at: *ACSM Annual Meeting*. Indianapolis, IN. May 30, 2013.
43. Lepley LK, **Palmieri-Smith RM**. Quadriceps Strength is Associated with Sagittal Plane Knee Angles and Moments During a Dynamic Landing Following Anterior Cruciate Ligament Reconstruction. *J Athl Train*. 2012; 47: S-146. Presented at: *National Athletic Trainers' Association Annual Meeting and Symposium*. St. Louis, MO. June 28, 2012
44. Lepley LK, **Palmieri-Smith RM**. Preoperative Quadriceps Strength is Associated with Postoperative Quadriceps Strength Following Anterior Cruciate Ligament Reconstruction. *Med Sci Sport Exerc*. 2012; 44. Presented at: *ACSM Annual Meeting*. San Francisco, CA. May 31, 2012.
45. Thomas AC, Wojtys EW, Palmieri-Smith RM. Contributions of central activation failure and atrophy to quadriceps weakness associated with ACL reconstruction. *J Athl Train*. 2011; 46: S-102. Presented at *NATA Annual Meeting*, New Orleans, LA, June 2011.
46. Klykken LW, Thomas AC, McLean SG, **Palmieri-Smith RM**. The effects of neuromuscular fatigue on knee biomechanics and muscle activity of ACL reconstructed patients. *J Athl Train*. 2011; 46: S-104. Presented at: *NATA Annual Meeting*, New Orleans, LA, June 2011.
47. Brown TN, McLean SG, **Palmieri-Smith RM**. Quadriceps activation predicts knee kinetics during single-leg landings. *Proceedings of the American Society of Biomechanics*. 2011. Presented at: *American Society of Biomechanics Annual Meeting*, Long Beach, CA, August 2011.
48. Brown TN, **Palmieri-Smith RM**, McLean SG. Training-induced hip strength changes predict knee flexion and abduction moments during unilateral landings. *Proceedings of the XXIIth International*

Society of Biomechanics. Presented at: the *International Society of Biomechanics*, Brussels, Belgium. 2011.

49. Brown TN, **Palmieri-Smith RM**, McLean SG. Training-induced hip-extensor-flexor strength Ratio changes predict knee abduction moment during single-leg landings. *Med Sci Sports Exerc*. Presented at: *ACSM Annual Meeting*, Denver, CO, June 2010.
50. **Palmieri-Smith RM**, Villwock M, Hecht G, Downie B, Zernicke R. Pain and effusion effects on quadriceps strength and activation. *Proceedings of the Orthopaedic Research Society*. 2011; 36: Abstract 1662. Presented at: *Orthopaedic Research Society Annual Meeting*, Long Beach, CA, January 2011
51. Thomas AC, McLean S, **Palmieri-Smith RM**. Neuromuscular fatigue and quadriceps inhibition alter lower extremity biomechanics. *Proceedings of the Orthopaedic Research Society*. 2011; 36: Abstract 0394. Presented at *Orthopaedic Research Society Annual Meeting*, Long Beach, CA, January 2011.
52. Kipp K, Brown TN, McLean SG, **Palmieri-Smith RM**. Altered knee muscle reflex activity during a cutting maneuver is influenced by motor learning not neuromuscular training. *Proceedings of the American Society of Biomechanics*. 2010. Presented at: *American Society of Biomechanics Annual Meeting*, Providence, RI, August 2010.
53. Beaulieu ML, Brown TN, **Palmieri-Smith RM**, McLean SG. Relationship between knee mechanics during a jump landing task and hip strength varies across maturation. *Med Sci Sport Exerc*. 2010; 42(5): 93. Presented at: *ACSM Annual Meeting*, Baltimore, MD, June 2010.
54. Brown TN, McLean SG, **Palmieri-Smith RM**. Lower extremity muscle activation changes following a standard six-week neuromuscular training program. *Med Sci Sport Exerc*. 2010; 42(5): 690-1. Presented at: *ACSM Annual Meeting*, Baltimore, MD, June 2010.
55. Kipp K, McLean SG, Brown TN, **Palmieri-Smith RM**. Frontal-plane knee motion during anticipated and unanticipated cutting in recreational and elite female athletes. *Med Sci Sport Exerc*. 2010; 42(5): 680. Presented at: *ACSM Annual Meeting*, Baltimore, MD, June 2010.
56. Thomas AC, Sowers MF, Karvonen-Gutierrez C, **Palmieri-Smith RM**. Quadriceps-hamstrings ratio is associated with knee adduction moment in women with knee osteoarthritis. *Med Sci Sport Exerc*. 2010;42(5): 93. Presented at: *ACSM Annual Meeting*, Baltimore, MD, June 2010.
57. Thomas AC and **Palmieri-Smith RM**. Subchondral bone contusions associated with ACL injury do not alter frontal plane knee biomechanics. *J Athl Train*. 2010; 45(3): S-74. Presented at: *NATA Annual Meeting*, Philadelphia, PA, June 2010.
58. Thomas AC, Sowers MF, Karvonen-Gutierrez, **Palmieri-Smith RM**. Quadriceps strength does not decrease with knee osteoarthritis progression. *Med Sci Sport Exerc*. 2009; 41(5): S-87. Presented at: *ACSM Annual Meeting*, Seattle, WA, May 2009.
59. Brown TN, **Palmieri-Smith RM**, McLean SG. The effects of fatigue and decision making on lower limb kinematics after a neuromuscular training program. *Med Sci Sport Exerc*. 2009; 41(5): S-56. Presented at: *ACSM Annual Meeting*, Seattle, WA, May 2009.
60. Thomas AC, **Palmieri-Smith RM**, McLean SG. Isolated hip and ankle fatigue alters lower extremity kinematics. *J Athl Train*. 2009; 44: S-64. Presented at: *NATA Annual Meeting*, San Antonio, TX, June 2009.
61. **Palmieri-Smith RM** and Hopkins JT. Dynamic instability in patients with functional ankle instability. *J Athl Train*. 2008; 43: S-109. Presented at: *NATA Annual Meeting*, St. Louis, MO, June 2008.
62. **Palmieri-Smith RM** and Hopkins JT. Neuromuscular dysfunction in persons with functional ankle instability. *Br J Sports Med*. 2008; 42: 537. Presented at World Congress on Sports Injury Prevention, Oslo, Norway, June 2008.
63. Thomas AC, McLean SG, **Palmieri-Smith RM**. Isolated quadriceps and hamstrings fatigue alters hip and knee mechanics. *Med Sci Sport Exerc*. 2008; 40(5): S-49. Presented at: *ACSM Annual Convention*, Anaheim, CA, May 2008.

64. Parekh J, **Palmieri-Smith RM**, McLean SG. Muscle pre-motor phase measures during a simple choice reaction task predict high risk knee landing mechanics. *Med Sci Sport Exerc.* 2008; 40(5): S-88. Presented at ACSM Annual Convention, Anaheim, CA, May 2008.
65. Brown TN, **Palmieri-Smith RM**, McLean SG. The effects of temporal changes in unanticipated stimuli on lower limb mechanics during jump landings. *Med Sci Sport Exerc.* 2008; 40(5): S-297. Presented at ACSM Annual Convention, Anaheim, CA, May 2008.
66. **Palmieri-Smith RM**, McLean SG, Ashton-Miller SG, Wojtys EM. Gender differences in quadriceps and hamstring co-contraction patterns are associated with knee joint loading. Presented at ACL Retreat IV, Greensboro, NC, March 2008.
67. Brown TN, Palmieri-Smith RM, McLean SG. An unanticipated stimulus alters lower limb mechanics during single-leg landing. Presented at ACL Retreat IV, Greensboro, NC, March 2008.
68. Parekh JN, **Palmieri-Smith RM**, McLean SG. Fatigue-induced changes in central control increases non-contact ACL injury risk in females. Presented at ACL Retreat IV, Greensboro, NC, March 2008.
69. Thomas AC, McLean SG, **Palmieri-Smith RM**. Isolated quadriceps and hamstring fatigues alters hip and knee mechanics. Presented at ACL Retreat IV, Greensboro, NC, March 2008.
70. **Palmieri-Smith RM**, Wojtys EM, Ashton-Miller JA. Association between preparatory muscle activation and peak valgus knee angle. *Journal of Athletic Training.* 2007;42:S-77. Presented at the National Athletic Trainers' Association Annual Convention, Anaheim, CA, June 2007.
71. Cordova ML, LeBlanc MJ, Ingersoll CD, Wojtys EM, **Palmieri-Smith RM**. Quadriceps and hamstrings muscle strength following ACL reconstruction: A meta-analysis of patellar tendon s. semitendinosus tendon grafts. *Journal of Athletic Training.* 2007;42:S-85. Presented at the *National Athletic Trainers' Association Annual Convention*, Anaheim, CA, June 2007.
72. McIntyre E, Ahmed AA, Youkeun O, Kreinbrink JE, **Palmieri RM**, Wojtys EM, Ashton-Miller JA. On changes in hamstring length during a simulated jump landing: An in vitro study. Presented at the *40th American Society of Biomechanics Annual Meeting*, Blacksburg, VA, September 2006.
73. Bowman TG, Hart JM, **Palmieri RM**, McGuire BA, Ingersoll CD. A repetitive throwing exercise protocol increases deceleration time from an internal rotation perturbation. *Journal of Athletic Training.* 2006;41:S-20. Presented at the *National Athletic Trainers' Association Annual Convention*, Atlanta, GA, June 2006.
74. Scibek JS, Hughes RE, Carpenter JE, **Palmieri RM**, Brown SHC, Namesnik KT. Observed changes in scapulohumeral rhythm and movement velocity in rotator cuff tear patients following a subacromial injection. *Journal of Athletic Training.* 2006;40:S-35. Presented at the *National Athletic Trainers' Association Annual Convention*, Atlanta, GA, June 2006.
75. **Palmieri RM**, Garrison JC, Leonard JL, Weltman A, Ingersoll CD. Peripheral joint cooling increases spinal reflex excitability and serum norepinephrine. *Journal of Athletic Training.* 2006;41:S-44. Presented at the National Athletic Trainers' Association Annual Convention, Atlanta, GA, June 2006.
76. Silcox KM, Garrison JC, **Palmieri RM**, Fujiwara L, Ingersoll CD. Plyometric training alters hamstring activity during a landing task. *Journal of Athletic Training.* 2006;40:S-69. Presented at the *National Athletic Trainers' Association Annual Convention*, Atlanta, GA, June 2006.
77. Weniger GR, Leonard JL, **Palmieri RM**, Saliba EN, Ingersoll CD. A two-week static stretching program does not decrease quadriceps muscle inhibition in patients with patellofemoral pain syndrome. *Journal of Athletic Training.* 2006;40:S-87. Presented at the National Athletic Trainers' Association Annual Convention, Atlanta, GA, June 2006.
78. Swaney MR, McVey ED, **Palmieri RM**, Parente WR, Ingersoll CD. Core stabilization training does not increase ball velocity or number of pitches thrown in overhead athletes. *Journal of Athletic Training.* 2006;40:S-88. Presented at the National Athletic Trainers' Association Annual Convention, Atlanta, GA, June 2006.

79. Aumann KB, Hart JM, **Palmieri RM**, Kerrigan DC, Ingersoll CD. Hip flexor fatiguing exercise does not affect lumbar forward lean in males with and without a history of low back pain. *Journal of Athletic Training*. 2006;40:S-105. Presented at the *National Athletic Trainers' Association Annual Convention*, Atlanta, GA, June 2006.
80. Berg CL, Hart JM, **Palmieri RM**, Cross KM, Ingersoll CD. Cryotherapy does not affect peroneal reaction time following sudden inversion. *Journal of Athletic Training*. 2005;40:S-36. Presented at the *National Athletic Trainers' Association Annual Convention*, Indianapolis, IN, June 2005.
81. Tobianski NA, Livingston SC, **Palmieri RM**, Barth JT, Ingersoll CD. Soccer headgear increases peak acceleration of the head during purposeful heading. *Journal of Athletic Training*. 2005;40:S-43. Presented at the *National Athletic Trainers' Association Annual Convention*, Indianapolis, IN, June 2005.
82. Golofski L, Garrison JC, **Palmieri RM**, Weltman A, Ingersoll CD. Differences in ACL stiffness at two points in the menstrual cycle in women taking oral contraception and women not taking oral contraception. *Journal of Athletic Training*. 2005;40:S-117. Presented at the *National Athletic Trainers' Association Annual Convention*, Indianapolis, IN, June 2005.
83. Oliver CL, Leonard JL, **Palmieri RM**, McGuire B, Ingersoll CD. Wrist flexor strength is not related to ulnar collateral ligament strain. *Journal of Athletic Training*. 2005;40:S-117. Presented at the *National Athletic Trainers' Association Annual Convention*, Indianapolis, IN, June 2005.
84. Ingersoll CD, Weltman A, Edwards JE, Tom JA, Saliba EN, Mistry DJ, **Palmieri RM** (2004). An experimental knee joint effusion does not affect plasma catecholamine concentration. *Medicine & Science In Sports & Exercise*. 2004; 36:S-301. Presented at the *Annual Meeting of the American College of Sports Medicine*, Indianapolis, IN, June 2004
85. Garrison JG, Ingersoll CD, Hart J, **Palmieri RM**, Boxer J. Comparison of knee joint moments in male and female varsity collegiate soccer players during a single-leg landing. *Medicine & Science In Sports & Exercise*. 2004; 36:S-347. Presented at the *Annual Meeting of the American College of Sports Medicine*, Indianapolis, IN, June 2004.
86. **Palmieri RM**, Tom JA, Edwards JE, Weltman A, Saliba EN, Mistry DJ, Ingersoll CD (2004). Soleus arthrogenic muscle response is mediated by pre- and post-synaptic spinal mechanisms. *Medicine & Science In Sports & Exercise*. 2004; 36:S-165. Presented at the *Annual Meeting of the American College of Sports Medicine*, Indianapolis, IN, June 2004
87. **Palmieri RM**, Weltman A, Edwards JE, Tom JA, Saliba EN, Mistry DJ, Ingersoll CD. Pre-synaptic modulation of quadriceps arthrogenic muscle inhibition. *Journal of Athletic Training*. 2004;39:S-70. Presented at the *National Athletic Trainers' Association Annual Convention*, Baltimore, MD, June 2004
88. Ingersoll CD and **Palmieri RM**. Intersession reliability of a protocol to assess reflex activation history in the vastus medialis. *Journal of Athletic Training*. 2004;39:S-70. Presented at the *National Athletic Trainers' Association Annual Convention*, Baltimore, MD, June 2004
89. McVey ED, **Palmieri RM**, Docherty CL, Zinder SM, Ingersoll CD. Arthrogenic muscle inhibition is present in patients exhibiting functional ankle instability. *Journal of Athletic Training*. 2004;39:S-7. Presented at the *National Athletic Trainers' Association Annual Convention*, Baltimore, MD, June 2004
90. Russell KA, **Palmieri RM**, Zinder SM, Ingersoll CD. Knee Flexion Angle Increases Valgus Knee Angle and Surface Gluteus Medius EMG Activity During a Single Leg Drop Jump. *Journal of Athletic Training*. 2004;39:S-35. Presented at the *National Athletic Trainers' Association Annual Convention*, Baltimore, MD, June 2004
91. Garrison JG, Ingersoll CD, Hart J, **Palmieri RM**, Boxer J. Female collegiate soccer players produce greater knee internal rotation moments than their male counterparts during a single-leg landing. Presented at the Combined Sections of the American Physical Therapy Association, Nashville, TN, February 2004.

92. **Palmieri RM**, Ingersoll CD, Edwards JE, Hoffman MA, Stone MB, Babington JP, Cordova ML, Krause BA. Arthrogenic muscle inhibition is not present in the limb contralateral to a simulated knee joint effusion. *Journal of Athletic Training*. 2003;38: S-35. Presented at the *National Athletic Trainers' Association Annual Convention*, St. Louis, MO, June 2003.
93. Campbell HL, Cordova ML, Ingersoll CD, Demchak TJ, **Palmieri RM**. A cryokinetics protocol does not affect quadriceps muscle fatigue. *Journal of Athletic Training*. 2003; 38: S-48. Presented at the *National Athletic Trainers' Association Annual Convention*, St. Louis, MO, June 2003.
94. Krause BA, Ingersoll CD, Edwards JE, Cordova ML, **Palmieri RM**, Stone MB. Ankle ice immersion facilitates the soleus Hoffmann reflex and muscle response. *Journal of Athletic Training*. 2003;38: S-48. Presented at the *National Athletic Trainers' Association Annual Convention*, St. Louis, MO, June 2003.
95. Hopkins JT and **Palmieri RM**. Effects of ankle joint effusion on lower leg function. *Medicine & Science In Sports & Exercise*. 2003. 25: S-18. Presented at the *Annual Meeting of the American College of Sports Medicine*, San Francisco, CA, May 2003.
96. Krause BA, Ingersoll CD, Edwards JE, Cordova ML, Stone MB, **Palmieri RM**. Focal temperature change facilitates the peak-peak soleus Hoffmann reflex and muscle response. *Medicine & Science In Sports & Exercise*. 2003. 25: S-24. Presented at the *Annual Meeting of the American College of Sports Medicine*, San Francisco, CA, May 2003.
97. **Palmieri RM**, Ingersoll CD, Cordova ML, Kinzey SJ, Stone MB, Krause BA. Artificial knee joint effusion improves postural steadiness. *Medicine & Science in Sports & Exercise*. 2002; 34: S-270. Presented at the *Annual Meeting of the American College of Sports Medicine*, St. Louis, MO, May 2002.
98. Krause BA, Ingersoll CD, Edwards JE, Cordova ML, **Palmieri RM**, Stone MB. Joint cryotherapy modulates the soleus Hoffmann reflex and muscle response. *Medicine & Science in Sports & Exercise*. 2002; 34: S-89. Presented at the *Annual Meeting of the American College of Sports Medicine*, St. Louis, MO, May 2002.
99. Stone MB, Vaughan MA, Ingersoll CD, Edwards JE, Babington JP, **Palmieri RM**, Cordova ML, Krause BA. A single dose of ginkgo biloba does not affect soleus motoneuron pool excitability. *Medicine & Science in Sports & Exercise*. 2002; 34: S-232. Presented at the *Annual Meeting of the American College of Sports Medicine*, St. Louis, MO, May 2002.
100. **Palmieri RM**, Ingersoll CD, Hoffman MA, Cordova ML, Porter DA, Edwards JE, Babington JP, Krause BA, Stone MB. Arthrogenic muscle response following artificial ankle joint effusion. *Journal of Athletic Training*. 2002; 37: S-25. Presented at the *National Athletic Trainers' Association Annual Convention*, Dallas, TX, June 2002.
101. Krause BA, Ingersoll CD, Edwards JE, Cordova ML, **Palmieri RM**, Stone MB. Knee joint cryotherapy facilitates the vastus medialis Hoffmann reflex and muscle response. *Journal of Athletic Training*. 2002; 37: S-25. Presented at the *National Athletic Trainers' Association Annual Convention*, Dallas, TX, June 2002.
102. **Palmieri RM**, Ingersoll CD, Cordova ML, Kinzey SJ. Prolonged ankle brace application does not affect the spectral qualities of postural sway. *Medicine & Science in Sports & Exercise*. 2001; 33: S-153. Presented at the *Annual Meeting of the American College of Sports Medicine*, Baltimore, MD, June 2001.

Submitted Grants

1. Advancing Redox-Targeted Therapies for Quadriceps Muscle Recovery After ACL Injury.
 Source: National Institutes of Arthritis, Musculoskeletal and Skin Diseases
 Grant Number: 1R21AR088187
 Role: Co-PI
 Total Costs: \$429,000

2. Wearable-Derived Physical Activity and Quadriceps Strength Across Early and Long-Term Recovery After ACL Reconstruction
Source: National Institutes of Health (NIH); National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
Grant Number: 1R21
Role: CO-I
Total Costs: \$429,000

Funded, Ongoing Grants

1. *Mi-SPA: Michigan Split-belt Adaptation Paradigm to Improve Knee Loading After ACL Reconstruction.*
Source: National Institutes of Arthritis, Musculoskeletal and Skin Diseases
Grant Number: 1 R21 AR082643-01
Role: Co-PI/Contact PI
Total Costs: \$641,024

Completed Grants (reverse chronological order)

1. MiACLR: *Michigan Initiative for ACL rehabilitation* (R01)
Source: National Institutes of Child Health and Human Development
Grant Number: 1R01HD093626-01A1
Role: PI
Total Costs: \$3,634,620 (Indirects = \$1,080,606)
2. Evaluating the impact of high body mass index on cartilage deformation, cartilage metabolism, and mechanical loading in individuals with anterior cruciate ligament reconstruction.
Source: National Institute of Arthritis and Musculoskeletal Diseases
Grant Number: 1F31AR078592-01
Role: Sponsor (Garcia – PI)
Total Costs: \$87,869
3. Operant Conditioning for Individuals with Anterior Cruciate Ligament Reconstruction
Source: Medical University of South Carolina/NIH
PIs: Krishnan and Palmieri-Smith
Total Costs: \$37,500 (\$2,778 Indirect costs)
4. Functional resistance training during gait: A novel intervention to improve knee function after ACLR (R21)
Source: National Institutes of Child Health and Human Development
Role: Co-PI
Total Costs: \$426,250 (Indirect costs = 151,250)
5. Blood flow restriction training to improve muscle function following ACL reconstruction
Source: University of Michigan (Mcubed program)
PI: Palmieri-Smith
Direct Costs: \$60,000
Aim: To determine the effects of blood flow restriction training along with high-intensity exercise to improve muscle strength after ACL reconstruction.

6. *Restoration of Quadriceps Activation after ACL injury and surgery*
Source: UM Bone & Joint Injury and Prevention Center
PI: Riann M. Palmieri-Smith, Ph.D., ATC – 10% effort
Period: October 31, 2007 to 2014
Amount: \$40,000
Aim: The goal of the project is to determine the impact of pre-operative NMES therapy on neuromuscular activation, atrophy, and functional outcomes.
7. *Quadriceps Inhibition after ACL Injury: Neuromuscular and Functional Consequences*
Source: National Institutes of Health (NIAMS) K08
PI: Riann M. Palmieri-Smith, Ph.D., ATC – 75% effort
Period: April 19, 2008- March 31, 2013
Amount: \$634,500
Aim: The goal of the project was to determine the magnitude of quadriceps AMI necessary to alter lower extremity mechanics and to assess the feasibility of introducing NMES to reverse quadriceps weakness and restore knee kinematics
8. *The effect of geographic bone bruises on biological markers and MRI findings of osteoarthritis after anterior cruciate ligament injury*
Source: National Football League Charities
PI: Riann M. Palmieri, Ph.D., ATC
Period: January 1, 2006- June 31, 2011
Amount: \$125,000 (Direct Costs)
Aim: The goal of this project is to determine whether geographic bone bruises that accompany anterior cruciate ligament injury result in pre-clinical signs of osteoarthritis.
9. *Post-traumatic osteoarthritis associated with ACL injury*
Source: Rackham School of Graduate Studies
PI: Riann M. Palmieri, Ph.D., ATC
Period : March 1, 2006-2010
Amount: \$12,650
Aim: The overall goal of the proposed project is to determine the impact of an ACL rupture and associated lateral bone bruising on the integrity of knee joint articular cartilage and knee joint kinetics.
10. *The efficacy of neuromuscular estim for improving quadriceps activation*
Source: Arthritis Foundation, Michigan Chapter
PI: Riann M. Palmieri-Smith, Ph.D., ATC
Period: July 1, 2007- December 31, 2009
Amount: \$20,000
Aim: The goal of this project is to determine if neuromuscular electrical stimulation (NMES) is capable of reversing quadriceps arthrogenic muscle inhibition (AMI) and restoring function in a sample of patients with early radiographic evidence of medial tibiofemoral osteoarthritis (OA).
11. *Neuromuscular inhibition of the dynamic ankle stabilizers in patients with ankle instability*
Source: National Athletic Trainers' Research & Education Foundation
PI: Riann M. Palmieri, Ph.D., ATC
Period: July 1, 2006 – December 31, 2007

Aim: The goal of this project is to determine the role of the dynamic ankle stabilizers in resisting sudden ankle inversion during walking.

Amount: \$65,861 (Total costs)

12. *The effects of an experimentally induced increase in intra-articular pressure and quadriceps inhibition on knee joint kinematics and muscle activation*

Source: Office for the Vice President of Research, University of Michigan

PI: Riann M. Palmieri, Ph.D., ATC

Period: June 2005 – June 30, 2006

Amount: \$11,260

Aim: The goal of the project is to determine whether the quadriceps inhibition that results following an experimentally-induced increase in knee intra-articular pressure places the knee joint at risk for injury.

13. *Functional status and the menopause transition*

Source: National Institutes of Health (NIAMS – 5R01 AG17104)

PI: MaryFran Sowers, Ph.D.

Role: Co-investigator – 5% effort

Period: July 1, 2006 – June 30, 2011

Amount: \$1,348,624 (annual directs)

Aim: The major goals of this project are to characterize measures of physical functioning in a well-characterized cohort of women transitioning the menopause.

14. *Effects of SCENAR® therapy on acute ankle sprains*

Source: Samuel Eli Institute

Title: Effects of Scenar therapy on acute ankle sprains

PI: Ann Gill-Taylor, EdD, FAAN, RN (Riann Palmieri, Collaborator)

Period: 2003-2005

Amount: \$200,000 (Total Costs)

Aim: The major goal of this project is to determine if SCENAR® therapy will reduce pain and swelling, reverse muscle inhibition, improve ankle functional status, and shorten the recovery time following acute ankle sprains.

15. *Thermoregulatory, spinal, and neuroendocrine involvement in motoneuron pool facilitation during focal ankle joint cooling*

Source: U. of Virginia General Clinical Research Center/U. of Virginia School of Medicine

Principal Investigators: Riann Palmieri and Christopher Ingersoll

Period: 2003-2004

Amount: \$68,000 (Total Costs)

Aim: The major goal of this project is to determine the central mechanisms by which cryotherapy potentially acts to reverse muscle inhibition.

16. *The neuroendocrine response and spinal inhibitory processes involved in arthrogenic muscle response following an experimental knee joint effusion*

Principal Investigators: Riann Palmieri and Christopher Ingersoll

Source: U. of Virginia General Clinical Research Center/U. of Virginia School of Medicine

Period: 2002-2004

Amount: \$28,000 (Total Costs)

Aim: The major goal of this project was to determine the neural networks involved in the quadriceps inhibition and soleus facilitation present with a knee joint effusion.

17. *Bilateral muscle inhibition following unilateral joint effusion*
 Source: Great Lakes' Athletic Trainers' Association
 Principal Investigator: Riann Palmieri
 Period: 2001
 Amount: \$1,000 (Total Costs)
 Aim: The goal of this project was to determine if joint effusion contributes to the presence of bilateral quadriceps muscle inhibition
18. *Arthrogenic muscle response following artificial ankle joint effusion*
 Source: Indiana State University Office of Sponsored Programs and ISU Graduate School Research Fund
 PI: Riann Palmieri
 Period: 2001
 Amount: \$500.00 (Sponsored Programs) and \$300.00 (Graduate School Research Fund)
 Aim: The goal of this project was to determine if ankle effusion results in a reflexive inhibition of the surrounding joint musculature.
19. *Arthrogenic muscle response following artificial ankle joint effusion*
 Source: Indiana State University Office of Sponsored Programs and ISU Graduate School Research Fund
 PI: Riann Palmieri
 Period: 2001
 Amount: \$500.00 (Sponsored Programs) and \$300.00 (Graduate School Research Fund)
 Aim: The goal of this project was to determine if ankle effusion results in a reflexive inhibition of the surrounding joint musculature.
20. *Artificial knee joint effusion increases postural steadiness.*
 Source: Indiana State University Graduate School Research Fund
 PI: Riann Palmieri
 Period: 2000
 Amount: \$400.00
 Aim: The goal of this project was to determine if knee joint effusion influenced proprioception and postural steadiness.
21. *Prolonged ankle brace application does not affect the spectral qualities of postural sway*
 Source: Indiana State University Graduate School Research Fund
 PI: Riann Palmieri
 Period: 2000
 Amount: \$150.00
 Aim: To goal of this project was to determine if long-term ankle brace application interfered with the proprioceptive system's ability to control posture.

Invited Talks (reverse chronological order)

1. **Palmieri-Smith RM.** Restoring Muscle Strength After ACL Reconstruction: New Insights to a Clinical Challenge. Marjorie King Research to Reality Lecture. Eastern Athletic Trainers Association Annual Meeting. January 2025.
2. **Palmieri-Smith RM.** Maximizing Quadriceps Muscle Function After ACLR: New Insights into A Clinical Challenge. High Point University. February 5, 2020.

3. **Palmieri-Smith RM.** Functional testing algorithm for return to sports after ACL injury. Sports Health Symposium, AOSSM Annual Meeting. July 11, 2019
4. **Palmieri-Smith RM.** Maximizing Muscle Strength After ACLR: New Insights into a Clinical Challenge. The Ohio State University. May 2019.
5. **Palmieri-Smith RM.** Translating Osteoarthritis Research to Clinical Practice. Presented at NATA Annual Meeting June 28, 2017.
6. Lepley LK, **Palmieri-Smith RM.** Maximizing muscle strength after ACL reconstruction: new insights to a clinical challenge. NATA Annual Meeting 2016.
7. **Palmieri-Smith RM.** The implications of post-traumatic osteoarthritis after an ACL injury. Pre-Conference Workshop on ACL Injuries. Team Concept Conference for Sports Physical Therapy. December 4, 2014.
8. **Palmieri-Smith RM.** Early considerations of ACL rehabilitation and Therapeutic Strategies for targeting arthrogenic muscle inhibition. Pre-Conference Workshop on ACL Injuries. Team Concept Conference for Sports Physical Therapy. December 4, 2014.
9. **Palmieri-Smith RM,** Hart JM, Pietrisimone B. Clinical Perspective and Emerging Concepts for Treating Muscle Dysfunction. Presented at NATA Annual Meeting. June 2014
9. **Palmieri-Smith RM.** Peripheral Triggers and Central Mechanisms of Arthrogenic Muscle Inhibition. Presented at the International Congress of Manual Therapy. Bologna, Italy. November 2012.
10. **Palmieri-Smith RM.** Therapeutic Strategies for Targeting Arthrogenic Muscle Inhibition. Presented at the International Congress of Manual Therapy. Bologna, Italy. November 2012.
11. **Palmieri-Smith RM.** Arthrogenic Muscle Inhibition and ACL Injury. Presented at the University of Delaware BIOMS seminar. October 2009.
12. **Palmieri-Smith RM.** Arthrogenic Muscle Inhibition: A Neuromuscular Consequence of Joint Injury. Presented at the ACSM Annual Convention, Indianapolis, IN, May 2008.
13. Ingersoll CD, **Palmieri-Smith RM.** Special Interest Group: Therapies to reverse muscle inhibition. Presented at the NATA Annual Convention, Anaheim, CA, June 2007.
14. **Palmieri-Smith RM.** Neuromuscular consequences of knee and ankle injury. Presented in the Distinguished Scholars Session at The NATA Annual Convention, Anaheim, CA, June 2007.
15. **Palmieri-Smith RM.** Arthrogenic Muscle Inhibition: A neuromuscular consequence of ankle injury? Presented at the 3rd International Ankle Symposium, Dublin, Ireland, August 2006.
16. **Palmieri RM.** Arthrogenic Muscle Inhibition: A Neuromuscular Consequence of Joint Injury. Presented at Pennsylvania State University's Kinesiology Graduate Colloquium, State Park, PA, March 2006.
17. **Palmieri RM.** Arthrogenic Muscle Inhibition: Sources and Implications for Rehabilitation. Presented at The Hope College Distinguished Lecture Series in Sports Medicine, Holland, MI, November 2005.
18. **Palmieri RM,** Hopkins JT, Ingersoll CD. Muscle inhibition following Joint Injury. Presented at the National Athletic Trainers' Association Annual Convention, Indianapolis, IN, June 2005.
19. Hopkins JT, Ingersoll CD, Krause BA, **Palmieri RM.** Arthrogenic muscle inhibition: Implications and intervention in joint injury. Presented at the Annual Meeting of the Midwest American College of Sports Medicine, Columbus, OH, October 2001.

Workshops

1. The Hoffmann reflex: Applications in sports medicine research. Arts & Sciences of Sports Medicine, Charlottesville, VA, June 2003.

Teaching

University of Michigan, School of Kinesiology

AT 260 Introduction to Athletic Training
AT 115 Prevention & Care of Athletic Injuries
AT 210 Clinical Evaluation of Upper Extremity Athletic Injuries
AT 375 Pathophysiology for the Allied Health Professions
AT 510 Evaluation of Upper Extremity Athletic Injury
MVS 219 Scientific Writing

University of Virginia, Department of Human Services

EDHS 354 Neuromechanical Basis of Human Movement
EDHS 451 Emergency Medical Care
EDHS 451L Emergency Medical Care Laboratory
EDHS 544-1 Athletic Injuries
EDHS 544-2 Athletic Injuries Laboratory
EDHS 750 Practicum in Sports Medicine
EDHS 841 Orthopaedic Basis of Rehabilitation
EDHS 850 Seminar: Current Topics in Athletic Training
EDHS 950 Doctoral Seminar in Kinesiology

Indiana State University, Department of Athletic Training

ATTR 210 Introduction to Analysis of Human Motion
ATTR 212 Athletic Training and Emergency First Aid Lab
ATTR 363 Athletic Injury Evaluation: Lower Extremity
ATTR 365 Athletic Injury Evaluation: Upper Extremity
ATTR 475 Therapeutic Exercise
ATTR 662 Athletic Trauma: Upper Extremity

Curriculum Development

AT 375 Pathophysiology for the Allied Health Professions
AT 420 Pharmacology for the Allied Health Professions
AT 458 Clinical Evaluation of Upper Extremity Athletic Injuries
AT 459 Clinical Evaluation of Upper Extremity Athletic Injuries Laboratory

Service

University of Michigan, School of Kinesiology

Undergraduate Curriculum Committee, 2004- 2023
Search Committee Chair – Athletic Training Tenure Track Faculty Position, 2005-2006
Search Committee Member – Endowed Chair in Kinesiology, 2008-2009
Graduate Committee, 2006-2008 and 2019-present
Search Committee Chair – Athletic Training Tenure Track Faculty Position, 2010.
Search Committee Member – Biomechanics (Rehabilitation Robotics) Tenure Track Faculty Position, 2010-2011
Kinesiology Executive Committee, 2010-2012; 2015-2017; 2021-present
Curriculum Reform Committee Member, 2010-2012
Curriculum & Instruction Committee, 2012-present
Search Committee Chair- Biomechanics Faculty Position, 2014
Search Committee Member, Biomechanics Tenure Track Faculty Position, 2017
Search Committee Chair – Athletic Training Tenure Track Faculty Position, 2018-2019

Search Committee Chair – Athletic Training Tenure Track Faculty Position, 2024
Kinesiology Ombud, 2019-present

University of Michigan

Sports Injury Prevention Center Implementation Committee, 2006-2008
Sports Injury Prevention Center Director Search, 2006-2007
Bone & Joint Injury Prevention & Rehab Center Operating Committee, 2008-2012
CTSA Research Committee, 2007-2009
Health and Behavioral Sciences Institutional Review Board, Member, 2010-present
Health and Behavioral Sciences IRB, Vice Chair, 2017-present
Health and Behavioral Sciences IRB, Co-Chair, 2021-present

National Football League

Musculoskeletal Research Committee (Knee Focus), 2018-2022

University of Virginia, Sports Medicine Program

Graduate Selection Committee, 2003-2004

Indiana State University, Athletic Training Department

Assistant Professor Search Committee, 2000
Assistant Athletic Trainer Search Committee, 2000
Entry-level Curriculum Committee, 2000-2001
Undergraduate Self Study Committee, 2000-2002
Honors and Awards Committee, 2001-2002

National Athletic Trainers' Association Research and Education Foundation

Vice Chair of Grants, Research Committee, 2010 to 2011
Research Committee Member, 2006 to 2011 and 2025 to present
Free Communications Student Poster/Oral Adjudicator, 2004-2006
Free Communications Moderator, 2004-present
Workshop Moderator, 2005
Free Communications Room Monitor, 2002-2004
Research Agenda Committee, 2023-2024

Manuscript Reviewer

American Journal of Physical Medicine and Rehabilitation
Archives of Physical Medicine and Rehabilitation
American Journal of Sports Medicine
Biomed Central Musculoskeletal Disorders
Chronic Illnesses
Clinical Neurophysiology
Ergonomics
European Journal of Applied Physiology
International Journal of Sports Medicine
Journal of Athletic Training
Journal of Applied Biomechanics
Journal of Applied Physiology
Journal of Bone and Joint Surgery
Journal of Orthopedic Research
Journal of Rheumatology

Journal of Sport Rehabilitation
Journal of Sports Science and Medicine
Medicine & Science in Sport & Exercise
Muscle & Nerve
Neuroscience Letters
Osteoarthritis & Cartilage
Perceptual and Motor Skills
Sports Medicine

Editorial Boards

Editorial Assistant, Journal of Sport Rehabilitation, 2001-2004
Section Editor, Journal of Athletic Training, 2004- 2008
Associate Editor, Sports Health: A multi-disciplinary approach, 2008-present
Editorial Board, Journal of Applied Biomechanics, 2009-present
Editorial Board, Journal of Athletic Training, 2011-present

Grant Application Reviewer

University of Michigan, Office of Vice Provost for Research
University of Michigan, Medical School
University of Michigan, Dept. of Orthopaedic Surgery
University of Utah, Center on Aging
NATA Research & Education Foundation
DOD, 2010 Investigator-Initiated Research Awards for Post-traumatic Osteoarthritis
NIH NIAMS Special Emphasis Panel (October 2016)
NIH NIAMS Special Emphasis Panel (October 2019)
NIH NIAMS Loan Repayment Application Reviewer 2020/08 ZAR1 FY (M2)
NIH NIAMS ZRG1 F10B-B (20)L (Fellowship) and ZRG1 MOSS-B(82)A (R15) (Fall 2021)
DOD, 2022 Peer Reviewed Orthopaedic Research Program (November 2022)
NIH NIAMS ZAR1 HL M1 ASMC Member Conflict Review Committee (Spring 2023)
NIH NIAMS ZRG1 MSOS-C (05) – Member Special Emphasis Panel (2023)

Mentoring

Post-Doctoral Scholars:

Kristof Kipp, Ph.D. (2009-11) – National Institutes of Health T32 NRSA Post-Doctoral Fellow. Currently an Associate Professor at Marquette University
Scott Brown, Ph.D. (2017-2020) – Currently an Assistant Professor at Aquinas University
Alexa Johnson, Ph.D. (2020-2022) – Currently a Research Area Specialist at University of Michigan
Beyza Tayfur, Ph.D. (2022-) -

Doctoral Students:

Abbey Thomas, PhD, ATC. U. of Michigan School of Kinesiology. Currently an Assistant Professor at The University of North Carolina at Charlotte
Tyler Brown, PhD. U. of Michigan School of Kinesiology. Currently an Assistant Professor at University of Montana
Lindsey Lepley, PhD, ATC. U. of Michigan School of Kinesiology. Currently an Assistant Professor at The University of Michigan
Michael Curran, MS, ATC. U. of Michigan School of Kinesiology. 2015-2019

Steven Garcia, MS. U. of Michigan School of Kinesiology. Currently a post-doc at University of Illinois Chicago
Kazandra Rodriguez, MS. U. of Michigan School of Kinesiology. Currently a post-doc at University of Michigan
McKenzie White, MS. U. of Michigan School of Kinesiology. Currently a post-doc at University of Kentucky
Alfred “AJ” Crone, DPT. U. of Michigan School of Kinesiology. Current student in program

Doctoral Student Research Rotations:

Jessica Deneweth. U. of Michigan School of Kinesiology.
Melanie Beaulieu. U. of Michigan School of Kinesiology.
Robert Kucner. U. of Michigan School of Kinesiology.

Doctoral Student Dissertation Committees (not primary mentor):

Jason Scibek. U. of Michigan School of Kinesiology, 2004
Steve Collins. U. of Michigan Dept. of Mechanical Engineering, 2008
Pei-Chun Kao. U. of Michigan School of Kinesiology, 2009
Antoinette Domingo. U. of Michigan School of Kinesiology, 2009
Chad Tiernan. U. of Michigan School of Kinesiology, 2012
Min Huang. U. of Michigan School of Kinesiology, 2010
David Lipps. U of Michigan Dept. of Mechanical Engineering, 2012
Karl Zelik. U of Michigan Dept. of Mechanical Engineering, 2012
Mark Gordon. U of Michigan Dept. of Mechanical Engineering, 2012
Jessica Deneweth. U. of Michigan School of Kinesiology, 2014
Melanie Beaulieu. U of Michigan School of Kinesiology, 2015
Geoff Burns. U of Michigan School of Kinesiology, 2020
E. Peter Washabaugh, U of Michigan School of Mechanical Engineering, present

Master's Students Thesis Committees:

Alexa Johnson. U. of Michigan School of Kinesiology, 2016
H. Heo. U. of Michigan School of Kinesiology, 2004
Kate Aumann. U. of Virginia Athletic Training, 2004
Christine Berg. U. of Virginia Athletic Training, 2004
Tom Bowman. U. of Virginia Athletic Training, 2004
Lauren Golofski. U. of Virginia Athletic Training, 2004
Carrie Oliver. U. of Virginia Athletic Training, 2004
Blair Putnam. U. of Virginia Athletic Training, 2004
Keith Silcox. U. of Virginia Athletic Training, 2004
Michelle Swaney. U. of Virginia Athletic Training, 2004
Grace Tessier. U. of Virginia Athletic Training, 2004
Nick Tobianski. U. of Virginia Athletic Training, 2004
Jerry Weniger. U. of Virginia Athletic Training, 2004
Lauren Williams. U. of Virginia Athletic Training, 2004
Eric McVey. U. of Virginia Athletic Training, 2003
Kyla Russell. U. of Virginia Athletic Training, 2003
Henry Wolfe. U. of Virginia Athletic Training, 2003
Campbell H. Indiana State University Athletic Training, 2002

Undergraduate Student Research Experiences:

Stephanie Osmer, U. of Michigan Athletic Training

Amber Radtke, U. of Michigan Athletic Training
Kellen Lawless, U. of Michigan Movement Science
Akhil Shah, U. of Michigan Movement Science (UROP)
Jagbir Khangura, U. of Michigan Movement Science (UROP)
Megan Collela, U. of Michigan Movement Science (UROP)
Katherine Donnelly, U. of Michigan Athletic Training
Jennifer Kurz, U. of Michigan Athletic Training
Sabrina Silver, U. of Michigan Movement Science (UROP)
James Bistolarides, U. of Michigan Movement Science
Brigid Nash, U. of Michigan Movement Science
Chie Tadaki, U. of Michigan Movement Science
Ashley Lescanec, U. of Virginia Sports Medicine
Alex Fierstein, U. of Michigan Movement Science
Sarah Hilu, U of Michigan Movement Science (UROP)
Kyle Doubrava, U of Michigan LSA (UROP)
Shelby Ebenhoeh, U of Michigan LSA (UROP)
Meagan Strickland, U of Michigan LSA (UROP)
Nicole Jimenez, U of Michigan LSA (UROP)
John Redman, U. of Michigan Kinesiology (UROP)
William Ballew, U. of Michigan Kinesiology (UROP)
Terry Noblin, U. of Michigan LSA (UROP)
Hannah Swirple, U. of Michigan Kinesiology (UROP)
Sam Goldman, U. of Michigan LSA (UROP)
Madison Tenhopen, U. of Michigan Kinesiology
Jordan Lewis, U. of Michigan LSA
Hawthorne Haywood, U of Michigan LSA (UROP)
Reagan Recchia, U of Michigan LSA
Zoe Barnett, U of Michigan LSA
Taylor McCollin, U of Michigan LSA
Jacob Leuteneker, U of Michigan Kinesiology
Madison Wheeler, U of Michigan Kinesiology (UROP)
Ryan Mahoney, U of Michigan LSA (UROP)
Amanda Amirata, U of Michigan Engineering (UROP)
Eric Ramirez, U of Michigan Kinesiology
Andreanna Ulery, U of Michigan LSA (UROP)
Chloe Feyerick, U of Michigan Kinesiology
Fiona Conway, Michigan State University
Grace Kinnear, U of Michigan Kinesiology
Isabella Balza, U of Michigan Kinesiology (UROP)
Jovanna Gallegos, U of Michigan LSA (UROP)
Olivia Sunderlik, U of Michigan LSA
Makana Woods, Cal State University Long Beach (RAF, SROP)

Professional Affiliations/Licensure Information

National Athletic Trainers' Association, Certified Member, Certification number 069902719
Athletic Trainers OsteoArthritis Consortium (ATOAC), Member
State of Michigan AT Licensure, License number 2601000867

Commonwealth of Virginia Board of Medicine, Athletic Training Certification, Certification number 0126000339 (2002-2004)

Virginia Athletic Trainers' Association, Certified Member, (2002-2004)

American College of Sports Medicine, Member (2000-present)

Indiana Athletic Training Board, Licensed Member, License number 36000808A (2001-2002)

Great Lakes' Athletic Trainers' Association, Certified Member (2000-2002; 2004-present)

Indiana Athletic Trainers' Association, Certified Member (2000-2002)

Pennsylvania Department of Health, Emergency Medical Technician (1998-2003)