

Keith C. DeRuisseau

Curriculum Vitae

CONTACT INFORMATION

Syracuse University
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EDUCATIONAL BACKGROUND

1994	B.S.	Exercise Science	University of Massachusetts, Amherst
1998	M.S.	Exercise Science	University of Massachusetts, Amherst
2002	Ph.D.	Movement Science	Florida State University

POSITIONS AND EMPLOYMENT

2015-2016 Fulbright Scholar, School of Medicine, Institute of Biomedicine, University of Eastern Finland

2013- Tenure conferred, Syracuse University

2012- Associate Professor
Department of Exercise Science, Syracuse University

2010- Assistant Professor, courtesy appointment
Department of Chemistry, Syracuse University

2006- Assistant Professor
Department of Exercise Science, Syracuse University

2002-2006 Postdoctoral Associate
Department of Applied Physiology and Kinesiology, University of Florida
Laboratory Director: Scott K. Powers, Ed.D., Ph.D.

2001 Course Instructor, Anatomy & Physiology I
Core Institute School of Massage Therapy, Tallahassee, FL

1998-2002 Graduate Teaching Assistant
Department of Nutrition, Food, and Exercise Sciences, Florida State University

1995-1998 Graduate Teaching Assistant
Department of Exercise Science, University of Massachusetts, Amherst

1994-1995 Research Technician
The Center for Clinical and Lifestyle Research, Shrewsbury, MA.
Director: James M. Rippe, M.D.

POST GRADUATE TRAINING

2006 Biotechnology Training Program, Proteomics Workshop, University of Florida, Gainesville, FL.

2005 Biotechnology Training Program, Cell Culture Techniques Workshop, University of Florida, Gainesville, FL.

PEER REVIEWED PUBLICATIONS UNDER REVIEW

1. Korkmaz, A., M. Venojärvi, N. Wasenius, S. Manderoos, **K.C. DeRuisseau**, O.J. Heinonen, H. Lindholm, S. Aunola, J.G. Eriksson, and M. Atalaya. Nordic walking increased circulating irisin levels in middle-aged men with impaired glucose regulation. *Submitted to Journal of Clinical Endocrinology & Metabolism*

PEER REVIEWED PUBLICATIONS

1. **DeRuisseau, K.C.**, Y.M. Park, L.R. DeRuisseau, P.M. Cowley, C.H. Fazen, and R.P. Doyle. Aging-related Changes in the Iron Status of Skeletal Muscle. *Exp Gerontol.* 48(11):1294-1302, 2013.
2. Cowley, P.M., S. Keslacy, F.A. Middleton, L.R. DeRuisseau, B. Fernhall, J.A. Kanaley, and **K.C. DeRuisseau**. Functional and Biochemical Characterization of Soleus Muscle in Down syndrome Mice: Insight into the Muscle Dysfunction Seen in the Human Condition. *Am J Physiol Regul Integr Comp Physiol.* 303(12): R1251-1260, 2012.
3. Kavazis, A.N., **K.C. DeRuisseau**, and D.M. Gordon. The senescent rat diaphragm does not exhibit age-related changes in caspase activities, DNA fragmentation, or myonuclear domain. *Eur J Appl Physiol.* 112(12): 3983-3990, 2012.
4. Goulopoulou, S., **K.C. DeRuisseau**, R. Carhart Jr., and J.A. Kanaley. Limb venous compliance responses to lower body negative pressure in humans with high blood pressure. *J Hum Hypertens.* 26(5): 306-314, 2012.
5. Cook, S.B., K.A. Brown, **K. DeRuisseau**, J.A. Kanaley, and L.L. Ploutz-Snyder. Skeletal muscle adaptations following blood flow restricted training during 30 days of muscular unloading. *J Appl Physiol.* 109(2): 341-349, 2010.
6. McClung, J.M., **K.C. DeRuisseau**, M.A. Whidden, H. Van Remmen, A. Richardson, W. Song, I.S. Vrabas, and S.K. Powers. Overexpression of antioxidant enzymes in diaphragm muscle does not alter contraction-induced fatigue or recovery. *Exp Physiol.* 95(1): 222-231, 2010.
7. DeRuisseau, L.R., D.M. Recca, J.A. Mogle, M. Zoccolillo, and **K.C. DeRuisseau**. Metallothionein deficiency leads to soleus muscle contractile dysfunction following acute spinal cord injury in mice. *Am J Physiol Regul Integr Comp Physiol.* 297: R1795–R1802, 2009.
8. DeRuisseau, L.R., D.D. Fuller, K. Qiu, **K.C. DeRuisseau**, W.H. Donnelly Jr., C. Mah, P.J. Reier, and B.J. Byrne. Neural Deficits Contribute to Respiratory Insufficiency in a Mouse Model of Pompe Disease. *Proc Natl Acad Sci.* 106(23): 9419-9424, 2009.
9. McClung J.M., D. Van Gammeren, M.A. Whidden MA, D.J. Falk, A.N. Kavazis, M.B. Hudson, G. Gayan-Ramirez, M. Decramer, **K.C. Deruisseau**, and S.K. Powers. Apocynin attenuates diaphragm oxidative stress and protease activation during prolonged mechanical ventilation. *Crit Care Med.* 37(4):1373-9, 2009.
10. Maes K., D. Testelmans, P. Cadot, **K.C. DeRuisseau**, S. Powers, M. Decramer, and G. Gayan-Ramirez. Effects of Acute Administration of Corticosteroids During Mechanical Ventilation on Rat Diaphragm. *Am J Respir Crit Care Med.* 178(12):1219-26, 2008.
11. McClung J.M., M.A. Whidden, A.N. Kavazis, D.J. Falk, **K.C. Deruisseau**, and S.K. Powers. Redox regulation of diaphragm proteolysis during mechanical ventilation. *Am J Physiol Regul Integr Comp Physiol.* 294(5):R1608-17, 2008.
12. Jung S.H., L.R. DeRuisseau, A.N. Kavazis, and **K.C. DeRuisseau**. Plantaris muscle of aged rats demonstrates iron accumulation and altered expression of iron regulation proteins. *Exp Physiol.* 93(3):407-14, 2008.

13. McClung J.M., A.N. Kavazis, M.A. Whidden, **K.C. DeRuisseau**, D.J. Falk, D.S. Criswell, and S.K. Powers. Antioxidant administration attenuates mechanical ventilation-induced rat diaphragm muscle atrophy independent of protein kinase B (PKB Akt) signalling. *J Physiol.* 585(Pt 1):203-15, 2007.
14. Kavazis A.N., **K.C. DeRuisseau***, J.M. McClung, M.A. Whidden, D.J. Falk, A.J. Smuder, T. Sugiura, and S.K. Powers. Diaphragmatic proteasome function is maintained in the ageing Fisher 344 rat. *Exp Physiol.* 92(5):895-901, 2007.
*co-first author
15. McClung J.M., A.N. Kavazis, **K.C. Deruisseau**, D.J. Falk, M.A. Deering, Y. Lee, T. Sugiura, and S.K. Powers. Caspase-3 Regulation of Diaphragm Myonuclear Domain during Mechanical Ventilation-Induced Atrophy. *Am J Respir Crit Care Med.* 175:150-159, 2007.
16. Van Gammeren D., D.J. Falk, M.A. Deering, **K.C. Deruisseau**, and S.K. Powers. Diaphragmatic nitric oxide synthase is not induced during mechanical ventilation. *J Appl Physiol.* 102:157-162, 2007.
17. Testelmans D., K. Maes, P. Wouters, N. Gosselin, **K. DeRuisseau**, S. Powers, R. Sciote, M. Decramer, and G. Gayan-Ramirez. Rocuronium exacerbates mechanical ventilation-induced diaphragm dysfunction in rats. *Crit Care Med.* 34(12):1-6, 2006.
18. Falk, D.J., **K.C. DeRuisseau**, D.L. Van Gammeren, M.A. Deering, A.N. Kavazis, and S.K. Powers. Mechanical Ventilation Promotes Redox Status Alterations in the Diaphragm. *J Appl Physiol.* 101(4):1017-1024, 2006.
19. **DeRuisseau, K.C.**, A.N. Kavazis, S. Judge, Z. Murlasits, M.A. Deering, J.C. Quindry, Y. Lee, D.J. Falk, C. Leeuwenburgh, and S.K. Powers. Moderate caloric restriction increases diaphragmatic antioxidant enzyme mRNA, but not when combined with lifelong exercise. *Antioxidant & Redox Signal.* 8(3-4):539-547, 2006.
20. Sellman, J.E., **K.C. Deruisseau**, J.L. Betters, V.A. Lira, Q.A. Soltow, J.T. Selsby, and D.S. Criswell. In vivo inhibition of nitric oxide synthase impairs up-regulation of contractile protein mRNA in overloaded plantaris muscle. *J Appl Physiol.* 100(1):258-265, 2006.
21. Chevront, S.N., R. Carter 3rd, **K.C. DeRuisseau**, and R.J. Moffatt. Running performance differences between men and women: An update. *Sports Med.* 35(12):1017-1024, 2005.
22. **Deruisseau, K.C.**, R.A. Shanely, N. Akunuri, M.T. Hamilton, D. Van Gammeren, A.M. Zergeroglu, M.McKenzie, and S.K. Powers. Diaphragm Unloading via Controlled Mechanical Ventilation Alters the Gene Expression Profile. *Am J Respir Crit Care Med.* 172(10):1267-1275, 2005.
23. Van Gammeren, D., D.J. Falk, **K.C. DeRuisseau**, J.E. Sellman, M. Decramer, and S.K. Powers. Reloading the diaphragm following mechanical ventilation does not promote injury. *Chest* 127(6):2204-2210, 2005.
24. **Deruisseau, K.C.**, A.N. Kavazis, and S.K. Powers. Selective downregulation of ubiquitin conjugation cascade mRNA occurs in the senescent rat soleus muscle. *Exp Gerontol.* 40(6):526-531, 2005.
25. Powers, S.K., A.N. Kavazis, and **K.C. DeRuisseau**. Mechanisms of disuse muscle atrophy: role of oxidative stress. *Am J Physiol Regul Integr Comp Physiol.* 288(2):R337-R344, 2005.
26. **DeRuisseau, K.C.**, A.N. Kavazis, M.A. Deering, D.J. Falk, D. Van Gammeren, T. Yimlamai, G.A. Ordway, and S.K. Powers. Mechanical ventilation induces alterations of the ubiquitin-proteasome pathway in the diaphragm. *J Appl Physiol.* 98(4):1314-1321, 2005.
27. Betters, J.L., D.S. Criswell, R.A. Shanely, D. Van Gammeren, D. Falk, **K.C. Deruisseau**, M. Deering, T. Yimlamai, and S.K. Powers. Trolox attenuates mechanical ventilation-induced diaphragmatic dysfunction and proteolysis. *Am J Respir Crit Care Med.* 170(11):1179- 1184, 2004.

28. Shanely, R.A., D. Van Gammeren, **K.C. DeRuisseau**, A.M. Zergeroglu, M.J. McKenzie, K.E. Yarasheski, and S.K. Powers. Mechanical ventilation depresses protein synthesis in the rat diaphragm. *Am J Respir Crit Care Med.* 170(9):994-999, 2004.
29. Powers, S.K., **K.C. DeRuisseau**, J. Quindry, and K.L. Hamilton. Dietary antioxidants and exercise. *J Sports Sci.* 22(1):81-94, 2004.
30. **DeRuisseau, K.C.**, L.M. Roberts, M.R. Kushnick, A.M. Evans, K. Austin, and E.M. Haymes. Iron status of young males and females performing weight-training exercise. *Med Sci Sports Exerc.* 36(2):241-248, 2004.
31. Zergeroglu, M.A., M.J. McKenzie, R.A. Shanely, D. Van Gammeren, **K.C. DeRuisseau**, and S.K. Powers. Mechanical ventilation-induced oxidative stress in the diaphragm. *J Appl Physiol.* 95(3):1116-1124, 2003.
32. **DeRuisseau, K.C.**, S.N. Cheuvront, E.M. Haymes, and R.G. Sharp. Sweat iron and zinc losses during prolonged exercise. *Int J Sport Nutr Exerc Metab.* 12(4):428-437, 2002.

BOOK CHAPTERS

1. Cheuvront, S.N., R.J. Moffatt, and **K.C. DeRuisseau**. Body Composition and Gender Differences in Performance. In: *Nutritional Assessment of Athletes*, J.A. Driskell and I. Wolinsky (Eds.). Boca Raton, FL: CRC Press, 2002.
2. Haymes, E.M. and **K.C. DeRuisseau**. Trace Minerals. In: *Nutrition and the Strength Athlete*, C. Jackson (Ed.). Boca Raton, FL: CRC Press, 2001, pp. 97-117.

ABSTRACTS PRESENTATED AT PROFESSIONAL MEETINGS

1. Benson, M., C. Receno, A. Le, S. Ruby, C. Liang, L. DeRuisseau, and **K. DeRuisseau**. Long Term Capsaicin Administration Effects on Skeletal Muscle Function in Aging Mice. Presented at the Experimental Biology annual meeting in Boston, 2015.
2. Receno, C.N., M.C. Benson, and **K.C. DeRuisseau**. Effects of Curcumin on the Expression of Antioxidants in Single Myofibers from Aged Mice. Presented at the Experimental Biology annual meeting in Boston, 2015.
3. Benson, M., Receno, C., Lee, A., Ruby, S., Liang, C., DeRuisseau, L., **DeRuisseau, K.** Long Term Capsaicin Administration Effects on Skeletal Muscle Function in Aging Mice. Presented at the Mid-Atlantic Regional Chapter (MARC) of the American College of Sports Medicine, annual meeting 2014.
4. Benson, M.C., Receno, C.N., Mohamed, Z., DeRuisseau, L.R., **DeRuisseau, K.C.** Effects of Manganese (Mn) Administration on Muscle Force Generation during Hypoxia. Presented at the American College of Sports Medicine, annual meeting in Orlando 2014.
5. Liang, C. Benson, M.C., Receno, C.N., **DeRuisseau, K.C.** Effect of Bisphenol A administration on insulin signaling and oxidative injury in mouse diaphragm. Presented at the American College of Sports Medicine, annual meeting in Orlando 2014.
6. Receno, C.N., Benson, M.C., Liang, C., Keslacy, S., **DeRuisseau, K.C.** Effect of Bisphenol A (BPA) on Skeletal Muscle Oxidative Stress. Presented at the American College of Sports Medicine, annual meeting in Orlando 2014.
7. Benson, M., Receno, C., Mohamed, Z., DeRuisseau, L., **DeRuisseau, K.** Effects of Manganese (Mn) Supplementation on Muscle Force Generation during Hypoxia. Mid-Atlantic Regional Chapter (MARC) of the American College of Sports Medicine, annual meeting 2013.
8. Receno, C., Benson, M., Liang, C., Keslacy, S., **DeRuisseau, K.** Effect of Bisphenol A (BPA) on Skeletal Muscle Oxidative Stress. Mid-Atlantic Regional Chapter (MARC) of the American College of Sports Medicine, annual meeting 2013.

9. Benson, M.C., C. Liang, C.N. Receno, and **K.C. DeRuisseau**. Investigation of Bisphenol A administration on skeletal muscle force generation in mice. Presented at the Experimental Biology annual meeting in Boston, 2013.
10. Receno, C.N., P.M. Cowley, A. Cromer, C. Liang, and **K.C. DeRuisseau**. The pattern of change in skeletal muscle oxidative injury and non-heme iron during aging differs between fast and slow muscles. Presented at the Experimental Biology annual meeting in Boston, 2013.
11. Baker, K., C. Liang, M. Benson, **K. DeRuisseau**, and L. DeRuisseau. Characterization of breathing following four weeks of prolonged dietary Bisphenol A exposure in mice. Presented at the Experimental Biology annual meeting in Boston, 2013.
12. Receno, C.N., R.P. Doyle, L.R. DeRuisseau, and **K.C. DeRuisseau**. Preliminary investigation of skeletal muscle signal recognition particle receptor beta in response to aging in the rat. *FASEB J* March 29, 2012 26:1075.15.
13. Bush B., J.L. Lloyd, **K. DeRuisseau**, and S. Keslacy. Alzheimer's disease is associated with muscle weakness. *FASEB J* March 29, 2012 26:1077.7.
14. DeRuisseau, L.R., S.L. Murphy, S.A. Zabycz, and **K.C. DeRuisseau**. Pattern of breathing in a mouse model of Down Syndrome (DS). *FASEB J* March 29, 2012 26:899.4.
15. Cowley, P., **DeRuisseau, K.** Measurement of Oxidant Production in Single Skeletal Muscle Fibers from Down Syndrome (DS) Mice. Mid-Atlantic Regional Chapter (MARC) of the American College of Sports Medicine, annual meeting 2011.
16. Cowley, P.M. and **K.C. DeRuisseau**. Production of Reactive Oxygen Species and Morphology of Single Skeletal Muscle Fibers from Down Syndrome Mice. Presented at the Pennsylvania Muscle Institute, Muscle and Metabolism Annual Retreat and symposium, October 17, 2011
17. Cowley, P.M., and **K.C. DeRuisseau**. Soleus muscle of Down syndrome (DS) mice exhibits elevated markers of oxidative and nitrosative stress. *FASEB J* April 6, 2010 24:989.4.
18. Collier, S.R., **K. DeRuisseau**, V. Frachette, J. Hong, W. Zheng, S. Locke, M. Diggle, J. Liu, and K. Sandberg. Moderate intensity exercise decreases oxidative stress in metallothionein deficient mice. *Med Sci Sports Exerc* 42:S306-307, 2010.
19. DeRuisseau, L.R., M. Zoccolillo, D.M. Recca, J.A. Mogle, S. Keslacy, and **K.C. DeRuisseau**. Muscle contractile dysfunction and oxidative injury are observed in the soleus muscle of metallothionein deficient mice following acute spinal cord injury. *FASEB J* April 22, 2009 23:955.19.
20. Zoccolillo, M.L., L.R. DeRuisseau, D.M. Recca, and **K.C. DeRuisseau**. Impact of MT Deficiency on Skeletal Muscle Iron Regulation and Oxidative Injury Following SCI. Presented at the Mid-Atlantic Regional Chapter (MARC) of the American College of Sports Medicine, annual meeting 2009.
21. DiStasio, T.J., L.R. DeRuisseau, P.M. Cowley, D.M. Recca, and **K.C. DeRuisseau**. Impact of acute caffeine administration on skeletal muscle oxidative stress and antioxidant status. *FASEB J* April 22, 2009 23:601.11.
22. Cowley, P.M., and **K.C. DeRuisseau**. Soleus muscle of Down syndrome (Ds) mice does not exhibit impaired contractile function or resistance to fatigue. *FASEB J* April 22, 2009 23:601.12.
23. McClung, J.M., M.A. Whidden, A.N. Kavazis, D.J. Falk, **K.C. DeRuisseau**, and S.K. Powers. Redox regulation of diaphragm proteolysis during mechanical ventilation. *FASEB J* 2008 22:962.19.
24. DeRuisseau, L.R., D.M. Recca, A.J. Bidwell, N.J. Orosz, K.M. Pompo, and **K.C. DeRuisseau**. Impact of metallothionein deficiency on soleus muscle function following acute spinal cord injury. *FASEB J* 2008, 22:962.25.

25. McClung, J.M., A.N. Kavazis, **K.C. DeRuisseau**, D.J. Falk, M.A. Whidden, and S.K. Powers. Effects of oxidative stress on PI3K/Akt regulation of FOXO transcription factors during diaphragm muscle disuse. *FASEB J* 2007, 21:921.23.
26. **DeRuisseau, K.C.**, J.M. McClung, A.N. Kavazis, M.A. Whidden, H. Van Remmen, A. Richardson, and S.K. Powers. Antioxidant overexpression reduces diaphragm maximal specific tension but does not alter resistance to fatigue. *FASEB J* 2007 21:921.24.
27. McClung, J.M., A.N. Kavazis, **K.C. DeRuisseau**, D.J. Falk, M.A. Deering, Y. Lee, and S.K. Powers. Maintenance of myonuclear domain during mechanical ventilation induced diaphragmatic atrophy. *FASEB J* 2006 20:LB32.
28. Falk, D.J., D. Van Gammeren, M.A. Deering, **K.C. DeRuisseau**, and Scott K Powers. Diaphragmatic nitric oxide synthase is not induced during mechanical ventilation. *FASEB J* 2006 20:A1160.
29. Van Gammeren, D.L, D.J. Falk, M.A. Deering, **K.C. DeRuisseau**, J.P. French, and S.K. Powers. Apocynin attenuates mechanical ventilation-induced diaphragmatic oxidative stress and contractile dysfunction. *FASEB J* 2006 20:A1160.
30. **DeRuisseau, K.C.**, J.M. McClung, D.J. Falk, M.A. Whidden, and S.K. Powers. Mechanical Ventilation-induced Alterations in Diaphragmatic Akt Signaling and FOXO Activation. *Med Sci Sports Exerc* 38:S10, 2006.
31. McClung, J.M., **K.C. DeRuisseau**, A.N. Kavazis, D.J. Falk, M.A. Whidden, and S.K. Powers. Caspase-3 Regulation of Diaphragmatic Myonuclear Apoptosis during Prolonged Mechanical Ventilation. *Med Sci Sports Exerc* 38:S10, 2006.
32. **DeRuisseau, K.C.** et al. Protein Expression Profile of the Unloaded Rat Diaphragm by Two-Dimensional Difference Gel Electrophoresis. *FASEB J* 2006 20:A391.
33. **DeRuisseau, K.C.** et al. Diaphragmatic Antioxidant Enzyme mRNA Increases with Caloric Restriction, but not with Lifelong Exercise. Late Breaking abstract presented at the 2005 FASEB Annual Meeting in San Diego, CA.
34. **DeRuisseau, K.C.** et al. Altered Expression of Ubiquitin Proteasome Pathway Components but not Proteasome Activity is Observed in the Aging Rat Diaphragm. Late Breaking abstract presented at the 2005 FASEB Annual Meeting in San Diego, CA.
35. **DeRuisseau, K.C.** et al. Mechanical Ventilation Alters Diaphragmatic Gene Expression of E3 Ubiquitin Ligases. Late Breaking abstract presented at the 2004 FASEB Annual Meeting in Washington, DC.
36. Zergeroglu, M., M. McKenzie, R.A. Shanely, D. Van Gammeren, **K.C. DeRuisseau**, and S.K. Powers. Mechanical Ventilation-Induced Oxidative Stress in the Diaphragm. Abstract presented at the 2003 American Thoracic Society Annual Meeting in Seattle, WA.
37. Shanely, R.A., D. Van Gammeren, **K.C. DeRuisseau** et al. Mechanical Ventilation-Induced Transcriptional Alterations in the Diaphragm. Abstract presented at the 2003 American Thoracic Society Annual Meeting in Seattle, WA.
38. Kushnick, M.R., **K.C. DeRuisseau**, L.M. Roberts, E.M. Jones, B.A. Stamford, and R.J. Moffatt. Blood Lipids and Fibrinogen Levels of College-aged Individuals Following Twelve Weeks of Strength Training. *Med Sci Sports Exerc* 35:S368, 2003.
39. **DeRuisseau, K.C.** et al. The Influence of Iron Status on Exercise Induced Lipid Peroxidation in Male Runners. *Med Sci Sports Exerc* 34:S192, 2002.
40. Kushnick, M.R., **K.C. DeRuisseau**, and R.J. Moffatt. Lean Body Mass and Gender do not Explain Differences in the Decrement of Power Output Seen Following a Three Minute Submaximal Run. *Med Sci Sports Exerc* 33:S99, 2001.
41. Katsanos, C.S., **K.C. DeRuisseau**, H.G. Simoes, and R.J. Moffatt. Association of the Ventilatory Threshold with Workrate by Means of a Fixed RPE-Value. Southeast Regional Chapter of the American College of Sports Medicine (SEACSM), annual meeting, 2001.

42. Cheuvront, S.N., M.R. Woodard, M.J. Ruble, **K.C. DeRuisseau**, D.M. Ostler, and E.M. Haymes. Fluid Intakes and Thermoregulatory Responses of Female Marathon Runners in Two Environments. *Med Sci Sports Exerc* 32:S116, 2000.
43. Katsanos, C.S., **K.C. DeRuisseau**, and R.J. Moffatt. Attenuated Hypertriglyceridemia with Prolonged Walking During the Postprandial Period. *Med Sci Sports Exerc* 32: S367, 2000.
44. **DeRuisseau, K.C.** et al. The Effect of Iron Depletion on Endurance Performance in Physically Active Females. *Med Sci Sports Exerc* 31:S120, 1999.
45. Kreidieh I., P. Freedson, G. Kline, **K. DeRuisseau**, S. Hess, C. Palmer, K. DeMers, and J. Rippe. Gender and Age Differences in Walk Time, Reaction Time and Balance Among Individuals Ages 40 to 79 Years. Abstract presented at The Gerontologic Society of America National Meeting, 1995.
46. Hess S., P. Freedson, G. Kline, K. DeMers, **K. DeRuisseau**, C. Palmer, I. Kreidieh, S. Damitz, and J. Rippe. Aerobic Capacity, Muscular Strength and Flexibility Among Individuals Ages 40 to 79 Years. Abstract presented at The Gerontologic Society of America National Meeting, 1995.

SEMINARS AND PRESENTATIONS

- | | |
|-----------|--|
| Nov 2015 | University of Eastern Finland, Institute of Biomedicine
<i>Title: Iron Metabolism and Exercise</i> |
| Oct 2015 | University of Eastern Finland, Seminars on Molecular Health Sciences
<i>Title: Iron Status and Skeletal Muscle Adaptations</i> |
| Oct 2015 | University of Turku, The Fulbright Center, North American Studies XXIII American Voices Seminar, presenter |
| Dec 2010 | Syracuse University, Biology Seminar
<i>Title: Iron Status of Aging Skeletal Muscle: Does Iron Accumulation Contribute to Sarcopenia?</i> |
| Oct 2010 | Le Moyne College, Natural Science Research Seminar
<i>Title: Iron Status of Aging Skeletal Muscle: Does Iron Accumulation Contribute to Sarcopenia?</i> |
| Feb 2010 | University of Florida, Center for Exercise Science
<i>Title: Down Syndrome and Aging-Associated Iron Accumulation: Models that Demonstrate Skeletal Muscle Oxidative Stress</i> |
| Oct 2009 | Syracuse University, Department Seminar
<i>Title: Skeletal Muscle Metallothionein: An Important Mediator of Adaptations Following Acute Spinal Cord Injury?</i> |
| Mar 2009 | Syracuse University, School of Education Luncheon Workshop
<i>Title: Use of Animal Models to Study the Impact of Disability on Skeletal Muscle Function</i> |
| Nov 2008 | Symposium speaker, Mid Atlantic American College of Sports Medicine Regional Meeting, Harrisburg, PA
<i>Title: Exercise and Oxidative Stress</i> |
| Jan 2008 | Syracuse University Gerontology Center
<i>Title: Impact of Aging on the Iron Status of Skeletal Muscle: Does Iron Accumulation Contribute to Sarcopenia?</i> |
| Oct 2006 | Syracuse University, Department Seminar
<i>Title: Redox Modulation of Skeletal Muscle Contractile Function</i> |
| Sept 2006 | Syracuse University, Journey to Fitness Seminar workshop
<i>Title: Nutrition and Exercise</i> |

- Feb 2005 Free Radical Underground Biennial Meeting, Gainesville, FL
Title: Mechanical Ventilation Induces Alterations of the Ubiquitin Proteasome Pathway in the Diaphragm
- Jan 2005 Symposium organizer and speaker, Southeast American College of Sports Medicine Annual Meeting, Charlotte, NC
Title: An Emerging Model to Study Skeletal Muscle Disuse Atrophy
- Nov 2004 University of Florida, Center for Exercise Science Fall Seminar Series
Title: Mechanisms of Mechanical Ventilation-Induced Diaphragm Dysfunction: Insights from Microarray Profiling of Gene Expression
- Sept 2002 University of Florida, Center for Exercise Science Fall Seminar Series
Title: Iron Status of Young Males and Females Performing Weight-Training Exercise

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American College of Sports Medicine
American College of Sports Medicine, Mid-Atlantic Chapter
The American Physiological Society

INVITED MANUSCRIPT REVIEWS

Medicine and Science in Sports and Exercise
International Journal of Sport Nutrition and Exercise Metabolism
Antioxidants & Redox Signaling
Journal of Applied Physiology
American Journal of Physiology - Regulatory, Integrative and Comparative Physiology
American Journal of Physiology - Endocrinology and Metabolism
Free Radical Research
Experimental Physiology
Mechanisms of Ageing and Development
Applied Physiology, Nutrition, and Metabolism
Experimental Gerontology
PLOS ONE
Journal of Sports Science and Medicine
Journal of Clinical Endocrinology & Metabolism
Biological Trace Element Research

PROFESSIONAL SERVICE AND ACTIVITIES

- Jun 2015 Dissertation Reader, School of Education Dissertation Defense
- 2014-2015 New Faculty Search Committee Member, College of Health Professions, Upstate Medical University
- 2014-2015 Member, Committee on Degrees and the Curriculum, School of Education
- Aug 2014 Graduate School Dissertation Chair, College of Arts and Sciences Dissertation Defense
- Apr 2014 Dissertation Reader, School of Education Dissertation Defense
- 2013-2014 Chair, New Faculty Search Committee, Department of Exercise Science
- 2013-2014 Chair, Committee on Degrees and the Curriculum, School of Education
- Jan 2013 Dissertation Reader, School of Education Dissertation Defense
- 2012-2013 New Faculty Search Committee Member, Department of Communication Sciences and Disorders
- Fall 2012 Teaching Committee Member, School of Education
- 2012- Exercise Science Department Representative to the Syracuse University Animal Users Group

Aug 2011 Dissertation Reader, School of Education Dissertation Defense
 2010-2011 New Faculty Search Committee Member, Department of Exercise Science
 Mar 2010 Dissertation Reader, School of Education Dissertation Defense
 2010- Faculty Representative to the Exercise Science Learning Community
 2009-2013 Member, Committee on Degrees and the Curriculum, School of Education
 Summer 2009 New Faculty Search Committee Member, Department of Exercise Science
 2008-2009 New Faculty Search Committee Member, Department of Exercise Science
 Spring 2008 Member, ad hoc Subcommittee on Scholarship Reviews, School of Education
 Dec 2007 Dissertation Reader, School of Education Dissertation Defense
 Fall 2007 Search Committee Member for Director of Recreation Services
 Apr 2007 Graduate School Dissertation Chair, School of Education Dissertation Defense
 2006-2008 Member, Committee on Degrees and the Curriculum, School of Education
 2006-2007 New Faculty Search Committee Member, Department of Exercise Science
 Jan 2005 Oral Free Communication Session Moderator, Southeast American College of Sports
 Medicine Annual Meeting.
 2000-2002 Assistant Presiding Chair, Graduate Student Advisory Council, Florida State
 University College of Human Sciences.
 1999-2001 Student Representative, Southeast American College of Sports Medicine Executive
 Board.
 1999-2000 Secretary, Graduate Student Advisory Council, Florida State University College of
 Human Sciences.

TEACHING: UNDERGRADUATE AND GRADUATE COURSES

UNIVERSITY OF MASSACHUSETTS

Teaching Assistant, Human Performance and Nutrition (EXERSCI 210)
Fall 1995, Spring 1996
 Teaching Assistant, Introduction to Exercise Science (EXERSCI 100)
Fall 1996, Spring 1997

FLORIDA STATE UNIVERSITY

Course Instructor, The Science of Nutrition (HUN 1201, 3 credits)
Fall 1998, Spring 1999, Fall 1999, Fall 2000
 Lab Instructor, Anatomy and Physiology II (PET 3323C)
Spring 1999
 Lab Instructor, Applied Exercise Physiology (PET 3380C)
Spring 2000, Spring 2001, Spring 2002
 Course Instructor, Exercise Testing and Prescription (PET 4551, 3 credits)
Spring 2000
 Course Instructor, Nutrition and Sports (PET 3361, 3 credits)
Summer 1999, Summer 2000, Fall 2000, Fall 2001
 Course Instructor, Metabolism II: Vitamins and Minerals (HUN 3226, 3 credits)
Summer 2000, Summer 2001
 Course Instructor (50% effort), Applied Exercise Physiology (PET 3380C)
Spring 2002

UNIVERSITY OF FLORIDA

Lecturer, Pulmonary Function During Exercise (PET 7366)

Topics: Mechanics of Breathing; Control of Ventilation; Endurance Training-Induced Changes in Respiratory Muscles

Fall 2003

Lecturer, Introduction to Exercise Science, Wellness and Sport (PET 2000C)

Topic: Mechanical Ventilation-Induced Diaphragmatic Atrophy

Spring 2004

Lecturer, Exercise Metabolism (PET 7368)

Topics: Unique Countermeasures Against Disuse Muscle Atrophy; Exercise-Induced Muscle Damage and Potential Mechanisms for the Repeated Bout Effect; Is Strength Development Inhibited by Concurrent Strength and Endurance Training?

Fall 2004

SYRACUSE UNIVERSITY

Course Instructor, Metabolic Aspects of Physical Activity (PPE 519, 3 credits)

Fall 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013

Course Instructor, Research Problems in Exercise and Sport (PPE 693, 3 credits)

Spring 2007

Course Instructor, Graded Exercise Testing & Interpretation (PPE 515, 4 credits)

Spring 2007, Spring 2008, Spring 2009

Course Instructor, Analysis of Human Motion, (PPE 408, 3 credits)

Fall 2007

Course Instructor, Motor Learning (PPE 485, 3 credits)

Spring 2008

Course Instructor, Skeletal Muscle Physiology (PPE 795, 3 credits)

Spring 2009, Spring 2010, Spring 2011, Spring 2013, Fall 2014

Course Instructor, Introduction to Exercise Science (PPE 295, 3 credits)

Fall 2009, Spring 2010, Fall 2010, Fall 2011, Spring 2012, Fall 2012, Fall 2013, Fall 2014

Course Instructor, First Year Forum (EDU 100, 1 credit)

Fall 2009

Course Instructor, Scientific Principles of Conditioning (PPE 483, 3 credits)

Spring 2012, Spring 2013, Spring 2014, Spring 2015

Course Instructor, Physiology of Exercise (PPE 497, 3 credits)

Spring 2014, Spring 2015

UNIVERSITY OF EASTERN FINLAND

Lecturer, Institute of Biomedicine, Exercise Medicine

Topic: Introduction to Nutrition and Energy Metabolism

Fall 2015

DOCTORAL DEGREE COMMITTEES

Department of Exercise Science, Syracuse University

Summer Cook, Ph.D.

Dissertation Title: The Development and Evaluation of Low-Load Resistance Exercise with Blood Flow Restriction as a Countermeasure to Muscular Unloading.

Role: Member

Graduation: 08/2009

Stella Goulopoulou, Ph.D.

Dissertation Title: The Effects of Exercise Training on Venous Function in Hypertensive Humans.

Role: Member

Graduation: 05/2010

Kyle Hackney, Ph.D.

Dissertation Title: Timing Nutrient Intake With Traditional High-Load or Low-Load Blood Flow Restricted Exercise During Unloading.

Role: Member

Graduation: 05/2013

Patrick M. Cowley, PhD.

Dissertation Title: Characterization of Skeletal Muscle Structure, Function, and Biochemistry in Ts65Dn Mice: A Mouse Model of Down syndrome.

Role: Advisor

Graduation: 12/2011

Youngmin Park, M.S.

Role: Advisor

Dates: 08/2010-12/2011

Yuho Kim, Ph.D.

Dissertation Title: Branched-Chain Amino Acid (BCAA) and Iron Status Effects on Aging Skeletal Muscle

Role: Advisor

Graduation 08/2015

Jesse W. Lloyd, M.S., ABD

Dissertation: The Effects of Acute and Chronic Exercise on Circulating Chemerin and its Association with Inflammation and Insulin Resistance

Role: Member

Marisa Benson, M.S., ABD

Dissertation Title: Capsaicin Effects on Skeletal Muscle Function

Role: Advisor

Candace N. Receno, M.S., ABD

Dissertation: Curcumin Supplementation and Aging Skeletal Muscle

Role: Advisor

Chen Liang, M.S.

Role: Advisor

MASTERS DEGREE COMMITTEES

Department of Exercise Science, Syracuse University

Seung Ho Jung, M.S.

Title: Effects of Age on Iron Accumulation and Oxidative Stress in Skeletal Muscle of Rats.

Role: Advisor

Graduation: 08/2007

Jesse W. Lloyd, M.S.

Title: The Effects of Low Intensity Resistance Training with Vascular Occlusion on Leg Volume and Muscle Function.

Role: Member

Graduation: 12/2007

Candace N. Receno, M.S.
Title: Bisphenol A (BPA) and Oxidant Activity in Muscle
Role: Advisor
Graduation: 05/2013

INTERNSHIP PROJECT SUPERVISION

Department of Exercise Science, Syracuse University

Meghan Young, M.S.

Title: Effectiveness of Various Instruction Methods Used for Partial Weight Bearing of the Lower Extremity.

Kelly A. Oddy, M.S.

Title: Effectiveness of a Retiree Corporate Fitness Program at Improving Functional Ability and Quality of Life in Older Adults.

Scott Braid, ATC, M.S.

Title: Functional Testing Results During the 2008 NFL Scouting Combine in Correlation with the 2008 NFL Draft Results.

Andrew J. Accacian, ATC, M.S.

Title: The Acute Effects of Counterirritants on Functional Stability Using the Balance Error Scoring System.

John A. Cortes, ATC, M.S.

Title: Gender and Training Differences in Skeletal Muscle Fatigability during Sustained Isometric Contractions.

Meaghan P. Borello, ATC, M.S.

Title: The Effects of HIVAMAT® on Delayed Onset Muscle Soreness.

Mark Russo, ATC, M.S.

Title: Effects of Performance Enhancing Mouthpieces on Strength Gains in Collegiate Athletes.

Katherine Frick, ATC, M.S.

Title: Facemask Removal Timeliness with Used Lacrosse Helmets Utilizing the Combined Tool Approach.

Andrew Landry, ATC, M.S.

Title: The effects of coconut oil on delayed-onset muscle soreness following eccentric exercise.

Jason Lopez, ATC, M.S.

Title: The use of per-season functional movement screening to predict injury in Division I college football athletes.

Heidi Baumbach, M.S.

Title: Depression and Blood Pressure in a Cardiac Rehabilitation Population.

Michael Boiselle, ATC, M.S.

Title: Assessing the Use of Sideline Concussion Testing Following Physical Exertion.

Mitchell Bjerke, ATC, M.S.

Title: Proprioception, Balance, and Joint Position Sense as Affected by Cryotherapy and Thermotherapy.

Brandon Hall, ATC, M.S.

Title: Functional Movement and the Predictability of Soft Tissue Injury in Collegiate Athletics.

Hannah Hager, ATC, M.S.

Title: Measures of Postural Stability using Accelerometers: Reliability and Normative Values.

Jenna Sniffen, ATC, M.S.

Title: Financial Incentive and Active Engagement in Wellness Consulting Does Not Lead To Weight or Body Fat Loss in Employees.

CURRENT LABORATORY PERSONNEL

- 2013- Jesse Lloyd, M.S.
2012- Chen Liang, M.S.
Recipient of the School of Education Research & Creative Grant Competition (2014).
2012- Marisa Benson, M.S.
1. Recipient of the American Physiological Society, Caroline tum Suden Award (2013).
Project: Investigation of Bisphenol A administration on skeletal muscle force generation in mice.
2. Recipient of the School of Education Research & Creative Grant Competition (2013).
2011- Candace Receno, M.S.
1. Recipient of the School of Education Research & Creative Grant Competition (2012).
2. Recipient of the American College of Sports Medicine, Mid-Atlantic Regional Chapter Master's Student Investigator Award (2013).
Project: Effect of Bisphenol A (BPA) on Skeletal Muscle Oxidative Stress.
3. Recipient of the Steven M. Horvath Travel Award, American College of Sports Medicine, 2014 annual meeting.
4. Recipient of the American Physiological Society, Caroline tum Suden Award (2015).
Project: Effects of Curcumin on the Expression of Antioxidants in Single Myofibers from Aged Mice.
5. Recipient of NIH Aging Research Dissertation Award to Increase Diversity (R36) (2015-2017).
Project: Curcumin Supplementation and Aging Skeletal Muscle.

PAST LABORATORY PERSONNEL

- 2014-2015 Sambo (Sam) Men (undergraduate)
2013-2015 Yuho Kim, Ph.D.
Current: Postdoctoral Associate, York University, Canada
2011-2014 Alray Cromer (undergraduate)
2007-2012 Patrick M. Cowley, PhD.
Current: Postdoctoral Fellow, UC San Francisco and VA Medical Center
1. Recipient of the American Physiological Society, Caroline tum Suden Award (2009)
Project: Soleus muscle of Down syndrome mice does not exhibit impaired contractile function or resistance to fatigue
2. American College of Sports Medicine, Mid-Atlantic Regional Chapter: Doctoral Student Investigator Award, finalist (2011)
Project: Measurement of Oxidant Production in Single Skeletal Muscle Fibers from Down Syndrome (DS) Mice.
2010-2011 Youngmin Park, M.S.
Current: Postdoctoral Associate, Division of Geriatric Medicine, University of Colorado Anschutz Medical Campus.
2010-2011 Stacy L. Murphy (undergraduate)
2009-2010 Nathaniel Charland, B.S.

- 2008-2009 Michelle L. Zoccolillo (undergraduate, LeMoyne College)
 American College of Sports Medicine, Mid-Atlantic Regional Chapter:
 Undergraduate Research Award finalist (2009)
 Project: Impact of MT Deficiency on Skeletal Muscle Iron Regulation and
 Oxidative Injury Following SCI.
- 2007-2009 Lara R. DeRuisseau, Ph.D.
 Current : Associate Professor, Le Moyne College, Syracuse, NY
 Recipient of the American Physiological Society, Environmental & Exercise
 Physiology Section: Military Physiology Beginning Investigator Award (2009)
 Project: Metallothionein deficiency leads to soleus muscle contractile
 dysfunction following acute spinal cord injury in mice.
- 2007-2008 Thomas DiStasio (undergraduate, Cornell University)
 Recipient of an American Physiological Society Undergraduate Summer
 Research Fellowship (2008)
 Project: Impact of acute caffeine administration on skeletal muscle oxidative
 stress and antioxidant status.
- 2007-2008 Kimberly Pompo (undergraduate, LeMoyne College)
- 2007-2008 Nadia Orosz (undergraduate, LeMoyne College)
- 2007-2008 Daniel M. Recca (undergraduate)
- 2006-2007 Seung Ho Jung, M.S.
 Current: Postdoctoral Fellow, Ohio State University

HONORS AND AWARDS

- 2015 2015-2016 Fulbright U.S. Scholar Grant awardee; Fulbright-Saastamoinen Foundation
 Grant in Health and Environmental Sciences, University of Eastern Finland
- 2012 American Physiological Society press release for article entitled “Functional and
 biochemical characterization of soleus muscle in Down syndrome mice: insight into the
 muscle dysfunction seen in the human condition”.
- 2010 Senior author of research article figure displayed on the front cover of the January-June
 issues of American Journal of Physiology - Regulatory, Integrative and Comparative
 Physiology
- 2008 Research Host, Undergraduate Summer Research Fellowship, APS
- 2007 Co-first author of research article figure displayed on the front cover of the September
 issue of Experimental Physiology

CURRENT RESEARCH SUPPORT

- 2015-2017 1R36AG050734-01
 PI: C. Receno, M.S.
 Role: Mentor
Title: Curcumin Supplementation and Aging Skeletal Muscle
 Total direct costs: \$128,764
- 2016-2019 1R15HD076379-01
 PI: L.R. DeRuisseau, Ph.D.
 Role: Co-Investigator
*Title: Investigation into Neural and Muscular Components of Breathing in Down
 Syndrome*
 Total direct costs: \$362,000
 Project start date: 09/01/2016

PENDING RESEARCH SUPPORT

In review Academy of Finland; Sport Research Funded by Ministry of Education, Science and Culture
PI: M. Atalay
Role: Collaborator
Title: Association of objectively measured sedentary behavior with metabolic risk factors in a middle-aged population
Total direct costs: 325,000€

COMPLETED RESEARCH SUPPORT

2012-2013 Diabetes Group of the Hill Collaboration on Environmental Medicine
Role: Co-PI
Title: BPA and Insulin Secretion and Regulation (\$20,000)

2009-2012 1R03AG032033-01A2
Role: PI
Title: Iron Accumulation in Aging Skeletal Muscle
Total direct costs: \$119,720

2009 Syracuse University Gerontology Center, Summer Seed Grant
Title: Assessment of Ventilatory Function in Senescent Rats Following Cervical Spinal Cord Injury (\$5,000)

2008 Syracuse University, SOE Summer Proposal Development Program (\$1,500)

2007 Syracuse University Gerontology Center, Summer Seed Grant
Title: Iron Accumulation in Aging Skeletal Muscle (\$5,000)

2004-2006 American Lung Association of Florida, Research Training Fellowship
Title: Mechanical Ventilation and Diaphragmatic Oxidant Injury (\$32,500/year)

2001 Florida State University, Dissertation Research Grant
Title: The Effect of Weight Training Exercise on Measures of Iron Transport and Status in Non Weight Trained Males and Females (\$500)

2001 Florida State University, College of Human Sciences, Dissertation Research Grant
Title: The Effect of Weight Training Exercise on Measures of Iron Transport and Status in Non weight Trained Males and Females (\$300)

1999 Gatorade Sports Science Institute
Title: The Influence of Iron Status on Exercise Induced Lipid Peroxidation (\$750)

1998 Commonwealth of Massachusetts Governor's Committee on Physical Fitness and Sports
Title: The Effect of Low Serum Ferritin on Consecutive Days of Endurance Performance in Female Athletes (\$500)