Lance M. Bollinger

Department of Kinesiology and Health Promotion 201 Seaton Building University of Kentucky, Lexington, KY 40506-0200 (859) 257-7904 Lance.bollinger@uky.edu

Education:

Ph.D. East Carolina University, Greenville, NC Aug. 2010-Dec. 2013

Bioenergetics and Exercise Science Mentor: Jeffrey J. Brault, Ph.D.

Dissertation title: Effects of obesity on the transcriptional regulation of protein

degradation in skeletal muscle

MA University of Missouri, Columbia, MO, Aug. 2006-Dec. 2008

Exercise Physiology

Advisor: John P. Thyfault, Ph.D.

Thesis title: A proposed scoring system for quantification of metabolic syndrome severity

BS Southeast Missouri State University, Cape Girardeau, MO Aug. 2002-Aug. 2006

Health Management (Exercise Science)

Advisor: Joseph Pujol, Ed.D

Summa cum laude

Professional Experience:

Jan. 2014- Assistant Professor

present Department of Kinesiology and Health Promotion, University of Kentucky, Lexington, KY

2010-2013 Graduate Research and Teaching Assistant

Department of Kinesiology, East Carolina University, Greenville, NC

2011-2013 Junior Editor

International Journal of Sports Medicine, Thieme Medical Publishers

2006-2010 Clinical Exercise Physiologist

Cardiac Rehabilitation Department, Boone Hospital Center, Columbia, MO

2006-2008 Graduate Research Assistant

Department of Nutrition and Exercise Physiology, University of Missouri, Columbia, MO

Courses Taught:

2014-Present University of Kentucky, Department of Kinesiology and Health Promotion

Nutrition and Physical Fitness (KHP 240) Exercise Testing and Prescription (KHP 450)

Muscle Physiology (KHP 781)

Fall 2011 East Carolina University, Department of Kinesiology

Physiology of Exercise (EXSS 3805)

Publications:

Primary Research:

- KS Worcester, PA Baker, and LM Bollinger. Effects of inertial load on sagittal plane kinematics of the lower extremity during flywheel-based squats. Journal of Strength and Conditioning Research. In Press. DOI: 10.1519/JSC.0000000000003415
- AL Ransom, MC Walaszek, F Gao, R Shapiro, and LM Bollinger. External loading alters lower extremity kinetics and kinematics in a distribution-specific manner during the transition from stair descent to level walking. Clinical Biomechanics. 69: 71-78. DOI: 10.1016/j.clinbiomech.2019.07.008
- 3) AR Herrenbruck and **LM Bollinger**. The role of skeletal muscle autophagy in high fat diet-induced obesity and exercise. Nutrition Reviews. In Press
- 4) *LM Bollinger, MC Walaszek, RF Seay, and AL Ransom. Knee extensor torque and BMI differently relate to sit-to-stand strategies in obesity. Clinical Biomechanics. 62: 28-33, 2019. DOI: 10.1016/j.clinbiomech.2019.01.002
- 5) DM Schnell, RG Walton, HJ Vekaria, PG Sullivan, LM Bollinger, CA Peterson, and DT Thomas. Vitamin D produces a perilipin 2-dependent increase in mitochondrial function in C2C12 myotubes. The Journal of Nutritional Biochemistry. 65: 83-92, 2019. DOI: 10.1016/j.jnutbio.2018.11.002
- 6) *LM Bollinger, Jason T Brantley, JK Tarlton, RF Seay, PA Baker, and MG Abel. Construct Validity, Testretest Reliability, and Repeatability of flywheel-based performance data. J Strength Cond Research. In Press. DOI: 10.1519/JSC.0000000000002647
- 7) GE Jefferson, D. Travis Thomas, and **LM Bollinger**. Calcitriol increases myocellular ceramide, diacylglycerol, and expression of lipid packaging proteins in skeletal muscle cells. J Physiol Biochem. 73: 613-621, 2017. DOI: 10.1007/s13105-017-0595-8
- 8) *LM Bollinger, MS Campbell, and JJ Brault. Palmitate and oleate co-treatment increases myocellular protein content via impaired protein degradation. Nutrition. 46: 41-43, 2018. DOI: 10.1016/j.nut.2017.07.017.
- 9) MR Mason, MJ Ickes, MS Campbell, and **LM Bollinger**. An incentivized workplace physical activity intervention preferentially increases daily steps in inactive employees. American Journal of Health Promotion. 32: 638-645, 2018. DOI: 10.1177/0890117117723803
- 10) **LM Bollinger**. Potential contributions of skeletal muscle contractile dysfunction to altered biomechanics in obesity. Gait and Posture. 56: 100-107, 2017. DOI: 10.1016/j.gaitpost.2017.05.003
- 11) MC Walaszek, AL Ransom, S Capehart, M Pohl, R Shapiro, and **LM Bollinger**. External loading alters trunk kinematics and knee extensor activity in a distribution-specific manner during sitting and rising from a chair. Journal of Electromyography and Kinesiology. J Electromyogr Kinesiol. 34: 102-108, 2017. DOI: 10.1016/j.jelekin.2017.04.005
- 12) S Roseno, PD Davis, **LM Bollinger**, JJS Powell, CA Witczak, and JJ Brault. Short-term, high-fat diet accelerates disuse atrophy and protein degradation in a muscle-specific manner in mice. Nutr Metabol. 12: 39-50, 2015. DOI: 10.1186/s12986-015-0037-y
- 13) **LM Bollinger,** J Powell, JA Houmard, CA Witczak, and JJ Brault. Skeletal muscle myotubes in severe obesity exhibit altered ubiquitin-proteasome and autophagic/lysosomal flux. Obesity. 23: 1185-1193, 2015. DOI: 10.1002/oby.21081
- 14) **LM Bollinger,** CA Witczak, JA Houmard, and JJ Brault. SMAD3 augments FoxO3-induced MuRF-1 promoter activity in a DNA-binding dependent manner. Am J Physiol. Cell Physiol. 307: 278–287, 2014. DOI: 10.1152/ajpcell.00391.2013
- 15) D Hershberger and **LM Bollinger**. Sarcopenic obesity: etiology and the roles of diet and exercise in its treatment. Strength and Conditioning Journal. 37: 72-77, 2015. DOI: 10.1519/SSC.000000000000169
- 16) D Hershberger and **LM Bollinger**. Sarcopenic obesity: background and exercise training strategies. 37: 78-83, 2015. DOI: 10.1519/SSC.000000000000170

- 17) **LM Bollinger***, CE Cowan, and TP LaFontaine. Parkinson's disease: epidemiology, pathophysiology, and exercise intervention. Strength and Conditioning Journal. 34: 50-54, 2012. DOI: 10.1519/SSC.0b013e3182441afd
- 18) **LM Bollinger***, CE Cowan, and TP LaFontaine. Exercise programming for Parkinson's disease. Strength and Conditioning Journal. 34: 55-59, 2012. DOI: 10.1519/SSC.0b013e31824db335
- 19) **L Bollinger*** and T LaFontaine. Exercise and insulin resistance. Strength and Conditioning Journal. 33: 40-43, 2011. DOI: 10.1519/SSC.0b013e31822599e2
- 20) L Bollinger* and T LaFontaine. Exercise programming for insulin resistance. Strength and Conditioning Journal. 33: 44-47, 2011. DOI: 10.1519/SSC.0b013e31822599fb
- 21) P Ronai*, T LaFontaine, and L Bollinger. Exercise guidelines for persons with multiple sclerosis. Strength and Conditioning Journal. 33: 30-33, 2011. DOI: 10.1519/SSC.0b013e3181fd0b2e

Manuscripts In Preparation

- 22) *LM Bollinger, AL Ransom, MC Walaszek, RF Seay, and L Moore. Obesity reduces quadriceps EMG amplitude and peak trunk flexion during sit-to-stand in women. PTJ. Pending.
- 23) *LM Bollinger, Jason T. Brantley, RS Carpenter, and MG Abel. Effects of relative inertial load on quadriceps electromyography during flywheel-based squats. J Strength and Conditioning Research. Under review.
- 24) RS Carpenter and **LM Bollinger**. Effects of simulated weight loss on lower extremity kinematics and electromyography during gait in obese women. Medicine and Science in Sports and Exercise. Under Review

Poster Presentations

- 1) LM Bollinger, AL Ransom, MC Walaszek, and RF Seay. Knee extensor electromyography amplitude and trunk flexion are reduced in obese subjects during chair rise performance. International Society of Biomechanics Annual Meeting. August 3, 2019.
- 2) LM Bollinger, RF Seay, and AL Ransom. Effects of simulated weight loss on lower extremity EMG and joint kinematics during treadmill walking in obese subjects. International Society of Biomechanics Annual Meeting. August 1, 2019.
- 3) PA Baker, JT Brantley, JK Tarlton, MG Abel, and **LM Bollinger**. Sex differences in squat power output during flywheel resistance exercise. NSCA National Conference July 2018.
- 4) RF Seay, JT Brantley, JK Tarlton, MG Abel, and **LM Bollinger**. Relationship between maximal strength and power during resistance training exercises. NSCA National Conference July 2018.
- 5) AL Ransom, MC Walaszek, R Shapiro, and **LM Bollinger**. Simulated Weight Gain Compared to an Obese Population on Lower Extremity Biomechanics During Descending Stair Walking. ASB Annual Meeting August 2018.
- 6) AL Ransom, MC Walaszek, R Shapiro, and **LM Bollinger**. The Biomechanical Implications of Simulated Weight Gain on the Lower Extremity During Gait. ASB Annual Meeting August 2018.
- 7) *LM Bollinger, DM. Schnell, and DT Thomas. Calcitriol increases complex II-supported oxygen consumption and expression of lipolytic genes in human skeletal muscle myotubes. Markey Cancer Center Research Day May 9, 2018.
- 8) DM Schnell, **LM Bollinger**, C Peterson, and DT Thomas. Vitamin D may promote a PLIN2-dependent increase in lipid flux of C2C12 myotubes. Markey Cancer Center Research Day May 9, 2018.
- 9) *LM Bollinger, RF Seay, AL Ransom, MC Walaszek, and R Shapiro. Relative muscle strength, not body mass, is associated with kinematics and kinetics during sit-to-stand in obese women. ACSM Annual Meeting June 1, 2018.

- 10) *LM Bollinger, David M. Schnell, and DT Thomas. Calcitriol increases complex II-supported oxygen consumption and expression of lipolytic genes in human skeletal muscle myotubes. Center for Clinical and Translational Sciences Spring Research Conference April 13, 2018.
- 11) AL Ransom, RF Seay, R Shapiro, and **LM Bollinger**. Relationship between lower extremity strength and gait characteristics during stair descent in obese subjects. SEACSM Feb 2018.
- 12) JT Brantley, JK Tarlton, RF Seay, PA Baker, MG Abel, and LM Bollinger. Validity and reliability of flywheel-based muscle performance testing. SEACSM Feb 2018.
- 13) M Ickes, H Erwin, J McMullen, **LM Bollinger**, A Wiggins, M Berger, C Cantrell. An Evaluation of WalkUK: Wayfinding Signs to Promote Walking for Transportation Among College Students. SOPHE April 2018.
- 14) AL Ransom, MC Walaszek, R Shapiro, and **LM Bollinger.** Simulated weight gain compared to an obese population on lower extremity biomechanics during descending stair walking. American Society of Biomechanics Annual Meeting. Boulder, Co August 2017.
- 15) AL Ransom, MC Walaszek, R Shapiro, and **LM Bollinger.** The biomechanical implications of simulated weight gain on the lower extremity during gait. American Society of Biomechanics Annual Meeting. Boulder, Co August 2017.
- 16) AL Ransom, MC Walaszek, S Capehart, R Shapiro, and LM Bollinger. The effects of simulated weight gain on lower extremity muscle activation during descending stair walking. Southeast ACSM. Greenville, SC Feb 16-18, 2017.
- 17) *LM Bollinger, MC Walaszek, and AL Ransom. Simulated central, but not peripheral, weight gain alters biomechanics and muscle recruitment during stand-to-sit. Southeast ACSM. Greenville, SC Feb 16-18, 2017.
- 18) MR Mason, MJ Ickes, MS Campbell, and **LM Bollinger.** An incentivize based wellness challenge preferentially increases physical activity in individuals with low physical activity. Southeast ACSM. Greenville, SC Feb16-18, 2017.
- 19) MC Walaszek, AL Ransom, S Capehart, R Shapiro, MB Pohl, and **LM Bollinger**. Effects of simulated weight gain on muscle activation during sit-to-stand task. American Society of Biomechanics Annual Meeting. Raleigh, NC. August 2-5, 2016.
- 20) AL Ransom, MC Walaszek, S Capehart, R Shapiro, and **LM Bollinger**. The biomechanical effects of simulated weight gain during descending stair walking on the lower extremity. American Society of Biomechanics Annual Meeting. Raleigh, NC. August 2-5, 2016.
- 21) DM Schnell, **LM Bollinger**, and DT Thomas. Calcitriol treatment increases oxygen consumption and blunts lipid accumulation in human myotubes. CCTS Spring Research Conference. Lexington, KY. April 21, 2016.
- 22) MC Walaszek, AL Ransom, S Capehart, R Shapiro, MB Pohl, and **LM Bollinger**. Effects of Simulated Weight Gain on Muscle Activation During Sit-to-Stand Task. CCTS Spring Research Conference. Lexington, KY. April 21, 2016.
- 23) GE Jefferson, DT Thomas, and **LM Bollinger**. Calcitriol favorably alters lipid partitioning within skeletal muscle cells. Southeast ACSM. Greenville, SC. Feb 2016.
- 24) AH Herrenbuck, GE Jefferson, MF Hazlett, BS Fleenor, and **LM Bollinger**. Myocellular endoplasmic reticulum stress is increased by autophagy inhibition and decreased by exercise. Southeast ACSM. Greenville, SC. Feb 2016.
- 25) *LM Bollinger, AR Herrenbruck, A Berrones, M Campbell, T Garner, BS Fleenor, and JJ Brault. A hyperlipidemic environment of equimolar palmitate and oleate induces myocellular hypertrophy by inhibiting protein degradation rate. Southeast ACSM. Jacksonville, Fl. Feb 2015.
- 26) **LM Bollinger** and JJ Brault. SMAD3 augments, and is essential for, FoxO3-induced MuRF-1 promoter activity. Advances in Skeletal Muscle Biology in Health and Disease. Gainesville, FL. March 6, 2014
- 27) **LM Bollinger** and JJ Brault. FoxO and SMAD3 coordinately regulate MuRF-1 gene transcription. Research and Creative Activities Week. East Carolina University. April 8-12, 2013.

- 28) **LM Bollinger** and JJ Brault. Skeletal muscle of extremely obese women is insensitive to atrophic stimuli. 2012 APS/ACSM Intersociety Meeting: Integrative Biology of Exercise VI. Westminster, CO. October 12, 2012.
- 29) *JJ Brault and **LM Bollinger**. Skeletal muscle of obese humans has normal protein turnover but is atrophy resistant. International Biochemistry of Exercise. Stockholm, Sweden. June 17-21, 2012.
- 30) **LM Bollinger**, SO Warner, MA Linden, MA Ruebel, Y Liu, RS Rector, J Friesen, JA Potteiger, SP Sayers, JP Thyfault, and TR Thomas. A proposed scoring system for quantification of metabolic syndrome severity. American College of Sports Medicine-Central States Chapter Meeting. Kansas City, MO. October, 2008.
- 31) LM Bollinger, JP Thyfault, RS Rector, SO Warner, PS Hinton, Y Liu, and TR Thomas. Effects of exercise on plasminogen activator inhibitor-1 during weight loss and regain. American College of Sports Medicine-Central States Chapter Meeting. Kansas City, MO. October, 2007.

Podium Presentations:

- 1) KS Worcester, PA Baker, RF Seay, R Shapiro, and **LM Bollinger**. Increasing inertial load does not affect sagittal plane kinematics during flywheel-based squats. SEACSM February 2019.
- 2) **LM Bollinger**. Flywheel-based resistance exercise performance testing: test-retest reliability and effects of inertial load. NSCA National Conference July 2018.
- 3) **LM Bollinger**. Flywheel Training: Principles and Application. National Strength and Conditioning Association Personal Trainer's Conference. Anaheim, CA. October 29, 2017
- 4) **LM Bollinger**. A Role for Autophagy in Obesity-Induced Anabolic Resistance. Center for Muscle Biology Forum, University of Kentucky. May 7, 2015.
- 5) **LM Bollinger**. Effects of Obesity on the Transcriptional Regulation of Protein Degradation. Center for Muscle Biology Muscle Forum, University of Kentucky. February 27, 2014.
- 6) **LM Bollinger**. Effects of Obesity on the Transcriptional Regulation of Protein Degradation. Exercise Science Seminar Series, Department of Kinesiology and Health Promotion, University of Kentucky. January 24, 2014.
- 7) **LM Bollinger**. Atrophy Resistance in Obese Skeletal Muscle. Interdepartmental Joint Metabolism Meeting, East Carolina University. March 29, 2012.

Funding and Awards:

2020 UK CCTS CURE COVID-19Pilot Program

\$3,591.60

Title: Effects of COVID-19 induced social distancing on university employees' physical

activity Role: PI

2019 University of Kentucky College of Education Creative Activities Award

\$7,500

Title: Effects of obesity on knee extensor motor performance

Role: PI

2018 American College of Sports Medicine Foundation

\$10,000

Title: Role of skeletal muscle strength in obesity-induced biomechanical adaptations

Role: PI

University of Kentucky College of Education Creative Activities Award

\$7,500

Title: Comparing Muscle Performance during Traditional and Flywheel-based Resistance

Training Role: PI

2017-2019 National Institutes of General Medical Sciences

P20GM121327 - \$2,212,250

Title: University of Kentucky Center for Cancer and Metabolism

Role: Co-Investigator

2015 U.S. Department of Health and Human Services (HHS) and the Centers for

Medicare & Medicaid Services (CMS)

Civil Money Penalty Grant - \$744,202 Title: Bingocize in Kentucky Nursing Homes Role: subawardee; PI: Jason Crandall (WKU)

2016 University of Kentucky College of Education Creative Activities Award

\$7,100

Title: Effects of Resistance Training on Biomechanics and Physical Function in Obesity

Role: PI

2012-2013 University of Kentucky, Office of the Vice President for Research

\$7,000 summer salary

Summer Research Fellowship

Title: Cellular mechanisms of muscle hypertrophy in response to unsaturated lipids

2012 American College of Sports Medicine Foundation

\$5,000

Doctoral Student Research Award

Title: Atrophy resistance in human myotubes expressing high myostatin

Role: Principal Investigator

East Carolina University Graduate School Travel Award

Travel Award-\$500 for travel to Integrative Biology of Exercise VI (Oct. 10-13)

Pending Grant Applications:

Dec 2019 National Aeronautics and Space Administration

Requested funds: \$134,293.00

Title: Dose-response relationship between reduced gravitational force and neuromuscular

function during locomotion

Role: PI

May 2020 Patient-Centered Outcomes Research Institute

Requested funds: \$169,763

Title: Effects of Social Distancing during the COVID-19 Pandemic on Healthcare Workers'

Physical Activity

Role: PI

Unfunded Grant Applications:

Dec 2014 Center of Research in Obesity and Cardiovascular Diseases (COBRE), University

of Kentucky

Pilot Project Program

Title: The role of mitophagy in obesity-induced skeletal muscle dysfunction

Lance Bollinger, PI

Requested Funds: \$50,000

March 2014 Office of the Vice President for Research, University of Kentucky

Research Support Grant

Title: Role of SMAD3 in skeletal muscle atrophy

Lance Bollinger, PI

Requested Funds: \$20,000

May 2015 Center for Clinical and Translational Science (CCTS), University of Kentucky

CCTS-Barnstable Brown Diabetes And Obesity Center Collaborative Pilot Awards

Title: Influence of sarcopenic obesity on aortic stiffness

Lance Bollinger, Co-PI, Brad Fleenor, Co-PI

Requested Funds: \$50,000

May 2015 The Obesity Society (TOS)

Early Career Research Award

Title: Impaired autophagy as a mediator of obesity-induced anabolic resistance

Lance Bollinger, PI

Requested Funds: \$25,000

May 2015 The Obesity Society (TOS)

Early Career Grant Challenge

Title: The role of autophagy in obesity-induced skeletal muscle dysfunction

Lance Bollinger, PI

Requested Funds: \$40,000

Aug. 2015 Center for Clinical and Translational Science (CCTS), University of Kentucky

Junior Investigator Research Award

Title: Effect of Sarcopenia on Arterial Stiffness Lance Bollinger, Co-PI, Brad Fleenor, Co-PI

Requested Funds: \$25,000

January 2016 American College of Sports Medicine Foundation

Research Endowment

Title: Role of ER-phagy in skeletal muscle ER stress

Lance Bollinger, PI

Requested Funds: \$10,000

May 2016 National Institutes of Health (R01)

Title: Vitamin D contribution to muscle metabolic function in cancer cachexia

Role: Co-Investigator

July 2016 American Heart Association-National Innovative Research Grants

Title: Role of skeletal muscle in aging-induced arterial stiffness

Lance Bollinger, Co-PI, Brad Fleenor, Co-PI

Requested Funds: \$150,000

August 2016 United States Department of Defense

Massage as a Therapeutic Treatment Following Eccentric Exercise

Lance Bollinger, Co-PI

Requested Funds: \$600,000

January 2017 American College of Sports Medicine Foundation

Role of Skeletal Muscle Contractile Dysfunction in Obesity-induced Biomechanics

Role: PI

Requested Funds: \$10,000

March 2017 UK Vice President for Research-Equipment Competition

Ultrasound purchase request for Seaton Bldg

Requested funds: \$40,000

June 2017 UK Women and Philanthropy Network

Preparing Fitness and Health Promotion Professionals to Combat Kentucky 's

Health Disparities

Requested Funds: \$50,000

August 2017 UK Center for Appalachian Research in Environmental Sciences and CCTS

Early Career Investigator Award

Improving the built environment through community engagement to combat

Physical inactivity-related diseases in Appalachian Kentucky

Requested funds: \$25,000

July 2019 Department of Defense

Title: Chronic sleep restriction, injury risk, and performance project (CRISSP)

Role: Co-I

April 2020 University of Kentucky College of Education Creative Activities Award

Title: Development of a novel muscle strength testing method to assess quadriceps

muscle contractile function in vivo.

Requested funds: \$7,500

Student Advising and Mentoring

2014-2017 Adrienne Herrenbruck, Ph.D student

2014-2016 Grace Jefferson, MS student

Michelle Walaszek, MS student

2017-Present Rebekah Seay, PhD student

An Ouyang, PhD student

Jason T. Brantley, MS student

Dissertation and Thesis Committees

2017-Present Rebekah Seay, dissertation committee co-chair

Paul Baker, thesis committee co-chair Jason Brantley, thesis committee co-chair Katie Worcester, thesis committee chair

2014-Present Adrienne Herrenbruck, dissertation committee co-chair

2014-2016 Grace Jefferson, thesis committee chair

Adam Berrones, dissertation committee member

2015-2016 Michelle Walaszek, thesis committee chair2016-Present An Ouyang, dissertation committee co-chair

Dave Schnell, dissertation committee member Ansii Saari, dissertation committee member

Amanda Ransom, dissertation committee member

Comprehensive exam committees

Spring 2017 Joe Arata

Fall 2017 Aaron Gillette, Joshua Saleeby, Jon Cothran

Spring 2016 Joshua Roar, Adam Defelice

Spring 2015 John Durant, Erica Daniels, Vanessa White

Spring 2014 Doug Hershberger

Service:

Journal International Journal of Sports

reviewer Medicine 2012-present Impact Factor: 2.374

Endocrine2014-presentImpact Factor: 3.527Journal of Gerontology2015-presentImpact Factor: 5.416Journal of Physiology2016-presentImpact Factor: 5.037Strength and Conditioning Journal2017-presentImpact Factor: 0.58

April 2013- National Strength and Conditioning Association (NSCA)

2017 Certified Special Populations Specialist Exam Development Committee

October 2014- KHP Strategic Planning Committee member

Present

Spring 2015 Outside examiner – Allison Jones dissertation defense; Department of Nursing

Fall 2015 KHP Lecturer Search Committee member

Health and Wellness Fitness Wearables RFP Committee member

Family and Consumer Sciences Cooperative Extension Publication Reviewer

Muscle Loss Mystery: Understanding Sarcopenia

2016 Study Abroad Advisory Committee-Chair

2017-Present KHP Periodic Program Review Committee Member

Spring 2017 Jenna Abbott – Undergraduate Honors Research Project Director

Outside examiner - Ryan McCann dissertation defense; Department of Athletic Training

Served as expert witness for two exercise-related lawsuits

Spring 2017-

Present

UK Environmental Health and Safety Committee Chair

2018-Present Graduate Student Block Funding Committee member

Exercise Science Student Learning Outcomes subcommittee member

Spring 2020 Outside examiner – Kaitlin Voigts Key dissertation defense; Department of Nursing

Certifications:

2008-Present American College of Sports Medicine (ACSM)

Certified Clinical Exercise Physiologist (CEP)

2006-Present National Strength and Conditioning Association (NSCA)

Strength and Conditioning Specialist (CSCS)