

Laurel A. Littlefield, Ph.D., ACSM E.P.-C.

Associate Professor, Department of Kinesiology

Lipscomb University, Nashville TN 37204

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Degrees in Higher Education

Ph.D. Kinesiology, Exercise Nutrition and Health Promotion
Baylor University Emphasis: Exercise Physiology
December 2013

M.S. Exercise & Sport Sciences
Texas Tech University Emphasis: Exercise Physiology
December 2007

B.S. Exercise & Sport Sciences
Lubbock Christian University
May 2005

Academic Experience

July 2018, Current, Lipscomb University, Nashville, TN

Associate Professor, Department of Kinesiology

August 2017 – May 2018, Lubbock Christian University, Lubbock TX

Associate Professor, Department of Exercise and Sport Sciences

August 2013- July 2017, Lubbock Christian University, Lubbock TX

Assistant Professor, Department of Exercise and Sport Sciences

2010-2013, Baylor University, Waco TX

Graduate Research & Teaching Assistant, Department of Health, Human Performance, and Recreation

2009-2010, Auburn University, Auburn AL

Graduate Assistant, Department of Kinesiology

2008-2009, Southern Union State Community College, Opelika, AL

Part-time Instructor

2008, Lubbock Christian University, Lubbock, TX

Adjunct Instructor, Department of Exercise & Sport Sciences

2006-2007, Texas Tech University, Lubbock, TX

Graduate Teaching Assistant, Department of Health, Exercise & Sport Sciences

Other Professional Experience

2020-Present, CycleBar, Franklin, TN

Group Exercise Instructor: Indoor Cycling

2013-2018, Bodyworks Family Sports Center, Lubbock, TX

Group Exercise Instructor

2008-2010, AC Fitness for Women, Auburn, AL

Group Exercise Instructor and Personal Trainer (2008-2009)

2008-2011, Independent Personal Trainer, Auburn AL & Waco TX

2008, Bodyworks Family Sports Center, Lubbock, TX

Youth Fitness Director

Certification and Offices

Certified Medical X-Ray Technologist, State of Tennessee, September 2019 – Present

Radiation Safety Officer, Lubbock Christian University. 2014 – 2018

Certified Exercise Physiologist, American College of Sports Medicine (ACSM EP-C). 2007-Present

Outreach and Lab Development

While completing my doctoral work, a portion of my research responsibilities included assisting with a community outreach and teaching program developed by Dr. Peter W. Grandjean. This outreach provides comprehensive fitness assessments for faculty and community members and is housed as a portion of an undergraduate course. The unique nature of this program allows students to obtain hands-on experience with exercise testing and prescription while providing program participants with personal, comprehensive health information. I have developed a lab and curriculum that supports a similar outreach program at Lubbock Christian University. My initial efforts have been focused on assimilating necessary lab equipment, ensuring regulatory and safety compliance and developing appropriate courses to support the function of this program.

Publications: Poster Presentations

Long, J.D., Kuenzi, G., Boswell, C., Estep, G. **Littlefield, L.**, Kuenzi, G., Rogers, T., & Culpepper, D. (2011). *Technology-based methods for measurement of fruit and vegetable consumption: a preliminary report*. Sigma Theta Tau International's 22nd International Nursing Research Congress, Poster Presentation, Cancun, Mexico.

Robert-McComb, J. & **Littlefield-Long, L.** (2009). *Resonance breathing training and heart rate variability: a pilot study*. Association for Applied Psychophysiology and Biofeedback Annual Meeting, Poster Presentation, Albuquerque, NM.

Long, J.D. and **Littlefield, L.A.** (2008). *Evidence review of the effectiveness of technology-based methods for dietary assessment of fruit and vegetable consumption*. International Fruit and Vegetable Summit (WHO Co-Sponsor), Poster Presentation, Paris, France.

Publications: Oral Presentations

Littlefield, L.A., Ruiz, M.R., Boston, A., and Cukrowski, K. “Perspectives on Endurance Running: Body, Mind, and Spirit.” Christian Scholar’s Conference, Lubbock Christian University, Lubbock, TX. June 5 – 7, 2019.

Littlefield, L.A. and Rogers, T.J. “Type 1 Diabetes, Exercise and Glycemic Control.” Scholar’s Colloquium, Lubbock Christian University, Lubbock, TX. March 30-31 2017.

Littlefield, L.A. and Chowning, L. “Exercise Using Lactate Threshold Measurements.” International Symposium in Exercise and Health Science Research, Baylor University, Waco, TX. 12-13 October 2016.

Blassingame, S., Boston, A.B., Dabbs, J., **Littlefield, L.A.**, and Porter, L. “Crisis in Research.” Scholar’s Colloquium, Lubbock Christian University, Lubbock, TX. 14-15 April 2016. Oral Presentation.

Long, J.D., Estep, Boswell, C., **Littlefield, L.**, Kuenzi, G., Rogers, T., & Culpepper, D. "Effectiveness of Cell Phones with Digital Picture Capability and MyPyramid Tracker for Measurement of Fruit/Vegetable Consumption." 41st Biennial Sigma Theta Tau International Convention, Grapevine, TX. 29 October – 2 November 2011. Oral Presentation.

Long, J.D., Rogers, T., **Littlefield, L.**, Boswell, C., & Kuenzi, G., Mahan, K., and Boswell, M. “Using Technology for Health Promotion.” Christian Scholars Conference, Pepperdine University, Malibu, CA. 16-18 June 2011. Oral Presentation.

Long, J.D., **Littlefield, L. A.**, Estep, G., Martin, H., Rogers, T., Boswell, C., Shriver, B., & Roman-Shriver, C. “Pilot Study Comparing the Effectiveness of Technology-based Methods of Dietary Assessment.” Christian Scholars Conference, David Lipscomb University, Nashville, TN. 26 June 2009. Oral Presentation.

Long, J.D. & **Littlefield, L. A.** “Evidence Review of the Effectiveness of Technology-based Methods for Dietary Assessment of Fruit and Vegetable Consumption.” Scholar’s Colloquium, Lubbock Christian University, Lubbock, TX. 3-4 April 2008. Oral Presentation.

Publications: Refereed Abstracts

Townsend J.R., Haynes J.T., Aziz M.A., Jones M.D., **Littlefield L.A.**, Ruiz M.D., Johnson K.D., Gonzalez A.M. Impact of red spinach supplementation on bench press and cognitive performance in resistance-trained males. 2021 NSCA National Conference. Orlando, FL.

Townsend J.R., Haynes J.T., Aziz M.A., Jones M.D., **Littlefield L.A.**, Ruiz M.D., Johnson K.D., Gonzalez A.M. Impact of dietary nitrate loading on muscle oxygenation during a fatiguing barbell bench press protocol. 2021 ACSM Annual Meeting. Virtual.

Townsend J.R., Morimune J.E., Jones M.D., **Littlefield L.A.**, Heffington S.H., VanDusseldorp T.A., Feito Y., Mangine G.T. The effects of a protease enzyme blend on post-resistance exercise intramuscular anabolic signaling. ASN Nutrition 2020. Seattle, WA.

Morimune J.E., Townsend J.R., Jones M.D., Beuning C.N., Hase A.A., Boot C.M., **Littlefield L.A.**, Henry R.N., Marshall A.C., VanDusseldorp T.A., Feito Y., Mangine G.T. The effects of a protease enzyme blend on the amino acid response to resistance exercise. 2020 ACSM Annual Meeting. San Francisco, CA.

Jones M.D., Townsend J.R., Morimune J.E., **Littlefield L.A.**, VanDusseldorp T.A., Feito Y., Mangine G.T. Acute protease supplementation does not alter the endocrine response to resistance exercise in trained males. 2020 ACSM Annual Meeting. San Francisco, CA.

Littlefield, L.A., Papadakis, Z., Rogers, K.M., Moncada-Jiminez, J., Taylor, J.K. and Grandjean, P.W. (2014). The effect of exercise intensity on postprandial blood lipids in physically-inactive men. Abstracted: *Medicine and Science in Sports and Exercise*, (46)5; Supplement.

Matthews, S. Ren, G., He, X. Okergerg, C., Papizan, J., Bowers, R.L., Mahurin, A.J., Araya-Ramirez, F., **Littlefield, L.A.**, and Grandjean, P.W. (2014). Ser 312-phosphorylated fetuin-A: role in insulin action and insulin resistance. *Diabetologia*, (57)1; S212.

Matthews, S. Ren, G., He, X. Bowers, R.L., Araya-Ramirez, F., **Littlefield, L.A.**, and Grandjean, P.W. (2014). Plasma fetuin-a and phosphofetuin-a (ser312) responses to a single or short-term repeated bout of exercise in obese and normal-weight individuals. Abstracted: *The Journal of the Federation of American Societies for Experimental Biology (FASEB Journal)*, (28)1, Supplement.

Grandjean, P.W., Ren, G., He, X., Kim, T., **Littlefield, L.A.**, Bowers, R.L., Araya-Ramirez, F., Mahurin, A.J., and S.T. Matthews. (2012). Fetuin-A responses to incremental weight loss. American College of Sports Medicine International Meeting, San Francisco, CA. Abstracted: *Medicine and Science in Sports and Exercise*, (44)5; No. 2397.

Littlefield, L.A., Bowers, R.L., Araya-Ramirez, F., Mahurin, A.J., Taylor, J.K., Teayoun, K., He, X., Matthews, S.T., and P.W. Grandjean. (2011). Changes in fibroblast growth factor 21 with modest weight loss. Abstracted: *Medicine and Science in Sports and Exercise*, (43)5; No. 2462.

Taylor, J.K., Plaisance, E.P., Mahurin, A.J., Mestek, M.L., Moncada-Jiminez, J., Araya-Ramirez, F., **Littlefield, L.A.**, and P.W. Grandjean. (2011). Aerobic exercise and niacin therapy alter paraoxonase-1 in metabolic syndrome. Abstracted: *Medicine and Science in Sports and Exercise*, (42)5; No. 2985.

Littlefield, L.A., Bowers, R.L., Dennis, J.D., Araya-Ramirez, F., Taylor, J.K., Matthews, S.T., & Grandjean, P.W. (2010) Temporal changes in cardiostrophin-1 and fibroblast growth factor-21 with weight loss. Southeast American College of Sport's Medicine 37th Annual Meeting, February 11-12, Greenville, SC.

Bowers, R.L., **Littlefield, L.A.,** Dennis, J.D., Araya-Ramirez, F., Taylor, J.K. Matthews, S.T., Mahurin, A.J., and Grandjean, P.W. (2010). Temporal changes in cardiostrophin-1 and fibroblast growth factor 21 with weight loss. Southeast American College of Sports Medicine 37th Annual Meeting, February 11-13, Greenville, SC.

Publications: Journal Articles

Townsend J.R., Morimune J.E., Jones M.D., Beuning C.N., Haase A.A., Boot C.M., Heffington S.H., **Littlefield L.A.,** Henry R.H., Marshall A.M., VanDusseldorp T.A., Feito Y., Mangine G.T. (2020). The Effect of ProHydrolase® on the Amino Acid and Intramuscular Anabolic Signaling Response to Resistance Exercise in Trained Males. *Sports*. 8(1), 13.

Ren, G., Kim, T., Papizan, J.B., Okerberg, C.K., Kothari, V.M., Zaid, H., Bilan, P.J., Araya-Ramirez, F., **Littlefield, L.A.,** Bowers, R.L., Mahurin, A.J., Nickles, M.M., Ludvigsen, R., He, X., Grandjean, P.W., and Matthews, S.T. (2019). Phosphorylation status of fetuin-A is critical for inhibition of insulin action and is correlated with obesity and insulin resistance. *American Journal of Physiology, Endocrinology, and Metabolism*, 1(317): E250-E260. DOI: [10.1152/ajpendo.00089.2018](https://doi.org/10.1152/ajpendo.00089.2018)

Littlefield, L.A., Papadakis, Z.P., Rogers, K.M. Moncada-Jimenez, J. Taylor, J.K. and Grandjean, P.W. (2017). The effect of exercise intensity and excess post-exercise oxygen consumption on postprandial blood lipids in physically-inactive men. *Applied Physiology, Nutrition and Metabolism*. Published online: <https://doi.org/10.1139/apnm-2016-0581>.

Littlefield, L.A. and Grandjean, P.W. (2015). Exercise intensity and postprandial lipemia. *RETOS Nuevas Tendencias en Educaciòn Fisica, Deporte y Recreaciòn* (Challenges. New Trends in Physical Education, Sport and Recreation). January 2015.

Long, J.D., **Littlefield, L.A.,** Estep, G., Martin, H., Rogers, T.J. Boswell, C., Shriver, B.J., & Roman-Shriver, C.R. (2010). Evidence review of technology and dietary assessment. *Worldviews on Evidence Based Nursing*, (7)4; 191-204.

Manuscripts in Review

Haynes J.T., Townsend J.R., Aziz M.A., Jones M.D., **Littlefield L.A.,** Ruiz M.D., Johnson K.D., Gonzalez A.M. Impact of Red Spinach Extract Supplementation on Bench Press Performance and Muscle Oxygenation in Resistance-Trained Males. *Sports* (In Review)

Grants

- 2017 Littlefield, L.A., Chowning L. Sa-id, M., and Carson, K. EQUIP LCU Grant Application. "The effect of test interruptions and work: rest ratio on exercise intensity at maximal lactate steady state in active individuals." (\$400). Funded.
- 2016 Littlefield, L.A. and Chowning L. EQUIP LCU Grant Application. "The effect of test interruptions and work: rest ratio on exercise intensity at maximal lactate steady state in active individuals." (\$400). Not Funded.
- 2015 Littlefield, L.A., McCullough, K., and Long, J.D. EQUIP LCU Grant Application. "Funding for Registration of Dual-Energy x-Ray Absorptiometry Machine." (\$400). Funded.
- 2010 Long, J.D., Estep, G., Boswell, C., & Littlefield. L. Sigma Theta Tau International, Small Grant Recipient. "Effectiveness of Cell Phones with Digital Picture Capability and MyPyramid Tracker for Measurement of Fruit/Vegetable Consumption." (\$4800). Funded.

Teaching Experience

Lipscomb University

EXNS 5354	Exercise Evaluation and Prescription for Special Populations
EXNS 5403	Special Topics in Diabetes Treatment
EXNS 5233	Nutrition and Exercise in Obesity Treatment
EXNS 5103	Research Design & Data Analysis II
EXNS 5013	Exercise and Nutrition Strategies
EX 4163	Applied Exercise Physiology
EX 4133	Exercise Physiology
EX 4123	Exercise Physiology Lab
PE 2203	Foundations in Kinesiology
PE 2012	Lifetime Wellness

Lubbock Christian University

ESS 4380	Senior Research
ESS 4361	Exercise Testing & Prescription I
ESS 4362	Exercise Testing & Prescription II
ESS 3371	Physiology of Exercise
ESS 3341	Measurement and Evaluation in Exercise Physiology
ESS 1201	Introduction to Kinesiology
ESS 1200	Personal Fitness & Wellness
ESS 1200	Personal Fitness & Wellness (Online)

Baylor University

HP 1420	Human Anatomy Lab
HP 1421	Introduction to Human Physiology Lab

Southern Union State Community College

PED 224/HED 140 Nutrition and Online Nutrition
PED 107, 108 Aerobic Dance
PED 109 Online Jogging
PED 105 Personal Fitness
PED 103, 104 Weight Training

Lubbock Christian University

ESS 1200 Personal Fitness & Wellness

Auburn University

PHED 1230 Jogging
PHED 1640 Yoga

PHED 1510 Bowling
PHED 1550 Tennis

Texas Tech University

PFW 2125 Advanced Tennis
PFW 1125 Tennis
PFW 1112 Diet and Exercise
PFW1130 Basketball
PFW 1117 Walking

Thesis Committee Service

Thesis Chair: Grace Zimmerman. *The Effects of Vigorous-Intensity Exercise and Dietary Manipulation on Substrate Oxidation in the Postprandial Period.* 2020-2021.

Thesis Chair: Madison Colson. *Comparison of Post-Exercise Hypotensive Responses to Acute Isovolumetric Strength- and Endurance-Based Resistance Exercise.* 2020-2021.

Thesis Committee Member: Tricia Hart. *Examining the Role of Biological Sex and Resistance Exercise on Gastrointestinal Distress.* 2020-2021.

Thesis Committee Member: Drew Howerton. *The Effects of Fed vs. Fasted Exercise During Intermittent Fasting Protocol on Strength and Power Performance and Heart Rate Variability.* 2020-2021.

Thesis Committee Member: J.T. Haynes. *The effects of Red Spinach Extract supplementation on isometric strength, resistance exercise and cognitive performance.* 2020-2021.

Thesis Chair: Megan Jones, *The Effects of Muscular Endurance Training on Onset of Blood Lactate Accumulation in Aerobically Trained Females.* 2019-2020.

Thesis Committee Member: Jaclyn Morimune. *The Effects of Prohydrolase® on the Plasma Amino Acid Response to Resistance Exercise in Trained Males.* 2019-2020.

Thesis Committee Member: Shameka Freeman, *The Effect of L-Citrulline and Senior Group Fitness Class on Indices of Health, Body Composition, and Functional Performance in Older Active Female Adults*. 2018-2019.

Thesis Committee Member: Heidi Fahmy, *Shoulder Flexion Range of Motion Evaluation with K-Laser vs. Proprioceptive Neuromuscular Facilitation Stretching*. 2018-2019.

Academic Service

Member	Institutional Review Board. Lipscomb University. Fall 2020 – Present.
Guest Lecturer	“Exercise Safety in Pregnancy and Type 1 Diabetes.” Guest lecturer to Physician Assistant Students. Lipscomb University. Fall 2019.
Presenter	“Exercise and Pregnancy in Type 1 Diabetes.” Guest speaker to dietetic interns. Lipscomb University. Fall 2019.
Presenter	“Type 1 Diabetes.” Guest speaker to American Pharmacists Association-Academy of Student Pharmacists. Lipscomb University. Fall 2018.
Member	Interprofessional Education Committee (IPE). Lipscomb University. Fall 2018 – Present.
Poster Judge Coordinator and Judge	Undergraduate and Graduate. Lubbock Christian University Scholar’s Colloquium. 2017.
Poster Judge	Undergraduate Category, Texas American College of Sports Medicine Annual Meeting, Waco, TX. Spring 2017.
Member	PORC Committee. Lubbock Christian University. Fall 2016 – 2018.
Member	Undergraduate Research Committee (CUR). Lubbock Christian University. Fall 2015- 2018.
Member	Lab Safety Committee. Lubbock Christian University. Spring 2015- 2018.
Member	Institutional Review Board. Lubbock Christian University. 2013- 2018.

Presenter	Community Wellness Program: Faculty Conferences. Lubbock Christian University. Fall 2016
Mentor	Michael Sa-id and Luke Chowning. "Lactate Production Function and Utilization: Applications for Maximal Lactate Steady State." Oral Presentation. Lubbock Christian University Scholar's Colloquium. Spring 2016.
Poster Judge	Undergraduate and Graduate, Lubbock Christian University Scholar's Colloquium. Spring 2016.
Poster Judge	Undergraduate Category, Texas American College of Sports Medicine Annual Meeting. College Station, TX. 2016.
Invited Presenter	Dabbs, J. and Littlefield, L. "Navigating the IRB." Lubbock Christian University Department of Nursing. Fall 2015.
Faculty Contact	Step Out: Walk to Stop Diabetes initiative. Lubbock Christian University. 2015.
Invited Responder	"Basal-bolus insulin versus sliding scale: improving glycemic control." Lubbock Christian University Department of Nursing with Elaine Emery. 2014.
Poster Judge	Master's Category, Texas American College of Sports Medicine Annual Meeting. Dallas, TX. 2014.
Honor's Course Instructor	Lubbock Christian University. 2013.
Community Service	
Volunteer	Host for Overton High School EKG course in Kinesiology Cardiovascular Lab. Lipscomb University. Fall 2018.
Board Member	American Diabetes Association. Lubbock, TX, 2017 – 2018.
Dream Center Presentation	"Living with Diabetes." Lubbock, TX. September 2016
Team Captain and Presenter	Step Out: Walk to Stop Diabetes, Lubbock Christian University Team. Lubbock, TX. September 2016.

Guest Speaker	Living Well with Diabetes, University Medical Center. Lubbock, TX. May and October, 2015.
Judge	Midway Middle School Science Fair. Waco TX. 2010.
Volunteer	Ronald McDonald House. Lubbock, TX. 2006 .
Ambassador	American Diabetes Association, Lubbock, TX. 2005.