# Haley C. Bergstrom

Department of Kinesiology and Health Promotion University of Kentucky 221 Seaton Building Lexington, KY 40506-0219

Office: 859-257-0068 hbergstrom@uky.edu

#### **PROFESSIONAL PREPARATION**

2011-2014	Doctor of Philosophy in Human Sciences (Specialization in Nutrition and Health Sciences; Emphasis in Exercise Physiology), University of Nebraska-Lincoln, Lincoln, Nebraska.
2009-2011	Master of Science in Nutrition and Health Sciences (Specialization in Nutrition and Exercise), University of Nebraska-Lincoln, Lincoln, Nebraska.
2005-2009	Bachelor of Science (Major: Exercise Science), Doane University, Crete, Nebraska

### **PROFESSIONAL EXPERIENCES**

2020 – Present	Associate Professor in Kinesiology and Health Promotion at the University of Kentucky, Lexington, KY
2014 – 2020	Assistant Professor in Kinesiology and Health Promotion at the University of Kentucky, Lexington, KY
2010 – 2014	Graduate Assistant in the Exercise Physiology Laboratory at the University of Nebraska-Lincoln, Lincoln, NE
2008 - 2009	Sports Performance Assistant Trainer at Madonna ProActive, Lincoln, NE
2006 - 2007	Physical Therapy Aide at Tri-County Hospital, Lexington, NE

# **INSTRUCTIONAL SUMMARY**

University of Kentucky

Laboratory Methods in Exercise Science (KHP 640)

Physiology of Exercise (KHP 420G)

Introduction to Exercise Testing and Prescription (KHP 450)

Strength and Conditioning for Sports (KHP 350)

Practicum in Kinesiology and Health Promotion (KHP 577)

*University of Nebraska-Lincoln – Graduate Teaching Assistant* 

Physiology of Exercise (NUTR 484/884)

Exercise Testing and Exercise Programming in Adult Fitness and Cardiac Rehabilitation (NUTR 486/886)

#### **PRIMARY RESEARCH INTERESTS**

- The mathematical modeling of human performance
- Fatigue thresholds as they relate to exercise performance parameters
- The non-invasive assessment of muscle function and fatigue
- Examination of changes in physiological and perceptual responses to fatiguing exercise including  $\dot{V}O_2$ , heart rate, muscle excitation, and ratings of perceived exertion
- Integration of nutrition and exercise interventions on health and performance measures

#### **PUBLICATIONS**

- \*For all manuscripts and abstracts the first author is designated as the principal investigator and the last author is designated as the senior author
- 1. Succi, P.J., Benitez, B., Kwak, M., and **Bergstrom, H.C.** Examination of individual responses to determine VO<sub>2</sub>max during cycle ergometry in women. *Journal of Functional Kinesiology and Morphology*. In Press, August 22, 2023.
- 2. Benitez, B., Kwak, M., Succi, P.J., Weir, J.P., and **Bergstrom, H.C.** Unilaterally induced quadriceps fatigue during isometric exercise does not alter contralateral leg extensor performance. *Journal of Functional Morphology and Kinesiology*. 8, 85, 2023.
- 3. Kwak, M., Succi, P.J., Benitez, B., **Bergstrom, H.C.** Sustainability and perceptual responses during handgrip holds to failure at two fatigue thresholds. *European Journal of Applied Physiology*. Published ahead of print, https://doi.org/10.1007/s00421-023-05248-7, May 2023
- 4. Langford, E.L., **Bergstrom, H.C.,** Lanham, S., Eastman, A.Q., Best, S., Ma, X., Abel, M.G. Evaluation of work efficiency in structural firefighters. *Journal of Strength and Conditioning Research*, In Press, April 2023.
- 5. Benitez, B., Dinyer-McNeely, T.K., McCallum, L., Kwak, M., Succi, P.J., and **Bergstrom, H.C.** Electromyographic and mechanomyographic responses of the biceps brachii during concentric and eccentric muscle actions to failure at high and low relative loads. *European Journal of Applied Physiology*, Published ahead of print, doi: 10.1007/s00421-023-05199-z, May 2023. Epub ahead of print. PMID: 37219738
- 6. Benitez, B., Dinyer-McNeely, T.K., McCallum, L., Kwak, M., Succi, P.J., and **Bergstrom, H.C.** Load-specific performance fatigability, coactivation, and neuromuscular responses to fatiguing forearm flexion muscle actions in women. *Journal of Strength and Conditioning Research*, 37(4): 769-779, 2023.
- 7. Succi, P.J., Dinyer-McNeely, T.K., Voskuil, C.C., Abel, M.G., Clasey, J.L., and **Bergstrom, H.C.** Responses to exercise at critical heart rate versus the power output associated with critical heart rate. *Journal of Strength and Conditioning Research*, Published ahead of print, June 2023.
- 8. Anderson, O.K., Voskuil, C.C., Byrd, M.T., Garver, M.J., Rickard, A.J., Miller, W.M., **Bergstrom, H.C.**, and Dinyer-McNeely, T.K. Affective and perceptual responses during an 8-week resistance training to failure intervention at low vs. high loads in untrained women. *Journal of Strength and Conditioning Research*, 37(3), 546-554, 2023. doi: 10.1519/JSC.00000000000004313
- 9. Succi, P.J., Benitez, B., Kwak, M., and **Bergstrom, H.C.** The minimal difference as an individual threshold to examine the utility of a verification bout in determining  $\dot{V}O_{2max}$ . *Medicine & Science in Sports & Exercise*, Medicine & Science in Sports & Exercise, 55(6), 1063-1068, 2023.
- 10. Mason, M.R., Heebner, N., Abt, J., Shapiro, R., **Bergstrom, H.C.,** Langford, E.L., and Abel, M.G. The acute effect high-intensity resistance training on subsequent firefighter performance. *Journal of Strength and Conditioning Research*, Published ahead of print, January 24, 2023. doi: 10.1519/JSC.0000000000004417
- 11. Succi, P.J., Benitez, B., Kwak, M., and **Bergstrom, H.C.** Methodological considerations for the determination of  $\dot{V}O_2$ max in healthy men. *European Journal of Applied Physiology*, 123(1): 191-199, 2023. doi: 10.1007/s00421-022-05033-y
- 12. Succi, P.J., Dinyer, T.K., Byrd, M.T., Voskuil, C.C., and **Bergstrom, H.C.** Application of  $\dot{V}O_2$  to the critical power model to derive the critical  $\dot{V}O_2$ . *Journal of Strength and Conditioning Research*, 36(12): 3374-3380, 2022.

- 13. Succi, P.J., Benitez, B., Kwak, M., and **Bergstrom, H.C.** VO<sub>2max</sub> is reliably measured from a stand-alone graded exercise test in healthy women. *Journal of Exercise Physiology online*, 25(4):14-25, 2022.
- 14. Voskuil, C.C., Dinyer, T.K., Succi, P.J., Campbell, M.S., Abel, M.G., and **Bergstrom, H.C.** Unilateral handgrip holds to failure result in sex-dependent contralateral facilitation. *International Journal of Exercise Science*, 15(4): 782-796, 2022.
- 15. Dinyer, T.K., Byrd, M.T., Succi, P.J., and **Bergstrom, H.C.** The time course of changes in neuromuscular responses during the performance of leg extension repetitions to failure below and above critical resistance in women. *Journal of Strength and Conditioning Research*. 36(3): 608-614, 2022.
- 16. Keeler, J.M., Pohl, M.B., **Bergstrom, H.C.,** Thomas, J.M., and Abel, M.G. The effects of tactical tasks and gear on muscle activation in swat officers. *Journal of Strength and Conditioning Research*, 36(1): 238-244, 2022.
- 17. Dinyer-McNeely, T.K., Succi, P.J., Voskuil, C.C., Byrd, M.T., and **Bergstrom, H.C.** Comparison of inter- and intra-individual neuromuscular patterns of responses during moderate-load bilateral let extension exercise. *Research Directs in Strength and Performance*, 1(1), article 7, 2021.
- 18. Succi, P.J., Dinyer, T.K., Byrd, M.T., Souci, E.P., Voskuil, C.C., and **Bergstrom, H.C.** Test-retest reliability of critical power, critical heart rate, time to exhaustion, and average heart rate during cycle ergometry. *Journal of Exercise Physiology online*, 24(2): 33-51, 2021.
- 19. Moss, A.C., Dinyer, T.K., Abel, M.G., **Bergstrom, H.C.** Methodological considerations for the determination of the critical load for the deadlift. *Journal of Strength and Conditioning Research*, 35(2S): S31-S37, 2021.
- 20. Byrd, M.T., Wallace, B.J., Clasey, J.L., and **Bergstrom, H.C.** Contributions of lower-body strength parameters to critical power and anaerobic work capacity. *Journal of Strength and Conditioning Research*, 35(1): 97-101, 2021.
- 21. **Bergstrom, H.C.,** Dinyer, T.K., Succi, P.J., Voskuil, C.C., and Housh, T.J. Applications of the critical power model to dynamic constant external resistance exercise: A brief review of the critical load test. *Sports*, 9(2): 15, 2021.
- 22. Dinyer, T.K., Succi, P.J., Byrd, M.T., Voskuil, C.C., Soucie, E.P., and **Bergstrom, H.C.** Interlimb neuromuscular responses during fatiguing, bilateral, leg extension exercise at a moderate versus high load. *Motor Control.* 25(1): 59-74, 2021.
- 23. Dinyer, T.K., Succi, P.J., Souci, E.P., Voskuil, C.C., Byrd, M.T., and **Bergstrom, H.C.** Muscular performance and neuromuscular fatigue are not sex-dependent during low-load fatiguing bilateral leg extension exercise. *NeuroSports.* 1(1), Article 7, 2021.
- 24. Dinyer, T.K., Byrd, M.T., Vesotsky, A.N., Succi, P.J., and **Bergstrom, H.C.** Linear and nonlinear modeling of critical load. *Journal of Exercise Physiology online*. 23(5): 1-13, 2020.
- 25. Herrick, L.P., Goh, J., Menke, W., Campbell, M.S., Fleener, B.S., Abel, M.G., **Bergstrom, H.C.** The effects of curcumin and fenugreek soluble fiber on the physical working capacity at the fatigue threshold, peak oxygen consumption, and time to exhaustion. *Journal of Strength and Conditioning Research*, 34(12): 3346-3355, 2020.
- 26. Goh, J., Menke, W., Herrick, L.P., Campbell, M.S., Fleener, B.S., Abel, M.G., **Bergstrom, H.C.** Examination of curcumin and fenugreek soluble fiber supplementation on submaximal and maximal aerobic indices. *Journal of Functional Morphology and Kinesiology*. 5(2): 34, 2020.
- 27. Dinyer, T.K., Byrd, M.T., Succi, P.J., Clasey, J.L., **Bergstrom, H.C.** Contributions of maximal strength and body composition characteristics to resistance exercise performance at the critical load. *Journal of Exercise Physiology online*. 23(3), 25-37, 2020.

- 28. Beyer, K.S., Stout, J.R., Redd, M.J., Baker, K.M., Church, D.D., **Bergstrom, H.C.**, Hoffman, J.R., Fukuda, D.H. Effect of somatic maturity on aerobic and anaerobic adaptation to sprint interval training. *Physiological Reports*, Published online, 8(9): e14426, May 6, 2020.
- 29. Succi, P.J., Dinyer, T.K., Byrd, M.T., and **Bergstrom, H.C.** Comparisons of the metabolic intensities at heart rate, gas exchange, and ventilatory thresholds. *International Journal of Exercise Science*, 13(2): 455-469, 2020.
- 30. **Bergstrom, H.C.,** Housh, T.J., Dinyer, T.K., Byrd, M.T., Jenkins, N.D.M., Cochrane-Snyman, K.C., Succi, P.J., Zuniga, J.M., Schmidt, R.J., and Johnson, G.O. Neuromuscular responses of the superficial quadriceps femoris muscles: Muscle specific fatigue and inter-individual variability during severe intensity treadmill running. *Journal of Musculoskeletal and Neuronal Interactions*. 3(1): 77-87, 2020.
- 31. Lesniak, A., **Bergstrom, H.C.,** Clasey, J.L., Stromberg, A.J., and Abel, M.G. The effects of personal protective equipment on firefighter occupational performance. *Journal of Strength and Conditioning Research*, 34(8): 2165-2172, 2020.
- 32. Dinyer, T.K., Byrd, M.T., Vesotsky, A.N., Succi, P.J., Clasey, J.L., and **Bergstrom, H.C.** The sensitivity of the critical resistance model to detect sex-related differences in fatigue during submaximal muscular contractions. *Journal of Science in Sport and Exercise.* 1: 151-158, 2019.
- 33. Dinyer, T.K., Byrd, M.T., Garver, M.J., Rickard, A.J., Miller, W., Burns, S., and **Bergstrom, H.C.** Low-intensity versus high-intensity resistance training to failure on one-repetition maximum strength and body composition in untrained females. *Journal of Strength and Conditioning Research*, 33(7): 1737-1744, 2019.
- 34. Dinyer, T.K., Byrd, M.T., Cochrane-Snyman, K.C., Jenkins, N.D.M., Housh, T.J., Schmidt, R.J., Johnson, G.O., and **Bergstrom, H.C**. Time course of changes in neuromuscular responses during rides to exhaustion above and below critical power. *Journal of Musculoskeletal and Neuronal Interactions*, 19(3): 266-275, 2019.
- 35. Dinyer, T.K., Byrd, M.T., Vesotsky, A.N., Succi, P.J., and **Bergstrom, H.C.** Applying the critical power model to a full body resistance training movement. *International Journal of Sport Physiology and Performance*. 14(10): 1364-1370, 2019.
- 36. Herbe, C.T., Byrd, M.T., Dinyer, T.K., Wallace, B.J., and **Bergstrom, H.C**. The effects of pre-workout supplementation on anaerobic power and maintenance of power in college students. *International Journal of Exercise Science*, 12(2): 355-365, 2019.
- 37. Beyer, K.S., Stout, J.R., Redd, M.J., Baker, K.M., **Bergstrom, H.C.**, Hoffman, J.R., Fukuda, D.H. Maturity-related differences in systemic and localized fatigue thresholds among youth male athletes. *Pediatric Exercise Science*, 31(1): 99-106, 2019.
- 38. Byrd, M.T., Dinyer, T.K., and **Bergstrom, H.C.** Sex comparisons for very short-term dynamic constant external resistance training. *Journal of Functional Morphology and Kinesiology*, 3(4): 50, 2018.
- 39. Byrd, M.T., and **Bergstrom, H.C.** Effects of very short-term dynamic constant external resistance exercise on strength and barbell velocity in untrained individuals. *International Journal of Exercise Science*, 11(1):867-874, 2018.
- 40. Keller, J.L., Housh, T.J., Herda, T.J., Zuniga, J.M., Camic, C.L., **Bergstrom, H.C.,** Smith, D.B., Weir, J.P., Smith, C.M., Hill, E.C., Schmidt, R.J., and Johnson, G.O. The effects of epoch length on time and frequency domain parameters of electromyographic and mechanomyographic signals. *Journal of Electromyography and Kinesiology*, 40:88-94, 2018.
- 41. Schulte, M., Clasey, J.L., Fleenor, B., and **Bergstrom, H.C.** Examination of resistance settings based on body weight for the 3-min all-out critical power test. *International Journal of Exercise Science* 11(4): 585–597, 2018.

- 42. Wallace, B.J., **Bergstrom**, **H.C.**, and Butterfield, T.A. Brief Review: Muscular basis of variable resistance efficacy. *International Journal of Sports Science and Coaching*. 13(6): 1177-1188, 2018.
- 43. **Bergstrom, H.C.,** Byrd, M.T., Wallace, B.J., and Clasey, J.L. Examination of a multi-ingredient pre-workout supplement on total volume of resistance exercise and subsequent strength and power performance. *Journal of Strength and Conditioning Research*, 32(6):1479-1490, 2018.
- 44. Byrd, M.T., Switalla, J.R., Clasey, J.L., Wallace, B.J., and **Bergstrom, H.C.** Contributions of body composition characteristics to critical power and anaerobic work capacity. *International Journal of Sports Physiology and Performance*, 13(2):189-193. 2018.
- 45. **Bergstrom, H.C.,** Housh, T.J., Cochrane, K.C., Jenkins, N.D.M., Byrd, M.T., Schmidt, R.J., and Johnson, G.O. A model for identifying intensity zones above critical velocity. *Journal of Strength and Conditioning Research*, 31(12): 3260-3265, 2017.
- 46. Switalla, J.R., Byrd, M.T., Abel, M.G., Fleenor, B., and **Bergstrom, H.C.** Can experienced runners accurately estimate performance capabilities to derive the parameters of the critical velocity model? *International Journal of Physical Education, Sports and Health*, 4(2): 204-209, 2017.
- 47. Brim III, H.H., Abel, M.G., Wallace, B.J., Byrd, M.T., Eastman, J.E., and **Bergstrom, H.C.** Can critical velocity and anaerobic swimming capacity be determined from estimated performance times in collegiate swimmers? *Journal of Exercise Physiology online*, 20(1): 23-32, 2017.
- 48. Smith, C.M., Housh, T.J., Zuniga, J.M., Camic, C.L., **Bergstrom, H.C.,** Smith, D.B., Herda, T.J., Weir, J.P., Hill, E.C., Cochrane, K.C., Jenkins, N.D.M., Schmidt, R.J., and Johnson, G.O. Influences of interelectrode distance and the innervation zone on electromyographic signals. *International Journal of Sports Medicine*. 38(2): 111-117, 2017.
- 49. Smith, C.M., Housh, T.J., Herda, T.J., Zuniga, J.M., Camic, C.L., **Bergstrom, H.C.,** Smith, D.B., Weir, J.P., Cramer, J.T., Hill, E.C., Cochrane, K.C., Jenkins, N.D.M, Schmidt, R.J, and Johnson, G.O. Time course of changes in neuromuscular parameters during sustained isometric muscle actions. *Journal of Strength and Conditioning Research*. 30(10): 2697-2702, 2016.
- 50. Jenkins, N.D.M., Housh, T.J., Buckner, S.L., **Bergstrom, H.C.,** Smith, C.M., Cochrane, K.C., Hill, E.C., Miramonti, A. Schmidt, R.J., Johnson, G.O., and Cramer, J.T. Four weeks of high- versus low-load resistance training to failure on the rate of torque development, electromechanical delay, and contractile twitch properties. *Journal of Musculoskeletal and Neuronal Interactions*. 16(2): 135-144, 2016.
- 51. Jenkins, N.D.M., Housh, T.J., Buckner, S.L., **Bergstrom, H.C.,** Cochrane, K.C., Hill, E.C., Smith, C.M., and Cramer, J.T. Neuromuscular adaptations after 2- and 4-weeks of 80% versus 30% 1RM resistance training to failure. *Journal of Strength and Conditioning Research*. 30(8): 2174-2185, 2016.
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- 53. Jenkins, N.D.M., Housh, T.J., Buckner, S.L., **Bergstrom, H.C.,** Cochrane, K.C., Hill, E.C., Smith, C.M., Schmidt, R.J., Johnson, G.O., and Cramer, J.T. Individual responses for muscle activation, repetitions, and volume during 3 sets to failure of high- (80% 1RM) versus low-load (30% 1RM) forearm flexion resistance exercise. *Sports.* 3(4): 269-280, 2015.
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- running above and below the critical heart rate. *European Journal of Applied Physiology*. 115(10): 2231-2241, 2015. DOI: 10.1007/s00421-015-32014-y.
- 55. Cochrane, K.C., Housh, T.J., Jenkins, N.D.M., **Bergstrom, H.C.,** Smith, C.M., Hill, E.C., Johnson, G.O., Schmidt, R.J., and Cramer, J.T. Electromyographic, mechanomyographic, and metabolic responses during cycle ergometry at a constant rating of perceived exertion. *Applied Physiology, Nutrition, and Metabolism.* 40(11): 1178-1185, 2015.
- 56. Jenkins, N.D.M., Housh, T.J., **Bergstrom, H.C.,** Cochrane, K.C., Hill, E.C., Smith, C.M., Johnson, G.O., and Schmidt, R.J. Muscle activation during three sets to failure at 80% vs. 30% 1RM resistance exercise. *European Journal of Exercise Physiology*. 115(11):2335-2347, 2015.
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- 59. Herda, T.J, Zuniga, J.M., Ryan, E.D., Camic, C.L., **Bergstrom, H.C.,** Smith, D.S., Weir, J.P., Cramer, J.T., and Housh, T.J. The influence of electromyographic recording methods and the innervation zone on the mean power frequency-torque relationships. *Journal of Electromyography and Kinesiology*. 25(3): 423-430, 2015.
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- 61. Cochrane, K.C., Housh, T.J., **Bergstrom, H.C.,** Jenkins, N.D.M., Johnson, G.O., Schmidt, R.J., and Cramer, J.T. Physiological responses during cycle ergometry at a constant perception of effort. *International Journal of Sports Medicine*. 36: 466-473, 2015.
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# ABSTRACTS AND PRESENTATIONS AT NATIONAL PROFESSIONAL MEETINGS

- 1. Succi, P.J., Benitez, B., Kwak, M., Butterfield, T.A., Pfeifer, H.J., **Bergstrom, H.C.** Performance fatigability, muscle excitation, and neuromuscular efficiency after cycling anchored to vigorous ratings of perceived exertion. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023). Doctoral Student Research Award for an Outstanding Poster Abstract Presentation at the National Conference.
- 2. Kwak, M., Succi, P.J., Benitez, B., **Bergstrom, H.C.** Examination of neuromuscular responses during isometric fatiguing handgrip holds at critical force. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
- 3. Gustave, D., Succi, P.J., Benitez, B., Kwak, M., Clasey, J.L., Lanphere, K.R., **Bergstrom, H.C.** Responses to cardiorespiratory endurance exercise anchored to a vigorous heart rate intensity. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
- 4. Benitez, B., Succi, P.J., Kwak, M., Gustave, D., **Bergstrom, H.C.** Sex-specific differences in fatigability during bilateral vs unilateral maximal isometric exercise to task failure. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
- 5. Lawson, J., Proppe, C., Rivera, P., Gonzalez-Rojas, D., Hammer, S., Trevino, M., **Bergstrom, H.C.**, Succi, P.J., Montgomery, T., Olmos, A., Burleson, K., Keller, J., Hill, E. Acute effects and reliability of blood flow restricted maximal strength testing. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
- 6. Montgomery, T., Olmos, A., Sears, K.N., Succi, P.J., Hammer, S.M., Bergstrom, H.C., Hill, E.C., Trevino, M.A., Dinyer-McNeely, T.K. Sex-dependent development of peripheral fatigue with and without blood flow restriction. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023). Doctoral Student Podium Awards Session.

- 7. Hudgins, J., Pastina, J., Gillis, I., Abel, M.G., **Bergstrom, H.C.**, Black, W.S., Best, S. The influence of running shoe type on the relationship between running power and metabolic workload. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023). Doctoral Student Podium Awards Session.
- 8. Langford, E.L., Lanham, S.N., Eastman, A.Q., **Bergstrom, H.C.**, Best, S., Ma, X. Higginbotham, L.T., Abel, M.G. Ventilatory dynamics in firefighters during simulated fireground tasks performed at a standardized pace. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
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- 10. Gillis, I.L., Abel, M.G., **Bergstrom, H.C.**, Ma, X., Best, S. Classifying national hockey league players drafted from 2000 2011 based on key performance metrics. (Presented at the National Strength and Conditioning Association Annual Meeting, July 2023).
- 11. Anderson, O.K., Succi, P.J., Voskuil, C.C., Clasey, J.L., Abel, M.G., Butterfield, T.A., **Bergstrom, H.C.,** Dinyer-McNeely, T.K. Muscle-specific responses during repetitions to failure at loads above vs. below the critical load. (Presented at the American College of Sports Medicine Annual Meeting, May 2023).
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# ABSTRACTS AND PRESENTATIONS AT REGIONAL PROFESSIONAL MEETINGS

- 99. Anderson, O.K., Succi, P.J., Voskuil, C.C., Clasey, J.L., Abel, M.G., Butterfield, T.A., **Bergstrom, H.C.,** Dinyer-McNeely, T.K. Muscle-specific responses during repetitions to failure at loads above vs. below the critical load. (Presented at the Central States American College of Sports Medicine Regional Chapter Meeting, March 2023).
- 100. Sears, K.N., Montgomery Jr., T.R., Olmos, A.A., Succi, P.J., Hill, E.C., Bergstrom, H.C., Trevino, M.A., Dinyer-McNeely, T.K., Hammer, S.M. Sex differences in contraction-induced blood flow limitations during small muscle mass exercise in humans. (Presented at the Central States American College of Sports Medicine Regional Chapter Meeting, March 2023).
- 101. Montgomery Jr., T.R., Olmost, A.A., Sears, K.N., Succi, P.J., Hammer, S.M., Bergstrom, H.C., Hill, E.C., Trevino, M.A., Dinyer-McNeely, T.K. Influence of blood flow restriction on neuromuscular function and fatigue during forearm flexion in men. (Presented at the Central States American College of Sports Medicine Regional Chapter Meeting, March 2023).
- 102. Olmos, A.A., Montgomery Jr., T.R., Sears, K.N., Dinyer-McNeely, T.K., Hammer, S.M., **Bergstrom, H.C.**, Hill, E.C., Succi, P.J., Trevino, M.A. Blood flow restriction influences electromyographic behavior of the biceps brachii during a high-intensity contraction. (Presented at the Central States American College of Sports Medicine Regional Chapter Meeting, March 2023).
- 103. Succi, P.J., Dinyer-McNeely, T.K., Voskuil, C.C., Benitez, B., Kwak, M., Abel, M.G., Clasey, J.L., **H.C. Bergstrom**. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2023, Greenville, SC). *International Journal of Exercise Science: Conference Proceedings* 16(2): Article 339.
- 104. Benitez, B., Dinyer-McNeely, T.K., McCallum, L. Succi, P.J., Kwak, M., **Bergstrom, H.C.** Individual and composite electromyographic responses during fatiguing forearm flexion exercise. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2023, Greenville, SC).
- 105. Kwak, M., Succi, P.J., Benitez, B., Clasey, JL, and **Bergstrom, H.C.** Responses to handgrip holds to failure at two unique fatigue thresholds in men and women. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2023, Greenville, SC). *International Journal of Exercise Science: Conference Proceedings* 16(2), Article 25.
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- 107. Anderson, O.K., Succi, P.J., Voskuil, C.C., Byrd, M.T., **Bergstrom, H.C.**, and Dinyer-McNeely, T.K. Mathematical considerations for deriving the critical load for resistance exercise. (Presented at the Central States American College of Sports Medicine Regional Chapter Meeting, 2022, Fayetteville, AR).

- 108. Succi, P.J., Dinyer-McNeely, T.K., Voskuil, C.C., Benitez, B., Kwak, M., Abel, M.G., Clasey, J.L., and **Bergstrom, H.C.** Comparison of responses to exercise at constant heart rate vs constant power. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2022, Greenville, SC).
- 109. Benitez, B, Succi, P.J., Dinyer-McNeely, T.K., Voskuil, C.C., Kwak, M., and **Bergstrom, H.C.** Neuromuscular responses differ during cycle ergometry to exhaustion at two severe intensity domain power outputs. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2022, Greenville, SC).
- 110. Kwak, M., Succi, P.J., Dinyer-McNeely, T.K., Voskuil, C.C., Benitez, B., and **Bergstrom, H.C.** Comparison of the power outputs at perceptual and physiological thresholds. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2022, Greenville, SC).
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- 112. Dinyer, T.K., Soucie, E.P., Succi, P.J., Voskuil, C.C., Byrd, M.T., and **Bergstrom, H.C.** Inter- and intraindividual differences in neuromuscular responses during leg extension exercise performed at 70% 1RM. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2021, Virtual).
- 113. Succi, P.J., Dinyer, T.K., Voskuil, C.C., Byrd, M.T., and **Bergstrom, H.C.** Inter- and intra-individual VO<sub>2</sub> responses above critical power. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2021, Virtual).
- 114. Voskuil, C.C., Dinyer, T.K., Succi, P.J., Byrd, M.T., Garver, M.J., Rickard, A.J., Miller, W.M., Burns, S., Bergstrom, H.C. Affective responses to performing repetitions to failure at 30% versus 80% one-repetition maximum in untrained women. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2021, Virtual).
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- 118. Dinyer, T.K., Byrd, M.T., Succi, P.J., Voskuil, C.C., and **Bergstrom, H.C**. Sex-related differences in neuromuscular responses during exercise performed below and above critical resistance. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2020, Jacksonville, FL).
- 119. Succi, P.J., Dinyer, T.K., Byrd, M.T., Voskuil, C.C., and **Bergstrom, H.C.** Reliability of the determination of critical heart rate. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2020, Jacksonville, FL).
- 120. Voskuil, C.C., Dinyer, T.K., Byrd, M.T., Vesotsky, A.N., Succi, P.J., and **Bergstrom, H.C.** Linear and nonlinear modeling of critical resistance. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2020, Jacksonville, FL).

- 121. Goh, J., Herrick, L.P., Menke, W., Campbell, M.S., Fleenor, B.S., Abel, M.G., and **Bergstrom, H.C.** Effects of curcumin and fenugreek soluble fiber on the ventilatory threshold in untrained college students. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2020, Jacksonville, FL).
- 122. Herrick, L.P., Goh, J., Menke, W., Campbell, M.S., Fleenor, B.S., Abel, M.G., and **Bergstrom, H.C.** Effects of curcumin and fenugreek soluble fiber on the physical working capacity at the fatigue threshold. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2020, Jacksonville, FL).
- 123. Byrd, M.T., Dinyer, T.K., Succi, P.J., and **Bergstrom, H.C.** Neuromuscular responses in lower limb bilateral deficit. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2019, Greenville, SC).
- 124. Dinyer, T.K., Byrd, M.T., Succi, P.J., and **Bergstrom, H.C**. Identifying the critical resistance for the deadlift. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2019, Greenville, SC).
- 125. Succi, P.J., Dinyer, T.K., Byrd, M.T., and **Bergstrom, H.C.** Comparison of the critical heart rate to heart rates at critical velocity and ventilatory threshold (Presentated at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2019, Greenville, SC).
- 126. Byrd, M.T., and **Bergstrom, H.C.** Gender comparisons for very short-term dynamic constant external resistance training. (Presentated at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2018, Chattanooga, TN).
- 127. Dinyer, T.K., Garver, M.J., Rickard, A.J., Miller, W., Burns, S., and **Bergstrom, H.C.** Low intensity resistance training to failure on 1RM strength in untrained females. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2018, Chattanooga, TN).
- 128. Lesniak, A., **Bergstrom, H.C.**, Clasey, J.L., Stromber, M., and Abel, A.G. The effect of personal protective equipment on firefighter occupational performance. (Presented at the Southeast American College of Sports Medicine Regional Chapter Meeting, 2018, Chattanooga, TN).
- 129. Schulte, M.J., Clasey, J.L., Fleenor, B.S., and **Bergstrom, H.C.** Examination of resistance settings based on body weight for the 3-min all-out critical power test. (Presented at the Southeast American College of Sports Medicine Regional Meeting, 2017, Greenville, SC).
- 130. Byrd, T.M., Wallace, B.J., Clasey, J.L., and **Bergstrom, H.C.** Acute effects of a pre-workout supplement on resistance training volume and the subsequent strength and power performance. (Presented at the Southeast American College of Sports Medicine Regional Meeting, 2017, Greenville, SC).
- 131. Byrd, M.T., Lane, M.T., **Bergstrom, H.C.** A pre-workout supplement and high intensity cycle ergometry performance in recreationally trained men. (Presented at the Southeast American College of Sports Medicine Regional Meeting, 2016, Greenville, SC).
- 132. Cochrane, K.C., Housh, T.J., **Bergstrom, H.C.,** Jenkins, N.D.M., Cramer, J.T., Johnson, G.O., and Schmidt, R.J. Comparison of perceptual and physiological fatigue thresholds during cycle ergometry. October 2013. (Presented at the Southwest American College of Sports Medicine Annual Meeting in Newport Beach, California).
- 133. **Bergstrom, H.C.,** Housh, T.J., Traylor, D.A., Lewis Jr., R.W., Johnson, G.O., Schmidt, R.J., and Housh, D.J. Physiological responses to a thermogenic nutritional supplement during rest, low-intensity exercise, and recovery. October 2012. (Presented at the Southwest American College of Sports Medicine Annual Meeting in Newport Beach, California)

#### ABSTRACTS AND PRESENTATIONS AT STATE AND LOCAL PROFESSIONAL MEETINGS

- 134. Voskuil, C.C., Dinyer-McNeely, T.K., Succi, P.J., Campbell, M.S., Abel, M.G., and **Bergstrom, H.C.** Unilateral handgrip holds to failure result in sex-dependent contralateral facilitation. (Presented at the Texas American College of Sports Medicine State Conference, February 25, 2022, Waco, Tx). International Journal of Exercise Science: Conference Proceedings: Vol. 2: Iss. 14, Article 124. Available at: https://digitalcommons.wku.edu/ijesab/vol2/iss14/124
- 135. Byrd, M.T., Dinyer, T.K., Succi, P.J., and **Bergstrom, H.C.** An examination of the effects of bilateral and unilateral very short-term DCER training on neuromuscular responses within the lower limb bilateral deficit. Spring Research Conference, 2019, Lexington, KY.
- 136. Succi, P.J., Dinyer, T.K., Byrd, M.T., and **Bergstrom, H.C.** Comparison of the times to exhaustion and physiological responses at constant heart rate vs constant power output exercise. Spring Research Conference, 2019, Lexington, KY
- 137. Dinyer, T.K., Byrd, M.T., Succi, P.J., and **Bergstrom, H.C.** Theoretical model for using critical resistance to prescribe low-load training. Spring Research Conference, 2019, Lexington, KY.
- 138. Byrd, M.T., Eastman, J.E., and **Bergstrom, H.C**. Application of the very short-term training model to dynamic constant external resistance exercise. Kentucky State National Strength and Conditioning Clinic, 2017, Georgetown, KY.

#### INVITED PRESENTATIONS

"Examination of Intensity-, Mode-, and Sex-Specific Fatigue During Resistance Exercise." Carlos Wear Lectureship, February 2020, University of Nebraska-Lincoln, Lincoln, NE.

"Historical basis and evolution of the critical power concept." Critical power: Unlocking the limits of human performance, Symposium, 2018, Provo, NV.

"Nutritional considerations before and after high intensity interval training in men and women" National Strength and Conditioning Association National Meeting, General Nutrition Corporation Sponsored Symposium, 2017, Las Vegas, NV.

"The examination of the methodologies and mechanisms underlying fatigue thresholds" Exercise Science Seminar Series. University of Kentucky, Department of Kinesiology and Health Promotion. September, 2014, Lexington, KY.

"The effects of protein supplementation on strength and protein synthesis" National Strength and Conditioning Association National Meeting, General Nutrition Corporation Sponsored Symposium, 2013, Las Vegas, NV.

# **BOOK CHAPTERS**

Bergstrom, H.C. Resting and Exercise Electrocardiogram. In: Housh, T. J., Cramer, J.T., Weir, J.P., Beck, T.W., and Johnson, G.O. *Laboratory Manual for Exercise Physiology, Exercise Testing, and Physical Fitness*. Scottsdale, AZ: Holcomb Hathaway Publishers, 2016. p. 21-32.

Bergstrom, H.C. Gas Exchange Threshold, Ventilatory Threshold, and Respiratory Compensation Point. In: Housh, T. J., Cramer, J.T., Weir, J.P., Beck, T.W., and Johnson, G.O. *Laboratory Manual for Exercise Physiology, Exercise Testing, and Physical Fitness*. Scottsdale, AZ: Holcomb Hathaway Publishers, 2016. p. 102-110.

Bergstrom, H.C. Critical Power 3-Min All-Out Test. In: Housh, T. J., Cramer, J.T., Weir, J.P., Beck, T.W., and Johnson, G.O. *Laboratory Manual for Exercise Physiology, Exercise Testing, and Physical Fitness*. Scottsdale, AZ: Holcomb Hathaway Publishers, 2016. p. 125-134.

### **DOCTORAL STUDENT COMMITTEES**

- Summer 2023 Jake Hudgins Dissertation: "The reliability and validity of a running power meter to indicate metabolic demand during endurance running" (Committee Member)
- Summer 2022 Emily Langford Dissertation: "Evaluation of air consumption and work efficiency in structural firefighters" (Committee Member)
- Spring 2021 Taylor K. Dinyer Dissertation: "Examination of Sex- and Intensity-Specific Fatigue during Bilateral Leg Extension Exercise" (Chair)
- Fall 2019 M. Travis Byrd Dissertation: "An Examination of the Effects of Bilateral and Unilateral Very Short-Term DCER Training on Strength and Neuromuscular Responses within the Lower Limb Bilateral Deficit" (Co-Chair)
- Fall 2017 Ashley Lesniak Dissertation: "The Effect of External Stressors on Firefighter Performance" (Committee Member)
- Spring 2017 Kyle S. Beyer Dissertation: "The Effects of Interval Training and Maturity Status on Metabolic and Neuromuscular Fatigue Thresholds in Adolescents" (Committee Member)

#### **MASTER'S STUDENT THESIS COMMITTEES**

- Spring 2023 Minyoung Kwak Thesis: "Examination of Physiological and Perceptual Responses during Sustained, Isometric, Fatiguing, Handgrip Exercise" (Chair)
- Spring 2023 Djadmann Gustave Thesis: "Responses to Exercise Anchored to Vigorous Intensity Heart Rates" (Chair)
- Spring 2021 Pasquale J. Succi Thesis: "Comparisons of the Time to Exhaustion, Physiological, Perceptual, and Neuromuscular Responses during Cycle Ergometry anchored by Heart rate,  $\dot{V}O_2$ , and Power Output" (Chair)
- Spring 2021 Caleb C. Voskuil Thesis: "Examination of Sex- and Limb-Specific Fatigue During Unilateral, Isometric Forearm Exercise" (Chair)
- Spring 2020 Alexander Moss Thesis: "Methodological Considerations for the Determination of the Critical Resistance" (Chair)
- Fall 2019 Jensen Goh Thesis: "Effects of Curcumin and Fenugreek Soluble Fiber Supplementation on Submaximal and Maximal Aerobic Performance Indices in Untrained College-aged Subjects" (Chair)
- Summer 2019 Lauren Herrick Thesis: "Effects of Curcumin supplementation on the Physical Working Capacity at the Fatigue Threshold, Peak Oxygen Consumption, and Time to Exhaustion" (Chair)
- Fall 2019 Isabelle Gillis Thesis: "Longitudinal Descriptive Profile of Collegiate Pitchers Participation in a Summer Baseball League" (Committee Member)
- Fall 2017 Tyler Lindon Thesis: "Examination of Volume and Intensities of Weekday Practices and Competitive Games in Collegiate Football Players" (Chair)

Fall 2016	Howard Brim III – Thesis: "A Non-Exercise Based Estimation of the Critical Swimming Velocity and Anaerobic Work Capacity in Collegiate Swimmers" (Chair)
Fall 2016	Jonathan Robert Switalla – Thesis: "A Non-Exercise Based Estimation of the Critical Running Velocity and Anaerobic Running Capacity in Competitive Runners" (Chair)
Summer 2016	Marlene (Nall) Schulte – Thesis: "Examination of Resistance Settings Based on Body Weight for the 3-Min All-Out Critical Power Test" (Chair)

Fall 2014 Jason M. Keeler – Thesis: "The Effect of Tactile Task and Gear on Muscle Activation of Swat Officers" (Committee Member)

# **MASTER'S STUDENT COMMITTEES: NON-THESIS**

Spring 2023 Spring 2023 Fall 2022 Summer 2020 Spring 2020 Fall 2018 Spring 2018 Spring 2018 Spring 2018 Spring 2017 Spring 2017 Spring 2017	Lindsay McCallum – (Chair) Abigail Reinhardt – (Chair) Emily Guimond (Committee Member) Justin Gibson (Committee Member) Zoe Schrader (Committee Member) Dillon Haughton (Committee Member) Christine Herbe (Chair) Kathleen Schlouch (Chair) Dominique Martin (Committee Member) Aaron Gillette (Chair) Joe Arata (Committee Member)
Fall 2016	Carlos Sierra (Committee Member)
Fall 2016	Stephanie Simpson (Committee Member)
Fall 2016	Matthew Stockwell (Committee Member)
Fall 2016	Alyssa Rohrbaugh (Committee Member)
Spring 2016	Nicole McCullough (Chair)
Spring 2016	Jeremy Paprocki (Committee Member)
Spring 2016	Tyler Donald (Committee Member)
Spring 2016	Katie White (Committee Member)

# **EXTERNAL FUNDING**

2022-2023	<u>Co-Investigator (Faculty Mentor)</u> - \$14,901.03. <i>Sex-and intensity-specific responses during cycle ergometry anchored to ratings of perceived exertion</i> . National Strength and Conditioning Association Foundation, Graduate Student Research Grant- Doctoral. (Principal Investigator: PJ Succi).
2015-2016	<u>Principal Investigator</u> – \$35,000. Acute effects of a pre-workout supplement on total upper and lower body resistance training volume and subsequent strength, power, and anaerobic endurance performance. MusclePharm Corporation, Denver, Colorado. Co-Principal Investigator: Brian Wallace, PhD).
2015 (Spring)	Co-Investigator (effort 50%) - \$2,500. Effects of MusclePharm Assault <sup>TM</sup> on spinal excitability and postactivation potentiation of the triceps surae. ISSN-MusclePharm. (Principle

Investigator: Brian Wallace, PhD).

- 2013 (Fall) Principal Investigator (effort 50%) \$10,000. Physiological responses at the critical heart rate during treadmill running. National Strength and Conditioning Association Doctoral Student Research Grant.
- 2013 (Fall) <u>Co-Investigator (effort 20%)</u> \$339,566. *Effects of conjugated linoleic acid on performance*. Stepan Lipid Nutrition. (Principal Investigator, Joel T. Cramer, PhD and Co-Principal Investigator: Terry J. Housh, PhD).
- 2013 (Fall) Co-Investigator (effort 20%) \$99,600. The effects of two forms of leucine and two forms of creatine on leucine and creatine bioavalability. General Nutrition Corporation, Pittsburgh, Pennsylvania. (Principal Investigator: Terry J. Housh, PhD and Co-Principal Investigator: Joel T. Cramer, PhD).
- 2012 (Fall) Co-Investigator (effort 20%) \$377,456 The effects of the dietary supplement anatabine on delayed onset muscle soreness in the forearm flexors. Rock Creek Pharmaceuticals. (awarded RCP-011; Principal Investigator: Joel T. Cramer, PhD and Co-Principal Investigator: Terry J. Housh, PhD).
- 2012 (Spring) Co-Investigator and Study Coordinator (effort 50%) \$99,600. The effects of a dietary supplement on energy expenditure before, during, and following low intensity exercise. General Nutrition Corporation, Pittsburgh, Pennsylvania, (awarded, GNC-2012-004; Principal Investigator: Terry J. Housh, PhD).
- 2011 (Fall) Co-Investigator (effort 20%) \$99,840, The effects of creatine supplementation on exercise performance and lean body mass while consuming an enteric coated tablet. General Nutrition Corporation, Pittsburgh, Pennsylvania, (awarded, GNC-2011-002; Principal Investigator: Terry J. Housh, PhD).

#### **EXTERNAL FUNDING REQUESTS (not funded)**

- 2021 (Spring) <u>Co-Investigator</u> Enhanced Safety through Augmented Ventilatory Efficiency (SAVE): Redefining Firefighter Readiness. Federal Emergency Management Agency.
- 2021 (Spring) <u>Co-Investigator</u> \$5,551 *Is a Verification Bout Required for the Determination of VO<sub>2</sub>max?* National Strength and Conditioning Association Master's Student Research Grant. PI, PJ Succi.
- 2020 (Spring) Co-Investigator \$14,898 Examination of the Mechanisms Underlying Performance of Repetitions to Failure at Low- and High-Loads. National Strength and Conditioning Association Doctoral Student Research Grant. PI, Taylor Dinyer.
- 2019 (Spring) <u>Co-Investigator</u> \$14,839 "A theoretical model for using critical resistance to prescribe low-load training." National Strength and Conditioning Association Foundation. Doctoral Student Research Grant. PI, Taylor Dinyer.
- 2019 (Spring) <u>Principal Investigator</u> \$19,560. *Time course of changes in physiological and perceptual responses during constant heart rate versus constant power output exercise.* National Strength and Conditioning Association Foundation. Young Investigator Grant.
- 2018 (Spring) <u>Principal Investigator</u> \$21,204. *Motor control strategies above and below the critical resistance threshold.* National Strength and Conditioning Association Foundation. Young Investigator Grant.

2018 (Spring) Co-Investigator - \$15,000. Effects of unilateral versus bilateral short-term DCER training on the bilateral deficit. Strength and Conditioning Association Foundation. Doctoral Student Research Grant. PI, Travis Byrd. Co-Investigator - \$10,000. Effect of DCER training on the bilateral deficit and cross-2018 (Summer) education of the lower limbs. De Luca Foundation. PI, Travis Byrd. 2017 (Spring) Principal Investigator - \$20,000. Salivary hormone and immune responses to a HIIT microcycle. National Strength and Conditioning Association Foundation. Young Investigator Grant. Principal Investigator (effort 50%) - \$20,000. Not funded. Physiological and perceptual 2016 (Fall) responses to five running paces used for endurance training. National Strength and Conditioning Association, Young Investigators Grant. 2014 (Fall) Co-Principal Investigator (effort 50%) – \$23,400. Not funded. The effects of the TITIN Force Shirt System on Anaerobic and Aerobic Performance Parameters. Titintech. (Co-Principle Investigator: Brian Wallace). **INTERNAL FUNDING** 2023-2024 College of Education Program Innovation and Improvement Grant. CASCE Accreditation of Bachelor of Science in Exercise Science. \$45,500. Project Director: Rosie Lanphere. 2023 (Summer) Co-Investigator - \$6,840. Investigation of the relationship between hip extensor muscle endurance, biomarkers of muscle health and hip-related patient report outcomes. CURATE Fund. 2019 (Summer) <u>Principal Investigator</u> - \$7,500. Defining exercise intensity domains for resistance training modalities. College of Education: Summer Support Grant, Type I. Principal Investigator - \$4,480. Neuromuscular responses above and below the critical 2018 (Summer) resistance threshold. College of Education: Summer Support Grant, Type I. **INTERNAL FUNDING REQUESTS (not funded)** 

2022 (Spring)	<u>Co-Principal Investigator</u> - \$75,000. Phosphodiesterase inhibition to improve postprandial amino acid metabolism and skeletal muscle perfusion in older adults. CTSA Inter-Institutional Pilot Project Award. (Co-PI's, Nathaniel DM Jenkins, David Church)
2017 (Fall)	<u>Principal Investigator</u> - \$20,000. <i>Salivary hormone and immune responses to a HIIT microcycle</i> . University of Kentucky, Center for Clinical and Translational Science. Pilot Grant.
2017 (Summer)	<u>Principal Investigator</u> - \$7,500. <i>Physiological and perceptual responses to five running paces used for endurance training</i> . College of Education: Summer Support Grant, Type I.
2017 (Spring)	<u>Principal Investigator</u> - \$10,000. Proposed study, <i>Examination of the bilateral deficit and cross-education effect after very-short term resistance training</i> . Research Professorship.
2015 (Summer)	<u>Principle Investigator</u> – \$7,500. <i>Reliability and validity of heart rate and neuromuscular based fatigue thresholds</i> . VPR Summer Faculty Research Fellowship.

#### **EQUIPMENT FUNDING REQUESTS**

Spring 2023 Co-Applicant - \$95,004.27. Biodex System Pro 4 Isokinetic Dynamometer and GE Ultrasound.

Office of the Vice President for Research: 2023 Equipment Grant Competition.

### **EQUIPMENT FUNDING REQUESTS (not funded)**

Fall 2019 <u>Principal Applicant</u> - \$52,925. Biodex System Pro 4 Isokinetic Dynamometer. Office of the Vice

President for Research: Minor Equipment Grant Competition.

Fall 2017 Principal Applicant - \$49,575. Biodex System Pro 4 Isokinetic Dynamometer. Office of the Vice

President for Research: Minor Equipment Grant Competition.

Spring 2017 <u>Principal Applicant</u> - \$49,575. Biodex System Pro 4 Isokinetic Dynamometer. Office of the Vice

President for Research: Minor Equipment Grant Competition.

# **SERVICE TO THE UNIVERSITY**

2022 - 2025	Graduate School	Committee on	Fellowships and	Traineeships.	University	of Kentucky, 3-
			1	1 /		<b>J</b> ) -

year term

2020 – 2023 University of Kentucky Faculty Senator, 3-year term.

2019 (Fall) Center for Clinical and Translational Sciences (CCTS) – Pilot Funding Program. Reviewed

full application for one applicant.

2019 (Fall) Center for Clinical and Translational Sciences (CCTS) – Pilot Funding Program. Reviewed

Letter of Intent for two applicants.

2019 (Summer) University of Kentucky STEM Experiences - Human Performance Session.

2015 (Spring-Fall) First Scholars Program, Academy for undergraduate excellence. Mentor

#### **SERVICE TO THE COLLEGE**

2020-2023 Faculty Council – Ex Officio Member

2015 – 2021 College Research Advisory Committee

2014 (Fall) College Work Groups - Group Forum - Student Achievement Subcommittee - Graduate

Student Retention

# **SERVICE TO THE DEPARTMENT**

2021-current Exercise Physiology Laboratory Director

2021-current Kinesiology and Health Promotion Faculty Performance Review Committee

2021-2023 Kinesiology and Health Promotion Graduate Affairs Committee

2019-current Undergraduate Certificate in Nutrition for Human Performance, Co-Director

2019 (Spring)	Needs Report on Laboratory Space and Preparation of Exercise Science Students, Data collection, data compilation, collaborative writing effort.
2017 – 2019	Undergraduate Certificate in Nutrition for Human Performance, Advisory board member
2016 (Summer)	Search committee for a full-time lecturer. Committee member
2016- current	National Strength and Conditioning Association Education Recognition Program. Director at the University of Kentucky
2014 - current	Annual Student Learning Outcomes Report for Baccalaureate Exercise Science Program. University of Kentucky, Department of Kinesiology and Health Promotion. Helps the Department and UK adhere to the Kentucky Common Core.
2014 (Fall)	Exercise Science curriculum committee – Fall 2014 University of Kentucky, Department of Kinesiology and Health Promotion

#### SERVICE TO THE PROFESSION

#### **Editorial Appointments:**

- European Journal of Applied Physiology, Advisory Editor (October 2021 current)
- Associate Editor, Research Directs in Strength and Performance (April 2021 current)
- Senior Associate Editor, Journal of Strength and Conditioning Research (January 2017 current)
- Associate Editor, Journal of Strength and Conditioning Research (September 2015 January 2017)

#### **Grant Reviewer**

- National Strength and Conditioning Association Foundation, Grant Review Panel, April 2022-April 2024
- NASA Musculoskeletal and Exercise Panel, Reviewer, February 2021.
- National Strength and Conditioning Association Foundation, Grant Reviewer (2016, 2019-2022)

# Manuscript Reviewer (~ number per year):

- Journal of Strength and Conditioning Research (4-6)
- European Journal of Applied Physiology (4-6)
- Medicine & Science in Sports & Exercise (1)
- Journal of Musculoskeletal and Neuronal Interactions (2)
- Sports Sciences of Health (1)
- Sports Sciences for Health (1)
- Physiological Measurement (1)
- Journal of Human Kinetics (1-2)
- International Journal of Exercise Science (1)
- Journal of Exercise Science and Fitness (1)
- Journal of Science in Sport and Exercise (1-2)
- Sports Medicine (1)
- High Altitude Medicine and Biology (1)
- Journal of Electromyography and Kinesiology (1)
- Experimental Physiology (1)
- Applied Physiology Nutrition and Metabolism (1-2)
- Research Quarterly for Exercise and Sport Journal (1-2)
- International Journal of Sports Medicine (1-2)
- Muscle and Nerve (1-2)

- Journal of Sports Sciences (1)
- Clinical Physiology and Functional Imaging (1)
- International Journal of Sports Physiology and Performance (1)
- Journal of Sports Science and Medicine (1)
- Journal of Visualized Experiments (1)
- Scandinavian Journal of Medicine and Science in Sports (1)
- Journal of Nature and Science
- Respiratory, Physiology, and Neurobiology (1)
- Journal of Applied Physiology (1)

#### **Service to Professional Organizations**

- National Strength and Conditioning Association Research Committee Member, three-year term, July 2021-2024
- Judge, Rapid Research Run: Preconference session at the Southeast American College of Sports Medicine (February 2019)
- Reviewer, SEACSM 1<sup>st</sup> time student presenter support applications (January 2018)
- Abstract Reviewer, National Strength and Conditioning Association (2014-2022)
- Abstract Reviewer, Southeast Chapter of the American College of Sports Medicine (2015-2018)
- Student Research Award Judge, Poster and Podium Presentations, National Strength and Conditioning National Conference (2015-2017, 2021)
- Moderator, Research Track Presentation, National Strength and Conditioning Conference (2015 and 2019)

## **HONORS AND AWARDS**

- Recipient: National Strength and Conditioning Association Fellow (2023)
- Recipient: Journal of Strength and Conditioning Research Editorial Excellence Award, National Strength and Conditioning Association (2021)
- Nominee: Albert D. and Elizabeth H. Kirwan Memorial Prize to recognize a full-time faculty member at UK who is deemed to have made outstanding contributions to original research or (creative) scholarship within the last four academic years (2020)
- Recipient: Teacher Who Made a Difference (2019) Recognized at the Teachers Who Made a Difference breakfast, sponsored by the University of Kentucky College of Education
- Nominee: William B. Sturgill Award to recognize a graduate faculty member who has made outstanding contributions to graduate mentoring and graduate education at UK (2019)
- Recipient: National Strength and Conditioning Associations Doctoral Student Research Award for an Outstanding Poster Abstract Presentation at the National Conference (2014)
- Recipient: National Strength and Conditioning Associations Doctoral Student Research Award for an Outstanding Poster Abstract Presentation at the National Conference (2013)
- Recipient: National Strength and Conditioning Associations Doctoral Student Research Award for an Outstanding Poster Abstract Presentation at the National Conference (2012)
- Recipient: Othmer Fellowship (2011-2014)
- Recipient: Challenge Scholarship from the National Strength and Conditioning Association Foundation (2013)
- Recipient: Women's Scholarship from the National Strength and Conditioning Association Foundation (2012)

# **CERTIFICATIONS**

- National Strength and Conditioning Association Certified Strength and Conditioning Specialist with distinction (CSCS\*D) (August 2013 current)
- American Red Cross CPR/AED and First Aid

# **PROFESSIONAL MEMBERSHIPS**

- Member of the International Society of Sports Nutrition (ISSN), January, 2015 current
- Member of the National Strength and Conditioning Association (NSCA), February, 2010 current
- Member of the American College of Sports Medicine (ACSM), November, 2009 current