

### **Curriculum Vitae**

David W. Russ, P.T., Ph.D.

Associate Professor

School of Physical Therapy and Rehabilitation Science  
University of South Florida Morsani College of Medicine  
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### **Academic Preparation**

Post-doctoral	2003	Exercise Physiology, University of Massachusetts, Amherst, MA. Advisor: Jane Kent, Ph.D.
Ph.D.	2001	Interdisciplinary Graduate Program in Biomechanics & Movement Sciences – Applied Physiology Track, University of Delaware, Newark, DE. Advisor: Stuart A. Binder-Macleod, Ph.D., P.T.
MPT	1993	Physical Therapy, University of Delaware, Newark, DE. Delayed Thesis Option: Completed November, 1997. Advisor: Stuart Binder-Macleod, Ph.D., P.T.
B.A	1989	History, Stanford University, Stanford, CA

### **Professional Experience**

#### Work Experience

12/19-present	Assistant School Director, Director of Research, School of Physical Therapy & Rehabilitation Science, University of South Florida Tampa, FL
12/19-present	Associate Professor (with tenure), School of Physical Therapy & Rehabilitation Science, University of South Florida Tampa, FL
8/13-12/19	Associate Professor (with tenure), Division of Physical Therapy, Ohio University Athens, OH
8/07-7/13	Assistant Professor (tenure track), Division of Physical Therapy, Ohio University Athens, OH
6/03-8/07	Assistant Professor (non-tenure track), Dept. of Physical Therapy, University of Maryland-Baltimore, Baltimore, MD
7/01-5/03	Post-doctoral Research Assistant, University of Massachusetts Dept. of Exercise Science, Amherst, MA.
2/01-5/01	Teaching assistant, University of Delaware Dept. of Physical Therapy, Newark, DE. Clinical Electrophysiology and Clinical Neurosciences.
9/98-6/01	Research Assistant, University of Delaware Dept. of Physical Therapy, Muscle Performance Laboratory, Newark, DE.
7/97-6/99	Per Diem Physical Therapist, Smith & Brown Physical Therapy, Dover, DE
9/96-9/98	Teaching Assistant, University of Delaware Dept. of Physical Therapy, Newark, DE. Clinical Electrophysiology, Physical Agents, and Neurological Evaluation and Treatment.
8/95-8/96	Sports Physical Therapy Section Clinical Resident, University of Delaware, Newark, DE Mentor: Lynn Snyder-Mackler, PT, Sc.D.
11/94-8/95	Staff Physical Therapist, Greater Baltimore Sports Medicine and Rehabilitation Center, Baltimore, MD
7/93-11/94	Staff Physical Therapist, Johns Hopkins Hospital, Baltimore, MD.

#### Certification & Licensure

Licensed (# 012086) Physical Therapist in the State of Ohio

### **Scholarly & Creative Accomplishments**

#### **Publications (\*-- Indicates student/trainee co-author)**

#### Journals & Proceedings (Refereed)

1. **Russ, D.W.**, Wages, N.P, Clark, L.A., Suhr, J.A. & Clark, B.C. Discrepancies in Hand Motor

- Performance and Executive Function in Older Adults. *Aging Clinical & Experimental Research* (In press, 4/23/22). PMID: 35597881
2. Slayton, M., Balakrishnan, B., Gupta, A., Jobe, S., Puri, I., Neely, S., Tamori, Y., **Russ, D.W.**, Yildirim, G., Yakar, S., Sharma, V.M. & Puri, V. (2022) Fsp27 plays a crucial role in muscle performance. *Apr 1;322(4):E331-E34. American Journal of Physiology – Endocrinology and Metabolism*. PMID: 35157807
  3. Manickam, R., Tur, J., Badole, S.L., Chapalamadugu, K.C., Sinha, P., Wang, Z., **Russ, D.W.**, Brotto, M. & Tipparaju, S.M. (2022) Nampt activator P7C3 ameliorates diabetes and improves skeletal muscle function modulating cell metabolism and lipid mediators. *Journal of Cachexia Sarcopenia & Muscle* 13(2):1177-1196. PMID: 35060352
  4. Clark, L.A., **Russ, D.W.**, Tavoian, D.\*, Arnold, W.D., Law, T.D., France, C.R., & Clark, B.C. (2021) Heterogeneity of Strength Response to Progressive Resistance Exercise Training in Older Adults: Contributions of Muscle Contractility. *Experimental Gerontology* Sep;152:111437. PMID: 34098008
  5. Tavoian, D.\*, **Russ, D.W.**, Law, T.D., Simon, J.E., Chase, P.J. Guseman, E.H. & Clark, B.C. (2021) Effects of Three Different Exercise Strategies for Optimizing Aerobic Capacity and Skeletal Muscle Performance in Older Adults: A Pilot Study. *Journal of Frailty and Aging* 10(4):357-360. PMID: 34549251
  6. Moskowitz, S., **Russ, D.W.**, Clark, L.A., Wages, N.P., Grooms, D.R., Woods, A.J., Suhr, J., Simon, J.E., O'Shea, A., Criss, C.R., Fadda, P., Clark, B.C.(2021) Is impaired dopaminergic function associated with mobility capacity in older adults? *Geroscience* Jun;43(3):1383-1404. PMID: 33236263. PMID: 33236263
  7. Stamenkovic, A., Clark, B.C., Pidcoe, P.E., Van Der Veen, S.M., France, C.R., **Russ, D.W.**, Kinser P.A., Thomas, J.S. (2021) Distinguishing Chronic Low Back Pain in Young Adults with Mild to Moderate Pain and Disability Using Trunk Compliance. *Scientific Reports*. Apr 7;11(1):7592. PMID: 33828171.
  8. Clark, L.A., Manini, T.M., Wages, N.P., Simon, J.E., **Russ, D.W.**, & Clark, B.C. (2021) Reduced neural excitability and activation contribute to clinically-meaningful weakness in older adults. *Journal of Gerontology A: Medical Sciences*. 31;76(4):692-702. PMID: 32588058
  9. **Russ, D.W.**, Amano, S., Law, T.D., Thomas, J.S. & Clark, B.C. (2021) Multiple Measures of Muscle Function Associated with Sorensen Test Performance in Individuals with Recurrent Low-back Pain. *Journal of Back and Musculoskeletal Rehabilitation* 34(1) 139-147. PMID: 33136088
  10. Riwniak, C., Simon J.D., Wages, N.P, Clark, L.A., Manini, T.M., **Russ, D.W.** & Clark, B.C. (2020) Comparison of a Multi-Component Physical Function Battery to Usual Walking Speed for Assessing Lower Extremity Function and Mobility Limitation in Older Adults *Journal of Nutrition, Health and Aging*. 24(8):906-913. PMID: 33009544
  11. Thomas, J.S., Clark, B.C., **Russ, D.W.**, France, C.R., Odenthal, J., Ploutz-Snyder, R.J. & Corcos, D., The RELIEF Study Investigators. (2020) Effect of Spinal Manipulative Therapies in Young Adults with Mild to Moderate Chronic Low Back Pain: A Randomized Clinical Trial. *JAMA Network Open*. Aug 3;3(8):e2012589. PMID: 32756930.
  12. Wages, N.P., Simon, J.E., Clark, L.A., Amano, S., **Russ, D.W.**, Manini, T.M. & Clark, B.C. (2020) Relative Contribution of Muscle Strength, Lean Mass and Lower Extremity Motor Function in Explaining Between-Person Variance in Mobility in Older Adults. *BMC*

*Geriatrics. Jul 28;20(1):255. PMID: 32723298*

13. **Russ, D.W.**, Dimova, K., Morris, E., Pacheco, M., Garvey, S.M. & Scordilis, S.P. (2020) Dietary Fish Oil Supplement Induces Age-Specific Contractile and Proteomic Responses in Muscles of Male Rats. *Lipids In Health & Disease* Jul 19:165. PMID: 32646455
14. Tavoian, D.\* **Russ, D.W.**, Consitt, L.A. & Clark, B.C. (2020) Perspective: Pragmatic exercise recommendations for older adults: The case for emphasizing resistance training. *Frontiers in Physiology. Jul 3;11:799. PMID: 32719618*
15. Tavoian, D.\* **Russ, D.W.**, Law, T.D., Simon, J.E., Chase, P.J., Guseman, E.H. & Clark, B.C. (2019) A randomized clinical trial comparing three different exercise strategies for optimizing aerobic capacity and skeletal muscle performance in older adults: Protocol for The DART. *Frontiers in Medicine* 6: 236. PMID: 31750307
16. Varadhan, R., **Russ, D.W.**, Gabr, R.E. Huang, J., Kalyani, R.R., Xue, Q.L., Cappola, A.R., Bandeen-Roche, K. & Fried, L.P. (2019) Relationship of physical frailty to phosphocreatine recovery in muscle after mild exercise stress in the oldest-old women. *Journal of Frailty and Aging* 8(4):162–168. PMID: 31637400
17. Ampoma, K., Amano, S., Wages, N.P., Volz, L., Clift, R., Ludin, A.F., Nakazawa, M., Law, T.D., Manini, T.M., Thomas, J.S., **Russ, D.W.**, & Clark, B.C. (2019) Blood flow restricted exercise does not induce a cross-transfer of effect: An RCT. *Medicine & Science in Sports & Exercise* 51(9):1817-1827. PMID: 30913160
18. Applegate, M.E.\* , Thomas, J.S., Leitkam, S.T., **Russ, D.W.**, France, C.R. (2019) Sørensen test performance is driven by different physiological and psychological variables in participants with and without recurrent low back pain *Journal of Electromyography and Kinesiology* 44:1-7. PMID: 30447543
19. **Russ, D.W.**, Garvey, S.M., Densmore, C.\* , Hawks, T.\* , Herman, S.\* & Pardi, K.\* (2018) Effect of Dietary Fish Oil on Acute Contractile and Biochemical Responses to Muscle Contusion Injury in Adult and Aged Male Rats. *Experimental Gerontology* 111:241-252. PMID: 30103026
20. Applegate, M.E.\* , France, C.R., **Russ, D.W.**, Leitkam, S.T., Thomas, J.S. (2018) Physiological and psychological predictors of time to task failure on a virtual reality Sørensen test in participants with and without recurrent low back pain. *JMIR Serious Games* 6(3):e10522. PMID: 30201604
21. Clark, B.C., **Russ, D.W.**, Nakazawa, M., France, C.R., Walkowski, S., Law, T.D., Applegate, M.\* , Mahato, N., Lietkam, S., Odenthal, J., Corcos, D., Hain, S., Sindelar, B., Ploutz-Snyder, R.J. & Thomas, J.S. (2018) A randomized control trial to determine the effectiveness and physiological effects of spinal manipulation and spinal mobilization compared to each other and a sham condition in patients with chronic low back pain: Study protocol for The RELIEF Study. *Contemporary Clinical Trials* 70:41-52. PMID: 29792940
22. **Russ, D.W.**, Ross, A.J.\* , Clark, B.C. & Thomas, J.S. (2018) The Effects of Task Type on Time to Task Failure During Fatigue: A Modified Sørensen Test. *Journal of Motor Behavior.* 50(1):96-103. PMID: 28350240
23. **Russ, D.W.**, Acksel C.\* , McCorkle, K.W.\* , Edens, N.K. & Garvey, S.M. (2017) Effects of Running Wheel Activity and Dietary HMB and  $\beta$ -alanine Co-supplementation on Muscle Quality in Aged Male Rats. *Journal of Nutrition Health and Aging.* 21(5): 554–561. PMID: 28448086

24. Oki, K., Mahato, N. K., Nakazawa, M., Amano, S., France, C.R., **Russ, D.W.** & Clark, B.C. (2016) Preliminary evidence that excitatory transcranial direct current stimulation extends time to task failure of a sustained, submaximal muscular contraction in older adults. *Journal of Gerontology A: Medical Sciences*. 71(8):1109-12. PMID: 26912478
25. Amano, S., Fitri, A. Clift, R. Nakazawa, M., Law, T.D., Rush, L.J., Manini, T.M., Thomas, J.S., **Russ, D.W.**, Clark, B.C. (2016) Effectiveness of blood flow restricted exercise compared with standard exercise in patients with recurrent low back pain: study protocol for a randomized controlled trial. *Trials*.17(1):81. PMID: 26867541
26. Klionsky, D.J., *et al.* (2016) Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy*. 12(1):1-222. PMID: 26799652
27. Thomas, J.S., **Russ, D.W.**, Thomas, L.C. (2015) Trunk Flexor Endurance and Low-back Pain in Men and Women. *International Journal of Advances in Science, Engineering and Technology*. 4(1): 39-43.
28. **Russ, D.W.**, Nakazawa, M., Boyd, I.M.\* (2015) A Pilot Study of Age-related Changes in the Sphingolipid Composition of the Rat Sarcoplasmic Reticulum. *Journal of Frailty and Aging*. 4(4): 166-172. PMID: 27031012
29. **Russ, D.W.**, Acksel C.\*, Boyd, I.M.\*, Maynard, J.\*, McCorkle, K.W.\*, Edens, N.K. & Garvey, S.M. (2015) Dietary HMB and  $\beta$ -alanine Co-supplementation Does Not Improve *In Situ* Muscle Function in Sedentary, Aged, Male Rats. *Applied Physiology Nutrition & Metabolism*. 40(12):1294-301. PMID: 26579948
30. **Russ, D.W.**, Boyd, I.M.\*, McCoy, K.M.\* & McCorkle, K.W.\* (2015) Muscle-specificity of Age-related Changes in Markers of Autophagy and Sphingolipid Metabolism. *Biogerontology*. Dec;16(6):747-59. PMID: 26296420
31. Clark, B.C., Taylor, J.L., Hong, S.L., Law, T.D. & **Russ, D.W.** (2015) Weaker seniors exhibit motor cortex hypoexcitability and impairments in voluntary activation. *Journal of Gerontology A: Medical Sciences*. Sep;70(9):1112-9. PMID: 25834195
32. Garvey, S.M., **Russ, D.W.**, Skelding, M.B., Dugle, J.E. & Edens, N.K. (2015) Molecular and metabolomic effects of voluntary running wheel activity on skeletal muscle in late middle-aged rats. *Physiological Reports*. Feb 25;3(2). PMID: 25716928
33. **Russ, D.W.**, Wills, A.M.\*, Boyd, I.M.\* & Krause, J.\* (2014) Weakness, SR Function and Stress in Gastrocnemius Muscles of Aged Male Rats. *Experimental Gerontology*. 50:40-4. PMID: 24316040
34. Romani, W.A. & **Russ, D.W.** (2013) Acute Effects of Sex-specific Sex Hormones on Heat Shock Proteins in Fast Muscle of Male and Female Rats. *European Journal of Applied Physiology*. 113(10):2503-10. PMID: 23821238
35. **Russ, D.W.**, Krause, J.\*, Wills, A.\* & Arreguin, R.\* (2012) "SR Stress" in Mixed Hindlimb Muscles of Aging Male Rats. *Biogerontology*. 13(5):547-55. PMID: 22955580
36. **Russ, D.W.**, Clark, B.C, Krause, J.\* & Hagerman, F.C. (2012) Development of a Neuromuscular Electrical Stimulation Protocol for Sprint Training. *Medicine & Science in Sports & Exercise*. 44(9):1810-9. PMID: 22453247
37. **Russ, D.W.**, Gregg-Cornell, K.\* , Conaway, M.J. & Clark, B.C. (2012) Evolving concepts on the age-related changes in 'muscle quality.' *Journal of Cachexia Sarcopenia & Muscle*. 3(2): 95-109. PMID: 22476917

38. Tennant, K.F., Takacs, S\*, Gau J-T, Clark, B.C. & **Russ, D.W.** (2012) A preliminary study of symptomatic fatigue in rural older adults. *Aging Clinical & Experimental Research*. 24(4): 324-330. PMID: 22453247
39. Horner, A.M.\*, **Russ, D.W.** & Biknevicius, A. R. (2011) Effects of Early Stage Aging on Locomotor Dynamics and Hindlimb Muscle Force Production in the Rat. *Journal of Experimental Biology*. 214: 3588-3595. PMID: 21993787
40. **Russ, D.W.** & Grandy, J.S.\* (2011) Increased Desmin Expression in Hindlimb Muscles of Aging Rats. *Journal of Cachexia Sarcopenia & Muscle*. 2:175–180. PMID: 21966643
41. **Russ, D.W.** & Lanza, I. R. (2011) The Impact of Old Age on Skeletal Muscle Energetics: Supply and Demand. *Current Aging Science*. 4: 235-248. PMID: 21529319
42. **Russ, D.W.**, Grandy, J.S.\*, Toma, K. & Ward, C.W. (2011) Aging, but not yet Senescent, Rats Exhibit Reduced Muscle Quality and Sarcoplasmic Reticulum Function. *Acta Physiologica (Oxf.)*. 201(3):391-403. PMID: 20874807
43. Thomas, J.S., Ross, A.\*, **Russ, D.W.** & Clark, B.C. (2011) Time to task failure of the trunk extensor muscles differs with load type. *Journal of Motor Behavior*. 43(1):27-9. PMID: 21186461
44. **Russ, D.W.**, Scott, W. B.\*, Oursler, K. K. & Salter-King, J.\* (2010) Paradoxical contractile properties in the knee extensors of HIV-infected men treated with antiretroviral therapy. *Applied Physiology Nutrition & Metabolism*. 35(5):713-7. PMID: 20962928
45. McGinley, M.\*, Hoffman, R. L., **Russ, D.W.**, Thomas, J.S. & Clark, B.C. (2010) Older adults exhibit more intracortical inhibition and less intracortical facilitation than young adults. *Experimental Gerontology*. 45(9):671-8. PMID: 20417265
46. Dearth, D. J.\*, Umbel, J., Hoffman, R. L., **Russ, D.W.**, Wilson, T. E. & Clark, B.C. (2010) Men and women exhibit a similar time to task failure for a sustained, submaximal elbow extensor contraction. *European Journal of Applied Physiology*. 108(6):1089-98. PMID: 20024575
47. Oursler, K. K., Katzel, L. I., Smith, B. A., Scott, W. B.\*, **Russ, D.W.**, & John D. Sorkin. (2009) Prediction of Cardiorespiratory Fitness in Older HIV-infected Men: Clinical Factors and Value of the Six-Minute Walk Distance. *Journal of the American Geriatrics Society*. 57(11):2055-61. PMID: 19793156
48. **Russ, D.W.**, Ruggeri, R.G.\* & Thomas, J.S. (2009) Central activation and force-frequency responses of the lumbar extensor muscles. *Medicine & Science in Sports & Exercise*. 41(7):1504-1509. PMID: 19516149
49. Clark, B.C., Manini, T. M., Hoffman, R. L. & **Russ, D.W.** (2009) Restoration of voluntary muscle strength following 3-weeks of cast immobilization is suppressed in women compared to men. *Archives of Physical Medicine & Rehabilitation* 90(1):178-80. PMID: 19154845
50. Lovering, R. M. & **Russ, D.W.** (2008) Fiber type composition of cadaveric human rotator cuff muscles. *Journal of Orthopedic & Sports Physical Therapy*. 38(11):674-680. PMID: 18978449
51. Clark, B. C., Hoffman, R. L. & **Russ, D.W.** (2008) Immobilization-induced increases in fatigue resistance is not explained by changes in the muscle metaboreflex. *Muscle & Nerve*. 38(5):

1466-1473. PMID: 18932206

52. **Russ, D.W.**, Towse, T. F., Wigmore, D. M., Lanza, I. R. & Kent-Braun, J. A. (2008) Contrasting Influences of Age and Sex on Muscle Fatigue. *Medicine & Science in Sports & Exercise* 40: 234-241. PMID: 18202580
53. **Russ, D.W.** (2008) Active and Passive Tension Interact to Promote Akt Signaling With Skeletal Muscle Contraction. *Medicine & Science in Sports & Exercise* 40: 88-95. PMID: 18091018
54. Scott, W. B.\*, Oursler, K. K., Katznel, L. I., Ryan, A. S. & **Russ, D.W.** (2007) Central Activation, Muscle Performance and Physical Function in Men Infected With Human Immunodeficiency Virus. *Muscle & Nerve* 36: 374-83. PMID: 17554797
55. **Russ, D.W.** & Lovering, R. M. (2006) Influence of Activation Frequency on Cellular Signaling Pathways During Fatiguing Exercise in Mammalian Skeletal Muscle. *Experimental Physiology* 91: 957-966. PMID: 16857718
56. **Russ, D.W.**, Lanza, I. R., Rothman, D. & Kent-Braun, J. A. (2005) Sex differences in glycolysis during brief, intense isometric contractions. *Muscle & Nerve* 32: 647-655. PMID: 16025523
57. **Russ, D.W.** & Kent-Braun, J. A. (2004) Is Skeletal Muscle Oxidative Capacity Decreased in Old Age? *Sports Medicine* 34: 221-229. PMID: 15049714
58. Lanza, I. R., **Russ, D.W.** & Kent-Braun, J. A. (2004) Age-related Enhancement of Fatigue Resistance is Evident in Men During Both Isometric and Dynamic Tasks. *Journal of Applied Physiology* 97: 967-975. PMID: 15145914
59. **Russ, D.W.** & Kent-Braun, J. A. (2003) Sex Differences in Human Skeletal Muscle Fatigue are Eliminated under Ischemic Conditions. *Journal of Applied Physiology* 94: 2414-2422. PMID: 12562681
60. **Russ, D.W.**, Vandenborne, K. & Binder-Macleod, S. A. (2002) Factors in Fatigue During Intermittent Electrical Stimulation of Human Skeletal Muscle. *Journal of Applied Physiology* 93: 469-478. PMID: 12133852
61. Russ, D.W., Elliott, M. A., Vandenborne, K., Walter, G. A. & Binder-Macleod, S. A. (2002) Effects of Muscle Activation on Fatigue and Metabolism in Human Skeletal Muscle. *Journal of Applied Physiology* 92: 1978-1986. PMID: 11960948
62. **Russ, D.W.**, Elliott, M. A., Vandenborne, K., Walter, G. A. & Binder-Macleod, S. A. (2002) Metabolic Costs of Isometric Force Generation and Maintenance in Human Skeletal Muscle. *American Journal of Physiology – Endocrinology and Metabolism*. 282: E448-E457. PMID: 11788378
63. **Russ, D.W.** & Binder-Macleod, S. A. (1999) Variable-frequency Trains Offset Low-frequency Fatigue in Human Skeletal Muscle. *Muscle & Nerve*, 22: 874-882. PMID: 10398205
64. Binder-Macleod, S. A. & **Russ, D.W.** (1999) Effects of Activation Frequency and Force on Low-frequency Fatigue in Human Skeletal Muscle. *Journal of Applied Physiology*, 86: 1337-1346. PMID: 10194220
65. Binder-Macleod, S. A., Lee, S.C.K., **Russ, D.W.** & Kucharski, L. K. (1998) Effects of Activation Pattern on Human Skeletal Muscle Fatigue. *Muscle & Nerve*, 21: 1145-1152. PMID: 9703440

66. **Russ, D.W.** (1998) In-season Management of Shoulder Pain in a Collegiate Swimmer--A Team Approach. *Journal of Orthopedic & Sports Physical Therapy*, 27(5): 371-376. PMID: 9580898

#### Book Chapters

1. Manini, T. M., Russ, D. W. and Clark, B. C. The Complex Relation Between Muscle Size and Muscle Strength, pp. 74-103. In *Sarcopenia*, eds. Cruz-Jentoft A. and Morely J. Wiley and Sons. (2012).
2. Lee, S. C., Russ, D. W. and Binder-Macleod, S. A. Force-Frequency Relation of Skeletal Muscle. In *Encyclopedic Reference Of Neuroscience*, ed. Binder M, Hirsch M, Hirokawa N & Windhorst U. Springer, Heidelberg, New York, Tokyo. Vol. 2, pp.1608-1611. (2009).
3. Russ, D. W. Chapter 6: Sex and Muscle Fatigue, pp. 135-164. In *Human Muscle Fatigue*, ed. Ratel S and Williams C. Routledge Publishing, (2009).

#### **Presentations/Workshops & Posters**

##### Major Invited Speeches/Workshops

- 02/21 Muscles, Mobility & Healthy Aging: Assumptions, Data and Work in Progress. Graduate Seminar. Sponsor: University of Central Florida Dept. of Kinesiology & Physical Therapy
- 02/20 Neuromuscular and Functional Differences Between Older Adults With and Without Moderate Dynapenia. Combined Sections Meeting of the American Physical Therapy Association (Denver, CO). Sponsor: Research Section of the APTA.
- 03/18 Leveraging Non-physiological Aspects of NMES for Beneficial Neuromuscular Adaptations in Older Adults. Miami Beach, FL. Sponsor: International Conference on Frailty and Sarcopenia Research.
- 01/18 Exercise for optimizing function in aging muscle. Fairfax, VA. Sponsor: George Mason University Department of Rehabilitation Sciences Conversation with a Scientist Seminar Series.
- 03/16 Quantity and Quality in Aging Skeletal Muscle. Research in Progress Forum. Columbus, OH. Sponsor: Davis Heart and Lung Research Institute.
- 05/14 Optimizing exercise interventions for aging muscles in Symposium: Maximizing Exercise Performance across the Lifespan. Orlando, FL. Sponsor: American College of Sports Medicine.
- 08/13 Contractile responses to Dietary Supplements in Aging Rat Hindlimb Muscles. Muscle & Mobility Research Symposium. Columbus, OH. Sponsor: Abbott Laboratories
- 06/12 Mechanisms of Age-related Changes in Muscle Quality & Quantity. Columbus, OH. Sponsor: Abbott Laboratories
- 06/12 Staying In Motion: Preventing Falls. Athens, OH. Sponsor: OU-HCOM Dept. of Geriatric Medicine & Gerontology.
- 03/12 When Less is Less is Even Less: Intramuscular Aging Muscle Quantity & Quality. Northampton, MA. Sponsor: Smith College Department of Biology.
- 11/11 Intramuscular factors in age-related muscle weakness in Symposium: Sarcopenia ≠ Dynapenia Boston, MA. Sponsor: Gerontological Society of America.

- 10/09 Influence of Biological Sex and Aging on Muscle Fatigue-Resistance: Annual Meeting of the Midwest Chapter of the American College of Sports Medicine, St. Charles, IL. Sponsor: Midwest ACSM.
- 06/08 Contractile parameters & muscle cell signaling: Molecular Physiology Laboratory, Marshall University. Sponsor: Eric Blough, Department of Biology.
- 03/07 Magnetic Resonance Spectroscopy and the Study of Aging Muscles: Center on Health and Aging, Johns Hopkins Hospital. Sponsor: Johns Hopkins Division of Geriatric Medicine and Gerontology.
- 04/06 Influence of neuromuscular activation frequency on intracellular signaling pathways following fatiguing exercise in skeletal muscle: University of Massachusetts Graduate Seminar, Amherst, MA. Sponsor: University of Massachusetts Dept. of Exercise Science.
- 08/05 Characterization of Muscle Function in HIV+ Men: University of Delaware BIOMS Seminar, Newark, DE. Sponsor: University of Delaware Interdisciplinary Program in Biomechanics and Movement Science.
- 10/04 Aging Skeletal Muscle: More Than Sarcopenia?: Annual Meeting of the APTA of Maryland, Catonsville, MD. Sponsor: Maryland Chapter of the American Physical Therapy Association.
- 10/04 Sex Differences in Human Skeletal Muscle: Fatigue & Metabolism: University of Delaware BIOMS Seminar, Newark, DE. Sponsor: University of Delaware Interdisciplinary Program in Biomechanics and Movement Science.
- 2/04 Magnets, Muscles & Metabolism: University of Maryland Medical System Radiology Lecture Series, Baltimore, MD. Sponsor: University of Maryland Medical System Dept. of Radiology.
- 9/03 Sex Differences in Human Skeletal Muscle Fatigue: Potential Mechanisms. University of Maryland-Baltimore Graduate Seminar, Baltimore, MD. Sponsor: U. of Maryland Dept. of Physical Therapy & Rehabilitation Science.
- 6/02 Factors in Metabolic Demand and Fatigue during Electrical Stimulation of Human Skeletal Muscle. Second Annual S. Mouchly Small Muscle Symposium. Amherst, MA. Sponsor: U. of Massachusetts Dept. of Exercise Science.
- 6/00 Muscle Fatigue: Physiological bases and clinical implications. Annual Conference and Exposition of the American Physical Therapy Association, Indianapolis, IN. Sponsor: APTA.
- 11/98 Evaluation and Treatment of the Cervical Spine. For Advanced Topics in Sports Medicine class (HPER 449). Sponsor: University of Delaware Athletic Training Program.
- 11/97 Evaluation and Treatment of the Cervical Spine. For Advanced Topics in Sports Medicine class (HPER 449). Sponsor: University of Delaware Athletic Training Program.
- 1/97 Electrotherapy--Choosing the Right Tool for the Right Job. Medical Aspects of Sports. Newark, DE. Sponsor: University of Delaware Athletic Training Program.
- 6/95 Evaluation of the Cervical Spine: The Basics. University of Maryland Hospital Physical Therapy Department. Sponsor: UMMS Physical Therapy Department.

#### **Other Presentations & Posters**

- 2/19 Different Measures of Trunk Muscle Endurance in Individuals with Recurrent Episodes of Low-



- back Pain: Clinical and Physiological Associations Combined Sections Meeting of the American Physical Therapy Association (Washington, D.C.). Sponsor: Research Section of the APTA.
- 2/07 Differential Effects of Sex & Aging on Fatigue During High-Intensity Isometric Contractions. Combined Sections Meeting of the American Physical Therapy Association (Boston, MA). Sponsor: Research Section of the APTA.
- 2/06 Quadriceps Femoris Muscle Function and Physical Performance in HIV+ African-American Men. Combined Sections Meeting of the American Physical Therapy Association (Dallas, TX). Sponsor: Research Section of the APTA.
- 2/05 Stimulation Frequency Affects Skeletal Muscle Fatigue, Independent of Muscle Force Production. APTA Combined Sections Meeting (New Orleans, LA). Sponsor: Clinical Electrophysiology Section of the APTA.
- 2/02 Sex Differences in human skeletal muscle fatigue are eliminated during ischemic exercise. APTA Combined Sections Meeting (Tampa, FL). Sponsor: Sports Section of the APTA.
- 2/00 Effects of Frequency on Human Skeletal Muscle Fatigue During Electrical Stimulation. APTA Combined Sections Meeting (New Orleans, LA). Sponsor: Clinical Electrophysiology Section of the APTA.
- 6/99 Force-Frequency Relationship in the Human Medial Gastrocnemius Muscle. APTA National Meeting (Washington, D.C.). Sponsor: APTA.
- 2/97 In-Season Management of Shoulder Pain in a Collegiate Swimmer. Combined Sections Meeting of the American Physical Therapy Association (Dallas). Sponsor: Sports Section of the APTA.

### **Grant Activity**

#### **Extramural**

##### **Active**

As PI:

As Co-I:

2021-2023	Foundation for Physical Therapy: Development of a Novel Evidence Based Practice-specific Entrustable Professional Activity for Doctor of Physical Therapy Student Clinical Education (D. Haladay, PI)
2021-2023	NIH/NIA R44AG058312: Development and Validation of a Novel Non-invasive Device for Measuring the Mechanical Properties of Cortical Bone. (B. Clark and A. Dick, PIs) Site PI; \$309,825 direct costs

##### **Pending**

#### **Extramural**

As PI:

As Co-I:

#### **Intramural**

As PI:

##### **Completed**

#### **Extramural**

As PI:

2020-2022	NIH/NIA R03 AG060143-01A1: Does Trimetazidine Enhance Skeletal Muscle Contractility and Muscle Quality?: (D.W. Russ, PI) (\$149,500)
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2014	Research Contract -- Abbott Nutrition: A Pilot Study of Dietary HMB for the Enhancement of Skeletal Muscle Function in Aging Rats (\$118,000)
2005	Claude D. Pepper Center Pilot Grant, (\$25,000)
2004	Claude D. Pepper Center Pilot Grant, (\$20,000)
2000	Foundation for Physical Therapy: Promotion of Opportunities for Doctoral Scholars, (half-year) (\$7,500, direct cost only)
1999-00	Foundation for Physical Therapy: Promotion of Opportunities for Doctoral Scholars (\$15,000 direct cost only)
1998-99	Foundation for Physical Therapy: Promotion of Opportunities for Doctoral Scholars (\$7,500 direct cost only)
As Co-I:	
2018-2021	U.S. Dept. of Defense OR170266: Rehabilitation 2.0: Addressing Neuroplasticity in the Musculoskeletal Rehabilitation (D. Grooms, PI)
2017-2018	National Institutes of Health Innovative neurophysiological techniques for assessing trunk muscle control and function (iCAM) (B. Clark, PI)
2014-2018	National Institutes of Health 1R01AG044424-01A1: Neural Mechanisms of Dynapenia (B. Clark, PI)
2014-2016	National Institutes of Health 1R21AR063909-01A1: Novel Exercise Interventions to Improve Trunk Muscle Function: A Pilot Study (B. Clark, PI)
2012-2017	National Institutes of Health R01AT00697803: THE RELIEF STUDY (J. Thomas & B. Clark, Co-PIs)
2010-2013	National Institutes of Health R15 HD065552-01: Intracortical mechanisms of muscle weakness, PI Brian C. Clark
2012-2013	MdDS Balance Disorder Foundation: Mechanisms of impaired postural control in Mal de débarquement.

Intramural

As PI:

2020-2021	Center for Neuromusculoskeletal Research; Does Gamma-loop Impairment Contribute to Motor Dysfunction in Older Adults? (\$17,500)
2020-2021	Center for Neuromusculoskeletal Research; Dietary Fish Oil for Enhancing Recovery From Muscle Injury in Old Age (\$32,500)
2018-2019	College of Health Sciences & Professions Dean's Innovation Research Award
2015-16	Dean's Innovation Challenge Fund: Research Promoting Recovery of Injured Muscle in the Elderly (RePRIME) (\$17,000)
2013	OMNI Research Award (\$8,500)
2011	OMNI Research Award (\$2,031)
2011	Ohio University CHSP Summer Research Award (\$10,000)
2010	Ohio University Baker Fund (\$8,314)
2009	RSAC (\$4000)
2008	CHHS Scholarly Activity Award (\$6,258)
2008	OURC (\$7,681)
2004	University of Maryland School of Medicine Intramural Grant, (\$14,360)

As Co-I:

2011	Ohio University HCOM RSAC (A. Biknevicus, PI)
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**Not Funded**Extramural

As PI:

3/22	National Institutes of Health R21: Enhancing Use of Hand Motor Performance for Identifying Increased Risk for Cognitive Impairment in Older Adults
11/21	U.S. Army Medical Research and Development Command Congressionally Directed Medical Research Programs Clinical Exploration Award - Clinical Trial: Can Goal

- Attainment Scaling Enhance Treatment Effectiveness and Patient Outcomes in the Treatment of Chronic Low Back Pain?
- 6/21 National Institutes of Health R21: Dietary Supplementation to Promote Aged Muscular Recovery from Injury by Enhancement of Muscle Membrane Repair
- 10/18 National Institutes of Health R15: Dietary Intervention for Enhancing Mechanisms of Functional Recovery of Aged Muscle from Contusion Injury
- 06/17 National Institutes of Health R15: Stimulation of Autophagy in Aged Muscle to Restore Sarcoplasmic Reticulum Function and Enhance Contractility
- 02/17 National Institutes of Health R15: An Experimental Trial of Acupuncture for the Reduction of Muscle Atrophy During Disuse
- 02/16 National Institutes of Health R15: Stimulation and Inhibition of Autophagy in Young and Aged Skeletal Muscle: Effects on Contractile and Sarcoplasmic Reticulum Function
- 10/14 National Institutes of Health R01: Dietary Interventions for Addressing Mechanisms of Age-related Muscle Weakness
- 06/13 National Institutes of Health R15: Stimulating Autophagy to Counter Age-related Muscle Weakness and SR Dysfunction
- 01/13 U.S. Dept. of Education/NIDRR: TRANSIT Therapy for the Treatment of Knee Osteoarthritis.
- 10/12 U.S. Dept. of Education/National Institute for Disability & Rehabilitation Research (NIDRR) TRANSIT Therapy for the Treatment of Knee Osteoarthritis
- 02/12 National Institutes of Health R01: Improving aging muscle function with TRANSIT neuromuscular electrical stimulation.
- 01/12 National Science Foundation: A comparative species study of muscle senescence in aging rodents. (Pre-proposal only, full proposal not invited)
- 12/11 American Federation for Aging Research: Trimetazidine treatment to reduce sarcoplasmic reticulum stress & enhance muscle quality in aging muscle.
- 10/10 National Institutes of Health R03: Interventions for Enhancing Muscle Quality in Young and Aging Individuals.
- 10/09 Eli Lilly Pre-Clinical Research Program: A Pilot Study of FORTEO® Treatment for the Enhancement of Skeletal Muscle Function in Aged Rats (Not funded, but drugs provided)
- 9/09 NIH R15: Sprint-modeled Electrical Stimulation training to Enhance Aged Muscle Quality.
- 8/09 Foundation for Physical Therapy Research Grant: A Novel Electrical Stimulation Protocol for Improving Skeletal Muscle Quality Physical Therapy
- 12/08 American Federation for Aging Research: A Novel Electrical Stimulation Protocol for Improving Calcium Release, Muscle Quality and Gait Performance in Aged Rats.
- 8/08 Empi Recovery Sciences Grant Program: NMES Training to Enhance Excitation-Contraction Coupling and Skeletal Muscle Quality.

## As Co-I:

- 06/12 National Institutes of Health R01: Neural Mechanisms of dynapenia. PI: Brian Clark
- 02/12 NIH R21: Novel Exercise interventions to improve trunk muscle function in low back pain: A pilot study. PI: Brian Clark.
- 10/11 National Institutes of Health R01: Novel Exercise interventions to improve trunk muscle function in low back pain. PI: Brian Clark
- 06/11 National Institutes of Health R01: Neurophysiological mechanisms of task failure in trunk extensor muscles. PI, James Thomas.
- 5/10 National Institutes of Health, U19: Neural, muscular, & biomechanical effects of spinal manipulation in chronic LBP. PI, James Thomas
- 9/09 National Institutes of Health R15: resubmission: Sex differences in muscle function associated with cast immobilization. PI, Brian Clark
- 6/09 National Institutes of Health R21: Characterizing neuromuscular mechanisms of fatigue of lumbar extensor muscles. PI, Brian Clark.
- 2/09 National Institutes of Health R15: Sex differences in muscle function following cast immobilization. PI, Brian Clark

- 12/08 Eli Lilly Clinical Research Program: Does FORTEO® Treatment Increase Muscle Size, Muscle Strength and/or Physical Performance in Postmenopausal Osteoporotic Women with or without Vertebral Fractures: A Pilot Study. PI, Jen-Tzer Gau.

### **Other Support**

- 1999-00 University of Delaware Office of Graduate Studies Competitive Fellowship, (\$10,140)  
 1998-99 University of Delaware Office of Graduate Studies Competitive Fellowship, (\$10,140)  
 1992 Johns Hopkins Hospital Physical Therapy Scholarship, (\$4,000)

### **Published Abstracts (\*-- Indicates student/mentee co-author)**

1. Russ DW, Sehested, C, Weisleder, N, Deschenes, MR. Contrasting Effects of Age on Muscle Contractility in Male and Female Rats. *FASEB J*, 2022, 36(S1)
2. Russ DW, Wages N, Clark, LA, Suhr JA and Clark BC Age-specific Differences in Anthropometric, Motor and Neuropsychological Factors in Grip Strength. *J Frailty Aging*. 10(S1): 24 2021.
3. Clark, LA, Amano S, Russ DW, Law TD, and Clark BC. Impairment in neural activation is a key contributor to clinically meaningful muscle weakness (i.e., Dynapenia) in Elderly Women. *J Frailty Aging*. 7(S1) 2018.
4. Russ DW, Beck EX, Leach E\* McElhanon KE, Weisleder N. Age-related Changes In Contractile Function Of Mouse Soleus And EDL Muscles. *Med Sci Sports Exerc*. 46(5S):356. 2017.
5. Russ DW, Garvey SM, Herman S\*, Hawks T\*. A Pilot Study of Fish Oil to Enhance Muscle Function and Injury Resistance in Young and Old Rats. *J Frailty Aging*. 5(S1): 118. 2016.
6. Grooms KD, Clark BC, Clark LA, Amano S, Manini, TM, Russ DW. Relationship Between White Matter Hyperintensity Load and Physical Function and Muscle Strength in Older Adults. *J Frailty Aging*. 5(S1): 50. 2016.
7. Octogenarians and Nonagenarians Exhibit Impairments in Leg Extensor Voluntary Activation, but not Elbow Flexor Voluntary Activation. Clark LA, Amano S, Clift R, Russ DW, Manini TM, Law TD and Clark BC. *J Frailty Aging*. 5(S1): 63. 2016.
8. Russ DW, Boyd IM\*, McCorkle KW\*. Sarcoplasmic Reticulum Function and Membrane Sphingolipids in Adult and Aged Rodent Skeletal Muscle. *J. Frailty Aging*. 4(1S):28. 2015.
9. Acksel C\*, Garvey SM, Russ DW. The Effects of Dietary –Hydroxy –Methylbutyrate and – Alanine and Physical Activity on Muscle Mass, Contractility and Myosin Composition in Aged Male Rats. *J. Frailty Aging*. 4(1S):52. 2015.
10. Boyd I\*, Russ DW. Interruption Of Basal Autophagy In Aging Skeletal Muscles Demonstrating Impaired Muscle Quality And SR Function *Med Sci Sports Exerc.*, 46(5S):356. 2014.
11. Garvey SM, Russ DW, Skelding MB, Reaves LA, Boyd I\*, Edens NK. Molecular and metabolomic effects of voluntary running wheel activity on skeletal muscle in late middle-aged rats *FASEB J*. 28:1040.7, 2014
12. Russ DW, Boyd IM\*, McCoy K\* & Wills A\*. Muscle specificity of age-related changes in markers of autophagy. *FASEB J*. 28:863.9 2014
13. Russ DW, Wills A\*, Boyd I\*. SR Function and Glycogen in Aging Rat Hindlimb Muscles. *Med Sci Sports Exerc*. Volume 45:5 Supplement, 2013.

14. D. Russ, J. Krause\*, A. Wills\*, and E. Klein\*. Markers of "SR Stress" in Aging and Exercised Muscle. *The Physiologist*, 9.1, 55(6), 2012.
15. Russ, D., Grandy, J. S.\*, Toma, K., Clark, B., & Ward, C. W. Intramuscular Factors in Age-related Muscle Weakness. *The Gerontologist*. 51:235, November 2011.
16. Russ DW, Grandy J.S.\*. Increased Desmin Expression In Aging Skeletal Muscle That Exhibits Reduced Muscle Quality *Med Sci Sports Exerc*. 43(5):297, May 2011.
17. Thomas J, Ross AR\*, Russ DW, Clark BC, Cowen J\*, Pickett R\*, Linsenmayer M\*. Trunk muscles respond to task specific fatigue in an opposite manner as appendicular muscles *Neuroscience Meeting Planner Online Program No.* 381.5. November, 2010.
18. Tennant KF, Clark B, Gau J, Russ D. (2010) The Lived Experience of Unexplained Fatigue in Rural Elderly *The Gerontologist* 50 Suppl.2: 292, October 2010.
19. Clark BC, McGinley MP\*, Hoffman RL, Thomas JS, Russ DW. Age-related differences in cortical excitability. *Med Sci Sports Exerc*. 42(5):10, May 2010.
20. Russ DW, Grandy J\*, Badenhop M\*, Toma K, MacIntosh S\*. Force relaxation and calcium handling in aged skeletal muscle *Med Sci Sports Exerc*. 42(5):580, May 2010.
21. Varadhan R, Horska A, Russ D, Weiss C, Walston JD, Fried LP. Dynamics of phosphocreatine recovery in the skeletal muscle of frail older women. *The Gerontologist* 49 Suppl.2: 292, October 2009.
22. Russ DW, Hans MA\*, Clark BC, Gau JT. Age-related Declines in Parathyroid Hormone Receptor Expression in Mammalian Skeletal Muscle. *The Gerontologist* 49 Suppl.2: 141, October 2009.
23. Dearth DJ\*, Umbel J, Hoffman RL,; Russ, DW, Wilson TE, Clark BC. Influence Of Fatigue-induced Muscle Afferent Stimulation On Motor Evoked Potentials *Med Sci Sports Exerc*. 41(5):354, May 2009
24. Russ DW, Horner AM\*, Biknevicus A, Ward CW. Hindlimb Muscle Quality And Ambulation In Old Rats *Med Sci Sports Exerc*. 41(5):483, May 2009.
25. Horner AM\*, Russ DW & Biknevicus AR. Effects of aging on locomotor dynamics and hindlimb muscle force production in the rat. *Int Comp Biol*. 49 Suppl. 1: E79, 2009.
26. Ruggeri RG\*, Russ DW, Gustwiller\* SM & Thomas J. Characterization of central activation and contractile properties of the lumbar extensor muscles. *Clinical Electrophysiology & Wound Management*. 23(1) 2009.
27. Clark BC, Manini TM, Hoffman RL & Russ DW. Restoration of muscle strength following 3-weeks of cast immobilization is suppressed in women compared to men. *The Physiologist*, 29.1, 51(6), 2008.
28. Lovering RM & Russ DW. Fiber Type Composition of Human Rotator Cuff Muscles. *Med Sci Sports Exerc*, 40 (5) 2008.
29. Russ DW & Romani WA. Muscle Heat Shock Protein Responses to Altered Levels of Sex Hormones. *FASEB J*, 664.10, 19(5), 2007.

30. Russ DW, Nutwell A\* & Lovering RM. Effects of stimulation frequency on fatigue and JNK phosphorylation in fast skeletal muscle. *FASEB J*, 664.10, 19(5), 2005.
31. Scordilis SP, Russ D, Thompson HS, Briggs RT, Maynard EB & Swoap, SJ. Heat shock protein gene and protein expression subsequent to unweighting and reloading in the rat soleus muscle. *FASEB J*, 701.6, 18 (5), 2004.
32. Russ DW, Lanza IR, Mason G, Rothman D and Kent-Braun JA. Sex-related differences in human skeletal muscle metabolism during maximum-effort exercise. *FASEB J*, 702.11, 18(5), 2004.
33. Russ DW, DM Bartholomew, Towse TF and Kent-Braun JA. Influence of duty cycle on sex differences in fatigue during maximum-effort exercise. *Med Sci Sports Exerc*, 35 (5) 2003.
34. Lanza IR, Russ DW, Towse TF and Kent-Braun JA. Enhanced fatigue resistance with age is evident during isometric and dynamic tasks. *Med Sci Sports Exerc*, 35 (5) 2003.
35. Russ DW, Towse TF and Kent-Braun JA. Effects of Ischemia on gender-dependent differences in Human Skeletal Muscle Fatigue. *FASEB J*, 612.12, 16(5), 2002.
36. Towse TF, Sacco P, Russ D, Bartholomew D and Kent-Braun J. Fatigue and Central Activation Failure in Young and Older Adults. *FASEB J*, 612.14, 16(5), 2002.
37. Russ DW, Binder-Macleod SA, Walter GA and Vandeborne K. Effects of Stimulation Frequency and Duration on Metabolism and Fatigue in Human Skeletal Muscle. *The Physiologist*, 26.8, 43(4), 2000.
38. Toriello KA, Russ DW, Binder-Macleod SA. Characterization of Post-activation Attenuation. *FASEB J*, 14(5), 2000.
39. Russ DW, Binder-Macleod SA, Elliott MA, Swift A, Vandeborne K. Metabolic Cost of Different Stimulation Trains During Fatigue of Skeletal Muscle. *FASEB J*, 514.9, 13(5), 1999.
40. Russ DW and Binder-Macleod SA. Effect of Activation Frequency and Force on Low-Frequency Fatigue in Human Skeletal Muscle. *FASEB J*, 3742, 12(5), 1998.

#### Instruction & Advising

##### **Courses Taught**

##### University of South Florida

PHT 6277 Physiology and Pathophysiology

PHT 6274 2A Scientific Inquiry II, Course Director (2021- )

PHT 7265 2A Integumentary Clinical Problem Solving (2021), Instructor

##### Ohio University

PT 7111 Clinical Medicine in PT, Ohio University (2018-2019)

PT 711/7110 Pathophysiology, Ohio University (2007-2017)

PT 865/7655 Wound Care and Integumentary System, Ohio University (2008-2019)

PT 765 Physical Agents, Ohio University (2008-2019) (now PT7650)

##### *Regular Guest Lectures*

PT 850 Management of Aging (2008-2011)

PT 764 PT in Acute Care (2008-2011)

##### University of Maryland-Baltimore

PTRS Basic Science II, University of Maryland-Baltimore (2003-2006)

PTRS Basic Science III, University of Maryland-Baltimore (2005-2007)

PTRS Musculoskeletal I, University of Maryland-Baltimore (2005-2007)  
PTRS Musculoskeletal II, University of Maryland-Baltimore (2004-2007)  
PTRS Neuromuscular II, University of Maryland-Baltimore (2004-2007)

### **Directed Studies/Honors Tutorials**

Ellen Lubbers: Ohio University Honors College Tutorial, Fall 2009  
Eric Leach: Ohio University Honors College Tutorial, Fall 2015, Spring 2016  
Samantha Beeler: Ohio University DPT Physiology Remediation, Summer 2017  
Erica Custer: Ohio University PURF advisor, 2016-17 "Interventions for Increasing Energy Expenditure during a Typing Task"

### **Dissertation Committees**

#### Member

Joseph Roche (2008) UMd-Baltimore Graduate Program in Life Sciences, Muscle Biology Program, Robert Bloch, Ph.D., advisor  
Ian Lanza (2007) University of Massachusetts Department of Kinesiology, Jane A. Kent-Braun, Ph.D., advisor  
Megan Applegate (2018) Ohio University Interdisciplinary Ph.D. Program, James S. Thomas, Ph.D., advisor

#### Advisor

Dallin Tavoian (2021) Ohio University Biomedical Sciences Program, Co-advisor with Brian C. Clark, Ph.D.

### **Comprehensive Examination Committees**

#### Member

Comprehensive Exam Committee for Chris Mizelle; UMd-Baltimore Ph.D. (2007)  
Comprehensive Exam Committee for Shih Chiao Tseng; UMd-Baltimore Ph.D. (2007)

### **Post-doctoral Mentorship**

Tertiary Mentor, Departmental T32: Wayne Scott, P.T., Ph.D; UMd-Baltimore (2005-2007)

### **Master's Thesis Committees**

#### Research Advisor

Cara Acksel, Ohio University Division of Food and Nutrition Sciences, Robert Brannan, Ph.D., academic advisor (2015)

### **Undergraduate Thesis Committees**

#### Honors Tutorial Thesis Advisor

Eric Leach, Ohio University Department of Biological Sciences (2016)

### **Professional Affiliations**

2006-Present Regular Member American College of Sports Medicine  
2003-Present Member: Sigma Xi, Smith College Chapter,  
2001-Present. Regular Member of the American Physiological Society

### **Service: Professional, International, Community, University, College & School Service**

#### **Professional Service**

##### Editorial Board Member:

Medicine and Science in Sports and Exercise (2011-present)  
Lipids in Health & Disease (2020-present)

##### Review Editor:

Frontiers in Aging Neuroscience (2020-present)

Ad hoc Grant Reviewer:

Scientist Reviewer: VA RR&D Scientific Merit Review (2021)  
 Scientist Reviewer: Department of Defense CDMRP (2020)  
 Scientist Reviewer: Department of Defense PRMRP (2017, 2019, 2020)  
 Reviewer: French CNRS and INSERM ATP-AVENIR Young Group Leader Grant Program (2017)  
 National Institutes of Health (NCCAM) ZAT1 HS-14  
 National Institute for Disability & Rehabilitation Research (US Dept. of Education) -- Field-Initiated Research Projects Program (2009-2011)  
 US-Israel Bi-national Science Foundation, Investigator-initiated Research Panel Reviewer (2008)

External Promotion & Tenure Reviewer

Reviewer for Tenure Candidate – Ohio State University Department of Physiology and Cell Biology (2018)

Ad hoc Manuscript Reviewer:

Journal of Orthopedic and Sports Physical Therapy (since 1999)  
 Journal of Applied Biomechanics (since 2000)  
 Medicine and Science in Sports and Exercise (since 2002)  
 Journal of Applied Physiology (since 2003)  
 Exercise & Sports Science Reviews (since 2003)  
 European Journal of Applied Physiology (since 2003)  
 Journal of Hand Therapy (since 2005)  
 Journal of Neurophysiology (since 2005)  
 Journal of Nutrition, Health and Aging (since 2006)  
 Physical Therapy (since 2006)  
 American Journal of Physiology (since 2006)  
 Archives of Physical Medicine & Rehabilitation (since 2007)  
 Muscle & Nerve (since 2007)  
 Neurorehabilitation & Neural Repair (since 2008)  
 Experimental Physiology (since 2008)  
 Applied Physiology, Nutrition and Metabolism (since 2009)  
 Cellular & Molecular Biology Letters (since 2010)  
 Experimental Gerontology (since 2011)  
 Journals of Gerontology: Biological Sciences (since 2012)  
 Journal of Motor Behavior (since 2013)  
 Age (since 2014)  
 PLOS One (since 2015)  
 Biogerontology (since 2015)  
 Physiotherapy Theory and Practice (since 2016)  
 Journal of Physiology & Biochemistry (since 2016)  
 Nature Communications (since 2018)  
 Lipids in Health and Disease (since 2020)  
 Scientific Reports (Since 2020)  
 Journal of Back & Musculoskeletal Rehabilitation (since 2020)

**Community Service**

Rural Health Outreach 2009  
 Geriatric Caregiver Series Speaker 2010

**University Service**Ohio University

2008-2019 OMNI (formerly OU-COM Institute for Neuromusculoskeletal Research) – Executive Board  
 2013-2018 Biomedical Institutional Review Board – Regular Member



2010-2015 OURC Committee  
 2014-2016 Baker Award Committee

### **College Service**

#### University of South Florida MCOM

Academic Promotion and Tenure Committee (2020-Present)

Academic Promotion and Tenure Committee, Revisions Subcommittee (2021)

#### Ohio University

2013, 2016-17 CHSP Promotion and Tenure Committee  
 2013 Search Committee -- Edison Biotechnology Institute Professor of Nutrition  
 2013-2015 OU CHHS Dean's Advisory Committee  
 2012 Search Committee – Group II College Anatomist  
 2009-2012 OU CHSP/CHHS Gerontology Advisory Committee (alternate)  
 2009-2011 OU CHSP/CHHS Scholarly Activity Award Committee  
 2008-2010 OU CHHS Dean's Advisory Committee  
 2008 Ad hoc CHHS PEP Committee

### **School Service**

#### University of South Florida

2020-present Director of Research, School of Physical Therapy and Rehabilitation Sciences  
 2020-present School of Physical Therapy and Rehabilitation Sciences Leadership Team  
 2020 Assistant School Director Search Committee (co-chair)  
 2020-present School of Physical Therapy and Rehabilitation Sciences Academic Promotion & Tenure Committee (chair)  
 2021-2022 School of Physical Therapy and Rehabilitation Sciences Research Faculty Search Committee (chair)  
 2022-present School of Physical Therapy and Rehabilitation Sciences Laboratory Engineer Search Committee

#### Ohio University

2012-2015 DPT Admissions Committee  
 2013-2019 School Promotion and Tenure Committee (Chair, 2013, 2016-17)  
 2012-2016 Search Committee – Group I Neurorehabilitation Faculty  
 2018-2019 Search Committee – Group I Orthopedic Faculty