

DRAFT Curriculum Vitae

Jennifer Steiner

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General Information

University address: Nutrition and Integrative Physiology
College of Health and Human Sciences
Biomedical Research Building- Rm235
Florida State University
Tallahassee, Florida 32306-1493

E-mail address: js17z@fsu.edu
jsteiner2@fsu.edu

Professional Preparation

2012 PhD, University of South Carolina. Major: Physiology- Exercise Science.
Supervisor: J. Mark Davis.

Jennifer Steiner. (2012). *MCP-1, Macrophages and Tumorigenesis in the C3(1)/SV40Tag Mouse Model of Breast Cancer: Benefits of Quercetin*. Unpublished doctoral dissertation, University of South Carolina.

2008 Masters, University of Virginia. Major: Exercise Physiology. Supervisor:
Arthur Weltman.

Jennifer Steiner. (2008). *The Effects of Carbohydrate Supplementation on the RPE-Blood Lactate Relationship*. Unpublished master's thesis, University of Virginia.

2007 Bachelors, University of Virginia. Major: Exercise Physiology. High Honors.

Professional Experience

2018–present Assistant Professor, NUTRITION FOOD & EXERCISE SCI, Florida State University.

2018 Dietetics Intern, Florida State University.

Program coordinators: Dr. Lisa Trone and Jennifer Farrell **Course work and ½ of internship hours completed towards RD. Second half of internship and passing RD exam is planned for future.

- 2018 Teaching Faculty I Adjunct, NUTRITION FOOD & EXERCISE SCI, Florida State University.
- 2013–2017 Post Doctoral Scholar, Department of Cellular and Molecular Physiology, College of Medicine at Penn State, Hershey, PA.
Mentor: Dr. Charles H. Lang Research Focus: Understanding the regulation of muscle protein balance during hypertrophic (resistance exercise) and atrophic conditions (alcoholism, sepsis, immobilization).

Honors, Awards, and Prizes

New Investigator Award, American Physiological Society- Endocrinology and Metabolism Section (2022). (\$1,000).

Awarded to top performing candidate within 10 years of their terminal degree for their research, teaching and service efforts.

The McKnight Junior Faculty Development Fellowship Award, Florida Education Fund (2021). (\$14,000).

Awarded support for 1 year of teaching release to focus on research.

Outstanding Post-Doctoral Scholar Award, Pennsylvania State University College of Medicine (2015).

Awarded to the institutions top performing post doctoral scholar.

Virenda B. Mahesh Award of Excellence in Endocrinology, APS Endocrinology and Metabolism Section (2015). (\$2,000).

Awarded to an outstanding post doctoral scholar for their work in the field of endocrinology and submission to the Experimental Biology conference.

Campbell Award, APS Endocrinology and Metabolism Section (2014).

Award for conference abstract and poster presentation at Experimental Biology Conference.

Current Membership in Professional Organizations

American Physiological Society
American Society of Nutrition
Research Society of Alcoholism

Teaching

Courses Taught

Human Physiology II (PET6931)
Intermediary Metabolism of Nutrients II (HUN3226)

Estrogen and Muscle (HUN6906)
Readings in alcohol metabolism (HUN6248)
EtOH+Cancer Effects on Liver (BSC4900)
Lab Techniques (HUN4905)
The Science of Nutrition (HUN1201)
Food and Nutrition Seminar (HUN5930)
Food and Nutrition Seminar (HUN6930)
Seminar in Food and Nutrition Sciences (FOS6930)
Seminar in Movement Sciences (PET5930)
Seminar in Movement Sciences (PET6930)
Effects of Alcohol with Aging (HUN5906)
Applied Exercise Physiology (APK3110C)

Doctoral Committee Chair

Laudato, J. A., graduate. (2023).
Tice, A. L., graduate. (2023).
Bridges, B., doctoral student.
Murphy, R., doctoral student.

Doctoral Committee Member

Centner, A., graduate. (2022).
Sokolowski, C. M., graduate. (2022).
Dunlap, K. R., doctoral candidate.

Master's Committee Chair

Pradhan, D. M., graduate. (2022).
Bridges, B., graduate. (2022).
Lacy, H. N., graduate. (2022).
Ryan, M., graduate. (2021).

Research and Original Creative Work

Publications

Refereed Journal Articles

Steiner, J. (2023). SIRT1 induction in the skeletal muscle of male mice partially attenuates changes to whole-body metabolism in response to androgen deprivation. *Biochem Biophys Res Commun*, 682, 124-131. doi:10.1016/j.bbrc.2023.10.005

This work shows that decreases in muscle SIRT1 protein in males may partially contribute to the dysregulation of whole-body metabolism in response to androgen deprivation.

Gordon, B. S., Burns, P. K., Laskin, G. R., Dunlap, K. R., Boykin, J. R., Rossetti, M. L., Fukuda, D. H., & Steiner, J. L. (2023). SIRT1 Induction in the Skeletal Muscle of Male Mice Partially Preserves Limb Muscle Mass but not contractile force in response to androgen deprivation. *Journal of Physiology*, 601(17), Epub. doi:10.1113/JP284869

This work determines the role of SIRT1 in the changes in limb muscle mass and function following the manipulation of androgen hormones.

Laudato, J., Tice, A., Johnson, B., Russo, A., Rossetti, M., Bridges, Blake, Egan, A., Gordon, B., & Steiner, J. (2023). Impact of prior alcohol use on the subsequent development of cancer cachexia in male and female mice. *Alcohol: Clinical and Experimental Research*. Retrieved from <https://doi.org/10.1111/acer.15100> doi:10.1111/acer.15100

The purpose was to determine the effects of stopping alcohol prior to tumor establishment on cancer cachexia.

Dunlap, K., Steiner, J. L., Hickner, R., Chase, B. P., & Gordon, B. S. (2023). The duration of glucocorticoid treatment alters the anabolic response to high-force muscle contractions. *Journal of Applied Physiology*. Retrieved from <https://doi.org/10.1152/jappphysiol.00113.2023> doi:10.1152/jappphysiol.00113.2023

The purpose of this study was to assess whether high-force contractions initiate an anabolic response in glucocorticoid myopathic muscle. Co-authors:.

Bridges, B., Tice, A., Laudato, J., Gordon, B., & Steiner, J. (2023). Mealtime alcohol consumption suppresses skeletal muscle mTORC1 signaling in female mice. *Molecular and Cellular Endocrinology*. Retrieved from <https://doi.org/10.1016/j.mce.2023.111914> doi:10.1016/j.mce.2023.111914

Alcohol administered as part of the meal results in lower skeletal muscle mTORC1 signaling while subsequent models show that alcohol may influence this pathway across the day.

Tice, A., Laudato, J., Gordon, B., & Steiner, J. (2023). Chronic Alcohol Consumption Disrupts the Skeletal Muscle Circadian Clock in Female Mice. *Journal of Biological Rhythms*. Retrieved from <https://doi.org/10.1177/07487304221141464>
doi:10.1177/07487304221141464

These data indicate that alcohol disrupted the skeletal muscle core clock but whether these changes in the core clock are causative or a consequence of alcoholic myopathy requires future mechanistic confirmation.

Tice, A. L., Laudato, J. A., Fadool, D. A., Gordon, B. S., & Steiner, J. L. (2022). Acute binge alcohol alters whole-body metabolism and the time-dependent expression of skeletal muscle specific metabolic markers for multiple days in mice. *American Journal of Physiology-Endocrinology and Metabolism*. Retrieved from <https://doi.org/10.1152/ajpendo.00026.2022> doi:10.1152/ajpendo.00026.2022

Herein, we demonstrate that acute alcohol intoxication immediately alters whole body metabolism coinciding with rapid changes in the skeletal muscle macronutrient gene signature for at least 48 h post-binge and that this response diverges from hepatic effects and those of a fasted animal.

Ismaeel, A., Laudato, J. A., Fletcher, E., Papoutsis, E., Tice, A., Hwa, L. S., Miserlis, D., Jamurtas, A. Z., Steiner, J., & Koutakis, P. (2022). High-Fat Diet Augments the Effect of Alcohol on Skeletal Muscle Mitochondrial Dysfunction in Mice. *Nutrients*, *14*(5), 1016. Retrieved from <https://doi.org/10.3390/nu14051016> doi:10.3390/nu14051016

Consumption of a high fat diet may exacerbate the negative effects of alcohol on skeletal muscle mitochondrial health and oxidative stress.

Dunlap, K., Laskin Grant, Waddell, D., Black, A., Steiner, J., Vied, C., & Gordon, B. (2022). Aerobic exercise-mediated changes to the expression of glucocorticoid responsive genes in skeletal muscle differ across the day. *Molecular and Cellular Endocrinology*. doi:10.1016/j.mce.2022.111652

The objective was to define changes in the expression of glucocorticoid target genes in skeletal muscle in response to acute aerobic exercise at different times of day.

Tice, A. L., Laudato, J. A., Rossetti, M. L., Wolff, C. A., Esser, K. A., Lee, C., Lang, C. H., Vied, C., Gordon, B. S., & Steiner, J. L. (2021). Binge alcohol disrupts skeletal muscle core molecular clock independent of glucocorticoids. *American Journal of Physiology-Endocrinology and Metabolism*, *321*(5), E606-E620. Retrieved from <https://doi.org/10.1152/ajpendo.00187.2021> doi:10.1152/ajpendo.00187.2021

We demonstrated that alcohol acutely interrupts oscillation of skeletal muscle core clock genes, and this is neither a direct effect of ethanol on the skeletal muscle, nor an effect of elevated serum corticosterone, a major clock regulator.

Laudato, J., Tice, A., Call, J., Gordon, B., & Steiner, J. (2021). Effects of alcohol on skeletal muscle contractile performance in male and female mice. *PLOS ONE*. Retrieved from <https://doi.org/10.1371/journal.pone.0255946> doi:10.1371/journal.pone.0255946

This work demonstrated that in the presence of alcohol, both males and females exhibited significant declines in muscle force production and enhanced fatigue; however, following complete clearance of the alcohol, females recovered all functional parameters, while males did not.

Dunlap, K. R., Steiner, J. L., Rossetti, M. L., Kimball, S. R., & Gordon, B. S. (2021). A clinically relevant decrease in contractile force differentially regulates control of glucocorticoid receptor translocation in mouse skeletal muscle. *Journal of Applied Physiology*, 130(4), 1052-1063. Retrieved from <https://doi.org/10.1152%2Fjappphysiol.01064.2020>
doi:10.1152/jappphysiol.01064.2020

This work further defines the therapeutic parameters of skeletal muscle contractions to blunt glucocorticoid-induced atrophy.

Steiner, J., Johnson, B. R., Hickner, R., Ormsbee, M. J., Williamson, D. L., & Gordon, B. (2021). Adrenal Stress Hormone Action in Skeletal Muscle During Exercise: An Old Dog with New Tricks? *Acta Physiologica*.

The objective of this review was to briefly highlight the known impact of adrenal stress hormones on skeletal muscle metabolism and function (Old Dog), and critically examine the current evidence supporting a role for these endogenous hormones in mediating long-term training adaptations in skeletal muscle (New Tricks).

Krause, A. R., Speacht, T. A., Steiner, J. L., Lang, C. H., & Donahue. (2020). Mechanical loading recovers bone but not muscle lost during unloading. *NPJ Microgravity*.

This work determined that acute external mechanical loading facilitates the recovery of bone during reloading following HLS unloading, but this does not translate to a concomitant recovery of muscle mass.

Saracino, P. G., Rossetti, M. L., Steiner, J. L., & Gordon, B. S. (2019). Hormonal regulation of core clock gene expression in skeletal muscle following acute aerobic exercise. *Biochemical and biophysical research communications*, 508(3), 871—876. Retrieved from <https://doi.org/10.1016/j.bbrc.2018.12.034> doi:10.1016/j.bbrc.2018.12.034

These data show that adrenal stress hormones signal through REDD1 to regulate skeletal muscle gene expression, specifically those of the core clock, following acute aerobic exercise.

Mekheal, M., Steiner, J. L., & Lang, C. H. (2018). Acute alcohol prevents the refeeding-induced decrease in autophagy but does not alter the increased protein synthetic response in heart. *Alcohol (Fayetteville, N.Y.)*, 73, 79—88. Retrieved from <https://doi.org/10.1016/j.alcohol.2018.04.005> doi:10.1016/j.alcohol.2018.04.005

These data indicate that acute ethanol prevents the normally observed inhibition of autophagy seen after refeeding, while the mTOR-dependent increase in protein synthesis remains largely unaltered by alcohol.

Steiner, J. L., & Lang, C. H. (2018). Ethanol acutely antagonizes the refeeding-induced increase in mTOR-dependent protein synthesis and decrease in autophagy in skeletal muscle. *Molecular and cellular biochemistry*. Retrieved from <https://doi.org/10.1007/s11010-018-3488-4> doi:10.1007/s11010-018-3488-4

These data suggest that ethanol can acutely prevent the normally observed mTOR-dependent increase in protein synthesis and reduction in autophagy in response to nutrient stimulation, but does not appear to acutely alter proteasome activity.

Crowell, K. T., Moreno, S., Steiner, J. L., Coleman, C. S., Soybel, D. I., & Lang, C. H. (2018). Temporally Distinct Regulation of Pathways Contributing to Cardiac Proteostasis During

the Acute and Recovery Phases of Sepsis. *Shock (Augusta, Ga.)*, 50(6), 616—626. Retrieved from <https://doi.org/10.1097/SHK.0000000000001084>
doi:10.1097/shk.0000000000001084

These data demonstrate a temporally distinct homeostatic shift in the cardiac proteostatic response to acute infection and recovery.

Rossetti, M. L., Steiner, J. L., & Gordon, B. S. (2018). Increased mitochondrial turnover in the skeletal muscle of fasted, castrated mice is related to the magnitude of autophagy activation and muscle atrophy. *Molecular and cellular endocrinology*, 473, 178—185. Retrieved from <https://doi.org/10.1016/j.mce.2018.01.017> doi:10.1016/j.mce.2018.01.017

These data identify a novel relationship between mitochondrial turnover in the fasted state with autophagy activation and muscle atrophy following androgen depletion.

Speacht, T. L., Krause, A. R., Steiner, J. L., Lang, C. H., & Donahue, H. J. (2018). Combination of hindlimb suspension and immobilization by casting exaggerates sarcopenia by stimulating autophagy but does not worsen osteopenia. *Bone*, 110, 29—37. Retrieved from <https://doi.org/10.1016/j.bone.2018.01.026> doi:10.1016/j.bone.2018.01.026

This work explored the relationship between osteopenia and sarcopenia during hindlimb unloading induced muscle loss.

Gordon, B. S., Steiner, J. L., Rossetti, M. L., Qiao, S., Ellisen, L. W., Govindarajan, S. S., Eroshkin, A. M., Williamson, D. L., & Coen, P. M. (2017). REDD1 induction regulates the skeletal muscle gene expression signature following acute aerobic exercise. *American journal of physiology. Endocrinology and metabolism*, 313(6), E737—E747. Retrieved from <http://europepmc.org/articles/PMC5814598> doi:10.1152/ajpendo.00120.2017

Steiner, J. L., & Lang, C. H. (2017). Alcoholic Cardiomyopathy: Disrupted Protein Balance and Impaired Cardiomyocyte Contractility. *Alcoholism, clinical and experimental research*, 41(8), 1392—1401. Retrieved from <http://europepmc.org/articles/PMC5522635>
doi:10.1111/acer.13405

Steiner, J. L., & Lang, C. H. (2017). Etiology of alcoholic cardiomyopathy: Mitochondria, oxidative stress and apoptosis. *The international journal of biochemistry & cell biology*, 89, 125—135. Retrieved from <http://europepmc.org/articles/PMC5536333>
doi:10.1016/j.biocel.2017.06.009

Rossetti, M. L., Steiner, J. L., & Gordon, B. S. (2017). Androgen-mediated regulation of skeletal muscle protein balance. *Molecular and cellular endocrinology*, 447, 35—44. Retrieved from <http://europepmc.org/articles/PMC5407187> doi:10.1016/j.mce.2017.02.031

Steiner, J. L., & Lang, C. H. (2017). Alcohol, Adipose Tissue and Lipid Dysregulation. *Biomolecules*, 7(1). Retrieved from <http://europepmc.org/articles/PMC5372728>
doi:10.3390/biom7010016

Steiner, J. L., Fukuda, D. H., Rossetti, M. L., Hoffman, J. R., & Gordon, B. S. (2017). Castration alters protein balance after high-frequency muscle contraction. *Journal of applied*

- physiology* (Bethesda, Md. : 1985), 122(2), 264—272. Retrieved from <http://europepmc.org/articles/PMC5338601> doi:10.1152/jappphysiol.00740.2016
- Crowell, K. T., Steiner, J. L., Coleman, C. S., & Lang, C. H. (2016). Decreased Whole-Body Fat Mass Produced by Chronic Alcohol Consumption is Associated with Activation of S6K1-Mediated Protein Synthesis and Increased Autophagy in Epididymal White Adipose Tissue. *Alcoholism, clinical and experimental research*, 40(9), 1832—1845. Retrieved from <http://europepmc.org/articles/PMC5009010> doi:10.1111/acer.13159
- Gordon, B. S., Liu, C., Steiner, J. L., Nader, G. A., Jefferson, L. S., & Kimball, S. R. (2016). Loss of REDD1 augments the rate of the overload-induced increase in muscle mass. *American journal of physiology. Regulatory, integrative and comparative physiology*, 311(3), R545—57. Retrieved from <http://europepmc.org/articles/PMC5142228> doi:10.1152/ajpregu.00159.2016
- Gordon, B. S., Steiner, J. L., Williamson, D. L., Lang, C. H., & Kimball, S. R. (2016). Emerging role for regulated in development and DNA damage 1 (REDD1) in the regulation of skeletal muscle metabolism. *American journal of physiology. Endocrinology and metabolism*, 311(1), E157—74. Retrieved from <http://europepmc.org/articles/PMC4967146> doi:10.1152/ajpendo.00059.2016
- Steiner, J. L., Kimball, S. R., & Lang, C. H. (2016). Acute Alcohol-Induced Decrease in Muscle Protein Synthesis in Female Mice Is REDD-1 and mTOR-Independent. *Alcohol and alcoholism (Oxford, Oxfordshire)*, 51(3), 242—250. Retrieved from <http://europepmc.org/articles/PMC4900151> doi:10.1093/alcalc/agv105
- Smith, K. R., Hussain, T., Karimian Azari, E., Steiner, J. L., Ayala, J. E., Pratley, R. E., & Kyriazis, G. A. (2016). Disruption of the sugar-sensing receptor T1R2 attenuates metabolic derangements associated with diet-induced obesity. *American journal of physiology. Endocrinology and metabolism*, 310(8), E688—E698. Retrieved from <http://europepmc.org/articles/PMC4835941> doi:10.1152/ajpendo.00484.2015
- Steiner, J. L., Crowell, K. T., Kimball, S. R., & Lang, C. H. (2015). Disruption of REDD1 gene ameliorates sepsis-induced decrease in mTORC1 signaling but has divergent effects on proteolytic signaling in skeletal muscle. *American journal of physiology. Endocrinology and metabolism*, 309(12), E981—94. Retrieved from <http://europepmc.org/articles/PMC4816198> doi:10.1152/ajpendo.00264.2015
- Steiner, J. L., Crowell, K. T., & Lang, C. H. (2015). Impact of Alcohol on Glycemic Control and Insulin Action. *Biomolecules*, 5(4), 2223—2246. Retrieved from <http://europepmc.org/articles/PMC4693236> doi:10.3390/biom5042223

- Steiner, J. L., Pruznak, A. M., Navaratnarajah, M., & Lang, C. H. (2015). Alcohol Differentially Alters Extracellular Matrix and Adhesion Molecule Expression in Skeletal Muscle and Heart. *Alcoholism, clinical and experimental research*, 39(8), 1330—1340. Retrieved from <http://europepmc.org/articles/PMC4702067> doi:10.1111/acer.12771
- Steiner, J. L., & Lang, C. H. (2015). Dysregulation of skeletal muscle protein metabolism by alcohol. *American journal of physiology. Endocrinology and metabolism*, 308(9), E699—712. Retrieved from <http://europepmc.org/articles/PMC4420901> doi:10.1152/ajpendo.00006.2015
- Steiner, J. L., & Lang, C. H. (2015). Sepsis attenuates the anabolic response to skeletal muscle contraction. *Shock (Augusta, Ga.)*, 43(4), 344—351. Retrieved from <http://europepmc.org/articles/PMC4359659> doi:10.1097/SHK.0000000000000304
- Steiner, J. L., Gordon, B. S., & Lang, C. H. (2015). Moderate alcohol consumption does not impair overload-induced muscle hypertrophy and protein synthesis. *Physiological reports*, 3(3). Retrieved from <http://europepmc.org/articles/PMC4393167> doi:10.14814/phy2.12333
- Steiner, J. L., & Lang, C. H. (2015). Alcohol intoxication following muscle contraction in mice decreases muscle protein synthesis but not mTOR signal transduction. *Alcoholism, clinical and experimental research*, 39(1), 1—10. Retrieved from <http://europepmc.org/articles/PMC4308817> doi:10.1111/acer.12600
- Farrag, M., Laufenberg, L. J., Steiner, J. L., Weller, G. E., Lang, C. H., & Ruiz-Velasco, V. (2015). Modulation of voltage-gated Ca²⁺ channels by G protein-coupled receptors in celiac-mesenteric ganglion neurons of septic rats. *PloS one*, 10(5), e0125566. Retrieved from <http://europepmc.org/articles/PMC4446366> doi:10.1371/journal.pone.0125566
- Steiner, J. L., & Lang, C. H. (2014). Alcohol impairs skeletal muscle protein synthesis and mTOR signaling in a time-dependent manner following electrically stimulated muscle contraction. *Journal of applied physiology (Bethesda, Md. : 1985)*, 117(10), 1170—1179. Retrieved from <http://europepmc.org/articles/PMC4233249> doi:10.1152/jappphysiol.00180.2014
- Steiner, J. L., Bardgett, M. E., Wolfgang, L., Lang, C. H., & Stocker, S. D. (2014). Glucocorticoids attenuate the central sympathoexcitatory actions of insulin. *Journal of neurophysiology*, 112(10), 2597—2604. Retrieved from <http://europepmc.org/articles/PMC4233268> doi:10.1152/jn.00514.2014
- Gordon, B. S., Steiner, J. L., Lang, C. H., Jefferson, L. S., & Kimball, S. R. (2014). Reduced REDD1 expression contributes to activation of mTORC1 following electrically induced muscle contraction. *American journal of physiology. Endocrinology and metabolism*, 307(8), E703—11. Retrieved from <http://europepmc.org/articles/PMC4200302> doi:10.1152/ajpendo.00250.2014

- McClellan, J. L., Steiner, J. L., Day, S. D., Enos, R. T., Davis, M. J., Singh, U. P., & Murphy, E. A. (2014). Exercise effects on polyp burden and immune markers in the ApcMin/+ mouse model of intestinal tumorigenesis. *International journal of oncology*, *45*(2), 861—868. Retrieved from <http://europepmc.org/articles/PMC4432723> doi:10.3892/ijo.2014.2457
- Steiner, J., Davis, J., McClellan, J., Guglielmotti, A., & Murphy, E. (2014). Effects of the MCP-1 synthesis inhibitor bindarit on tumorigenesis and inflammatory markers in the C3(1)/SV40Tag mouse model of breast cancer. *Cytokine*, *66*(1), 60—68. Retrieved from <http://europepmc.org/articles/PMC4419732> doi:10.1016/j.cyto.2013.12.011
- Steiner, J. L., Pruznak, A. M., Deiter, G., Navaratnarajah, M., Kutzler, L., Kimball, S. R., & Lang, C. H. (2014). Disruption of genes encoding eIF4E binding proteins-1 and -2 does not alter basal or sepsis-induced changes in skeletal muscle protein synthesis in male or female mice. *PloS one*, *9*(6), e99582. Retrieved from <http://europepmc.org/articles/PMC4063727> doi:10.1371/journal.pone.0099582
- Steiner, J., Davis, J., McClellan, J., Enos, R., Carson, J., Fayad, R., Nagarkatti, M., Nagarkatti, P., Altomare, D., Creek, K., & Murphy, E. (2014). Dose-dependent benefits of quercetin on tumorigenesis in the C3(1)/SV40Tag transgenic mouse model of breast cancer. *Cancer biology & therapy*, *15*(11), 1456—1467. Retrieved from <http://europepmc.org/articles/PMC4623114> doi:10.4161/15384047.2014.955444
- Day, S. D., Enos, R. T., McClellan, J. L., Steiner, J., Velázquez, K. T., & Murphy, E. (2013). Linking inflammation to tumorigenesis in a mouse model of high-fat-diet-enhanced colon cancer. *Cytokine*, *64*(1), 454—462. Retrieved from <http://europepmc.org/articles/PMC4826024> doi:10.1016/j.cyto.2013.04.031
- Steiner, J., Davis, J., McClellan, J., Enos, R., & Murphy, E. (2013). Effects of voluntary exercise on tumorigenesis in the C3(1)/SV40Tag transgenic mouse model of breast cancer. *International journal of oncology*, *42*(4), 1466—1472. Retrieved from <https://doi.org/10.3892/ijo.2013.1827> doi:10.3892/ijo.2013.1827
- McClellan, J. L., Davis, J. M., Steiner, J. L., Enos, R. T., Jung, S. H., Carson, J. A., Pena, M. M., Carnevale, K. A., Berger, F. G., & Murphy, E. A. (2012). Linking tumor-associated macrophages, inflammation, and intestinal tumorigenesis: role of MCP-1. *American journal of physiology. Gastrointestinal and liver physiology*, *303*(10), G1087—95. Retrieved from <http://europepmc.org/articles/PMC3517651> doi:10.1152/ajpgi.00252.2012
- Steiner, J. L., & Murphy, E. A. (2012). Importance of chemokine (CC-motif) ligand 2 in breast cancer. *The International journal of biological markers*, *27*(3), e179—85. Retrieved from <https://doi.org/10.5301/JBM.2012.9345> doi:10.5301/jbm.2012.9345
- McClellan, J. L., Davis, J. M., Steiner, J. L., Day, S. D., Steck, S. E., Carmichael, M. D., & Murphy, E. A. (2012). Intestinal inflammatory cytokine response in relation to

tumorigenesis in the Apc(Min/+) mouse. *Cytokine*, 57(1), 113—119. Retrieved from <http://europepmc.org/articles/PMC3367310> doi:10.1016/j.cyto.2011.09.027

Steiner, J. L., Murphy, E. A., McClellan, J. L., Carmichael, M. D., & Davis, J. M. (2011). Exercise training increases mitochondrial biogenesis in the brain. *Journal of applied physiology (Bethesda, Md. : 1985)*, 111(4), 1066—1071. Retrieved from <https://doi.org/10.1152/jappphysiol.00343.2011> doi:10.1152/jappphysiol.00343.2011

Murphy, E., Davis, J., Barrilleaux, T., McClellan, J., Steiner, J., Carmichael, M., Pena, M., Hebert, J., & Green, J. (2011). Benefits of exercise training on breast cancer progression and inflammation in C3(1)SV40Tag mice. *Cytokine*, 55(2), 274—279. Retrieved from <http://europepmc.org/articles/PMC3383660> doi:10.1016/j.cyto.2011.04.007

Steiner, J. L., A Curmaci, A., Patrie, J. T., Gaesser, G. A., & Weltman, A. (2009). Effects of carbohydrate supplementation on the RPE-blood lactate relationship. *Medicine and science in sports and exercise*, 41(6), 1326—1333. Retrieved from <https://doi.org/10.1249/MSS.0b013e3181967637> doi:10.1249/mss.0b013e3181967637

Presentations

Invited Presentations at Symposia

Steiner, J. (presented 2023). SEXUAL DIMORPHIC RESPONSE TO LONG TERM ALCOHOL USE IN AGING MICE. In Patricia Molina (Chair), *Alcohol: an accelerator of biological aging*. Presentation at the meeting of Research Society on Alcoholism, Bellevue, WA. (International)

Steiner, J. (presented 2019). Alcohol Induced Skeletal Muscle Dysfunction: Protein Synthesis and Beyond. In Liz Simon (Chair), *Alcohol mediated skeletal muscle metabolic dysfunction*. Presentation at the meeting of Research Society on Alcoholism, Minneapolis MN. (International)

Refereed Presentations at Conferences

Laudato, J., Tice, A., Bridges, B., Rossetti, M., Gordon, B. S., & Steiner, J. (presented 2023, June). *Chemotherapy Mitigates Muscular Fatigue In Cancer Cachexia But Is Ineffective During Chronic Alcohol Use*. Poster presentation at American College of Sports Medicine National Meeting, American College of Sports Medicine, Denver, Colorado. (International)

- Tice, A., Laudato, J., Rossetti, M., Gordon, B., & Steiner, J. (presented 2023, June). *Chronic alcohol ingestion impairs exercise effects on muscle clock while blunting exercise-induced adaptations*. Poster presentation at ACSM National Conference, American College of Sports Medicine, Denver, Colorado. (International)
- Laudato, J., Tice, A., Bridges, B., Rossetti, M., Gordon, B. S., & Steiner, J. (presented 2023, May). *Alcohol Consumption Worsens mTOR Signaling and Prevents Preservation of Muscle Atrophy by Chemotherapy During Cancer Cachexia*. Poster presentation at Advances in Skeletal Muscle Biology in Health and Disease, UF myology Institute, Gainesville, FL. (International)
- Bridges, B., Tice, A., Laudato, J., Rossetti, M., & Steiner, J. (presented 2023, May). *Chronic Alcohol Consumption reduces Muscle Force and Fatigue Recovery in Aged Female, but not Male mice*. Poster presentation at Advances in Skeletal Muscle Biology In Health and Disease Conference, UF myology Institute, Gainesville, FL. (International)
- Tice, A., Laudato, J., Rossetti, M., Gordon, B., & Steiner, J. (presented 2023, March). *Chronic Alcohol Consumption Impairs Aerobic Exercise-Induced Adaptations to Skeletal Muscle*. Presentation at FSU Graduate Research Showcase, FSU- College of Health and Human Sciences, Tallahassee, FL. (Local)
- Tice, A., Laudato, J., Rossetti, M., Gordon, B., & Steiner, J. (presented 2023, March). *Chronic Alcohol May Mimic Exercise Effects on Muscle Clock Genes in Female Mice*. Poster presentation at Advances in Skeletal Muscle Biology In Health and Disease Conference, UF myology Institute, Gainesville, FL. (International)
- Egan, A., Laudato, J., Tice, A., Lima, M., Rossetti, M., Bridges, B., Gordon, B., & Steiner, J. L. (presented 2023, February). *Effects of Prior Alcohol Consumption with Chemotherapy on Cancer Cachexia*. Poster presentation at Florida Undergraduate Research Conference, Florida Undergraduate Research Association, Miami, Florida. (State)
- Egan, A., Laudato, J., Tice, A., Lima, M., Rossetti, M., Bridges, B., Gordon, B., & Steiner, J. L. (presented 2023, February). *Effects of Prior Alcohol Consumption with Chemotherapy on Cancer Cachexia*. Poster presentation at Florida Undergraduate Research Conference, Florida Undergraduate Research Association, Miami, Florida. (State)
- Lima, M., Laudato, J., Tice, A., Egan, A., Rossetti, M., Bridges, B., Gordon, B., & Steiner, J. L. (presented 2023, February). *Interaction of alcohol use and chemotherapy treatment on cancer cachexia in female mice*. Poster presentation at Advances in Skeletal Muscle Biology In Health and Disease Conference, UF myology Institute, Gainesville, FL. (International)
- Jessup, M., Tice, A., Steiner, J. L., & Wang, Y. (presented 2023, February). *Prenatal Alcohol Exposure and Brain Development*. Poster presentation at College of Medicine Research Fair, FSU, Tallahassee, FL. (State)

- Steiner, J., Bridges, B., Tice, A., & Gordon, B. (presented 2023). *Long-term, Low dose alcohol intake decreases absolute but not specific muscle force in a sex-dependent manner in aged mice*. Poster presentation at Advances in Skeletal Muscle Biology In Health and Disease Conference, UF myology Institute, Gainesville, FL. (International)
- Tice, A., Gordon, B., & Steiner, J. L. (presented 2022, June). *Acute alcohol intoxication differentially alters fat metabolism genes in skeletal muscle and liver*. Poster presentation at Research Society on Alcoholism Annual Meeting, Research Society on Alcoholism, Orlando, FL. (International)
- Tice, A., Gordon, B., & Steiner, J. L. (presented 2022, June). *Acute alcohol intoxication differentially alters fat metabolism genes in skeletal muscle and liver*. Poster presentation at Research Society on Alcoholism Annual Meeting, Research Society on Alcoholism, Orlando, FL. (International)
- Tice, A., Laudato, J., Gordon, B., & Steiner, J. (presented 2022, May). *Alcohol stimulates antioxidant gene expression in skeletal muscle in a time dependent manner*. Poster presentation at Experimental Biology, American Physiological Society, Philadelphia, PA. (International)
- Dunlap, K., Laskin Grant, Waddell, D., Black, A., Steiner, J., Vied, C., & Gordon, B. (presented 2022, May). *Glucocorticoids differentially regulate the skeletal muscle transcriptome in response to acute aerobic exercise at different times of day*. Poster presentation at Experimental Biology, American Physiological Society, Philadelphia, PA. (International)
- Lima, M., Rossetti, M., Laudato, J., Bridges, B., Gordon, B. S., & Steiner, J. (presented 2022, May). *Low-Dose Alcohol Consumption Throughout Chemotherapy Does Not Amplify Muscle Wasting*. Poster presentation at Florida State University Undergraduate Research Symposium, FSU, Tallahassee, FL. (Local)
- Tice, A., Laudato, J., Bridges, B., Rossetti, M., Gordon, B. S., & Steiner, J. (presented 2022, May). *Prior Alcohol Use does not Enhance Skeletal Muscle Atrophy and Force Decrements Induced by Cancer Cachexia*. Poster presentation at Experimental Biology, American Physiological Society, Philadelphia, PA. (International)
- Egan, A., Laudato, J., Bridges, B., Tice, A., Rossetti, M., Herling, K., & Steiner, J. (presented 2022, April). *Effects of Alcohol Consumption on Cancer Cachexia*. Poster presentation at Florida State University Undergraduate Research Symposium, FSU, Tallahassee, FL. (Local)
- Laudato, J., Tice, A., Rossetti, M., Bridges, B., Gordon, B. S., & Steiner, J. (presented 2022, March). *Discontinuation of Chronic Alcohol Consumption Preserves Skeletal Muscle Mass and Body Weight but does not Preserve Force Production*. Presentation at FSU Graduate Research Showcase, FSU- College of Health and Human Sciences, Tallahassee, FL. (Local)

- Tice, A., Laudato, J., Gordon, B., & Steiner, J. (presented 2022, February). *Alcohol intoxication stimulates antioxidant gene expression in skeletal muscle in a time dependent manner*. Presentation at FSU Graduate Research Showcase, FSU- College of Health and Human Sciences, Tallahassee, FL. (Local)
- Laudato, J., Gordon, B., & Steiner, J. L. (presented 2021, June). *No Effects of Alcohol on Skeletal Muscle Clock Genes in C2C12 myotubes*. Poster presentation at Research Society on Alcoholism Annual Meeting, Research Society on Alcoholism, Virtual. (International)
- Tice, A., Laudato, J., Fadool, D., Gordon, B., & Steiner, J. (presented 2021, June). *The effects of acute alcohol intoxication on skeletal muscle substrate metabolism measured around the clock*. Poster presentation at Research Society on Alcoholism Annual Meeting, Research Society on Alcoholism, Virtual. (International)
- Laudato, J., Tice, A., Rossetti, M., & Steiner, J. (presented 2021, May). *Alcohol Worsens Cancer Cachexia and Anabolic Signaling in C26 Tumor Bearing Mice*. Poster presentation at Experimental Biology, American Physiological Society, Virtual. (International)
- Tice, A., Laudato, J., Gordon, B., & Steiner, J. (presented 2021, April). *Chronic Alcohol Suppresses Skeletal Muscle Molecular Clock*. Poster presentation at Experimental Biology, American Physiological Society, Virtual. (International)
- Laudato, J., Tice, A., Dunlap, K., Keith, Z., & Steiner, J. (presented 2020, June). *Chronic Alcohol Consumption in Female Mice yields Strain Dependent Differences in Muscle Atrophy*. Presentation at American College of Sports Medicine National Meeting, American College of Sports Medicine, San Francisco, CA. (International)
- Laudato, J., Tice, A., Dunlap, K., Keith, Z., & Steiner, J. (presented 2020, May). *Dietary Composition Exacerbates Sex Differences in Skeletal Muscle Myopathy following Chronic Alcohol Intake*. Presentation at Experimental Biology, American Physiological Society, San Diego, CA. (International)
- Tice, A., Gordon, B., & Steiner, J. L. (presented 2020, May). *Drinking 'Off' the Clock: Effects of Binge Alcohol on the Skeletal Muscle Core Clock*. Poster presentation at Experimental Biology, American Physiological Society, San Diego, CA. (International)
- Steiner, J., Tice, A., Laudato, J., & Johnson, B. (presented 2020, May). *Novel Binge Drinking Model Causes Perturbations in Muscle Metabolism with Refeeding*. Poster presentation at Experimental Biology, American Physiological Society, San Diego, CA. (International)
- Steiner, J., Vied, C., & Lang, C. (presented 2019, May). *Unique Skeletal Muscle Gene Expression Signature Induced by Acute Alcohol Intoxication in mice*. Poster presentation at Experimental Biology, American Physiological Society, Orlando, FL. (International)

Invited Lectures and Readings of Original Work

Steiner, J. (2022, October). *Alcohol and Aging in Mice: Friend or Foe?* Delivered at Institute for Successful Longevity, Virtual at FSU, Tallahassee, Fl. (Local)

Talk was part of the monthly Brown Bag Series hosted by ISL.

Contracts and Grants

Contracts and Grants Funded

Steiner, J. (Dec 2022–Dec 2023). *Influence of obesity and/or gut microbiome on alcohol enhanced cancer cachexia*. Funded by NIP- FSU. Total award \$10,000.

Gordon, Bradley S (Co-PI), & Steiner, Jennifer (PI). (Sep 2022–Aug 2023). *Impact of Alcohol on Aging Skeletal Muscle*. Funded by National Institute on Alcohol. (1R03AA030408-01). Total award \$100,000.

Steiner, Jennifer (Co-PI), & Tice, Abigail Lynn (PI). (Jul 2022–Jun 2023). *The potential protective effects of daily exercise against alcohol-induced disruptions to muscle clock oscillation*. Funded by American College of Sports Medicine. (22-01619). Total award \$5,000.

Wang, Yuan (PI), & Steiner, Jennifer (Co-PI). (May 2022–Apr 2024). *MDS: A Novel Role of Fragile X Proteins in Fetal Alcohol Spectrum Disorder*. Funded by FSU CRC. (None). Total award \$25,000.

Steiner, J. (2022–2022). *UROP Materials Grant- for Arthur Egan*. Funded by FSU. Total award \$500.

Steiner, J., & Nagpal, R. (May 2021–May 2022). *Effects of Alcohol on Aging-Related Sarcopenia: Role of the Gut Microbiome*. Funded by FSU- Institute of Successful Longevity. Total award \$15,500.

Steiner, J. (2021–2022). *The McKnight Junior Faculty Development Fellowship Award*. Funded by Florida Education Fund. Total award \$15,000.

Kim, Jeong-Su (Co-PI), Delp, Michael D (PI), Gordon, Bradley S (Co-PI), Singh, Prashant (Co-PI), Ledermann, Thomas (Co-PI), Berryman, Claire Elizabeth (Co-PI), Hennigar, Stephen R (Co-PI), & Steiner, Jennifer (Co-PI). (Jan 2020–Jan 2024). *Effects of Simulated Microgravity and Partial Unloading on Organ Systems of the Body*. Funded by National Aeronautics & Space Administration. (80NSSC19K1599). Total award \$298,000.

Fadool, Debra A (Co-PI), Lee, Choogon (Co-PI), Spector, Alan C (Co-PI), Williams, Diana L (Co-PI), Delp, Michael D (Co-PI), Hammock, Elizabeth Anne Dunn (Co-PI), Delp, Judy

Muller (Co-PI), Gordon, Bradley S (Co-PI), Singh, Prashant (Co-PI), Hennigar, Stephen R (Co-PI), Parvatiyar, Michelle Anne Stegemeyer (Co-PI), La Favor, Justin D (Co-PI), Storace, Douglas A (Co-PI), & Steiner, Jennifer (PI). (Jan 2020–Apr 2020).

EIEG:Purchase of EchoMRI to Assess Body Composition in Mice, Rats and Tissue Specimens. Funded by FSU CRC. (None). Total award \$70,000.

Steiner, Jennifer (PI). (May 2019–Aug 2019). *FYAP:Effects of Alcohol on Skeletal Muscle Strength and Function*. Funded by FSU CRC. (None). Total award \$20,000.

Steiner, J. (Apr 2019–Mar 2022). *Impact of Alcohol on Cancer Comorbidities*. Funded by Florida Department of Health. Total award \$732,238.

Steiner, Jennifer (PI). (Dec 2018–Dec 2019). *PG:Effects of Alcohol on Skeletal Muscle Loss During Cancer*. Funded by FSU CRC. (None). Total award \$13,000.

Steiner, Jennifer (PI). (Aug 2018–Aug 2022). *Startup - J. Steiner*. Funded by FSU. (None). Total award \$58,334.

Contracts and Grants Denied

Steiner, J. (2023). *Impact of Obesity and the gut microbiome on cancer cachexia*. Submitted to Pfizer.

Steiner, J. (2022). *Interaction of the biome with cancer cachexia*. Submitted to Florida Department of Health.

Steiner, J. (2022). *Impact of Cannabidiol (CBD) and Alcohol on Aging Skeletal Muscle*. Submitted to Medical Marijuana clinical outcomes research.

Steiner, J. (2020). *Novel Role of FMRP in Fetal Alcohol Spectrum Disorder Across Multiple Tissues*. Submitted to NIH.

UH2 grant mechanism.

Steiner, Jennifer (PI). (Mar 2019). *Untitled Proposal*. Submitted to Allen Foundation, Inc.

Steiner, J. (2018). *Impact of Alcohol on Cancer Comorbidities*. Submitted to NIH-NIAAA. R15 application.

Service

Florida State University

FSU University Service

Member, Animal Research Advisory Committee (2021–2024).

FSU College Service

Judge, College of Human Sciences Research Showcase (2020).

FSU Department Service

Member, Graduate Director Committee (2022–present).

Assists graduate director with various tasks and decisions.

Member, Faculty Search Committee (2022).

Sports Nutrition.

Member, Faculty Search Committee (2022).

Nutrition.

Member, Faculty Search Committee (2021).

Member, Faculty Search Committee (2020).

The Profession

Guest Editing for Refereed Journals

Steiner, J. (Ed.). (2019). Topic: Sepsis: Nutritional Treatment and its Physiological Implications [Special Issue]. *Nutrients*.

Guest Reviewer for Refereed Journals

Alcohol Research: Current Reviews (2022–present).

Alcohol and Alcoholism (Sep 2018–present).

Alcoholism: Clinical and Experimental Research (Sep 2018–present).

American Journal of Drug and Alcohol Abuse (Sep 2018–present).

Biomolecules (Sep 2018–present).

International Journal of Environmental Research and Public Health (Sep 2018–present).

Journal of Cachexia and Sarcopenia (Sep 2018–present).

Medicine Science and Sports Exercise (Sep 2018–present).

Nutrients (Sep 2018–present).

Physiological Genomics (Sep 2018–present).

Physiological Reports (Sep 2018–present).

Scientific Reports (Sep 2018–present).

Southern Medical Journal (Sep 2018–present).

Chair of a Symposium

Steiner, J., & Romero, D. (Chair). (2022). *Endocrinology and Metabolism Awards*. Symposium conducted at the meeting of American Physiological Society.

Steiner, J., & Romero, D. (Chair). (2021). *Endocrinology and Metabolism Awards Lecture*. Symposium conducted at the meeting of American Physiological Society.

Steiner, J. (Chair). (2017). *Kickstart your funding: Looking beyond the NIH and NSF*. Symposium conducted at the meeting of American Physiological Society.

Trainee Advisory Committee Symposium.

Steiner, J., & Yosten, G. (Chair). (2016). *Metabolic Consequences of Exercise*. Symposium conducted at the meeting of American Physiological Society.

At Experimental Biology Conference- Featured Topic.

Steiner, J. (Chair). (2016). *Sex differences in Health and Disease*. Symposium conducted at the meeting of American Physiological Society.

Trainee Advisory Committee organized Featured Topic.

Reviewer or Panelist for Grant Applications

NIH (2023).

AA-1 Biomedical Research Review Subcommittee.

NIH (2022).

Special Emphasis Panel- ZAA1 DD (00).

NIH (2020).

April 30, 2020 - Program grant review panel member – ZAA1 JJ(65).

Service to Professional Associations

Member of Physiology Summit Leadership Committee, Physiology Summit Leadership Committee, American Physiological Society (2024–2026).

Committee responsible for finding speakers and developing sessions for the upcoming conference hosted by APS.

Awards Chair, American Physiological Society- Endocrinology and Metabolism Section (2020–2023).

- Puts out calls for award applications
winner selection
awards information.

- Organizes and oversees scoring of applications and
- Liaison between APS personnel and Committee about

Member, Animal Care and Use Committee- American Physiological Society (2020–2022).

-Committee reviews and addresses issues related to animal welfare in research, scientific policy, and institutional regulations for animal use.

Abstract Reviewer, Nutrition Meeting 2020: reviewed 16 abstracts, American Society of Nutrition (2020).

Abstract Reviewer, Nutrition Meeting 2019: reviewed 17 abstracts, American Society of Nutrition (2019).

Secretary and Treasurer, American Physiological Society- Endocrinology and Metabolism Section (2017–2019).

- Designed and produced bi-annual newsletter to be sent out to section
Monitored spending and award money.

Trainee representative to Endocrinology and Metabolism Section, American Physiological Society- Trainee Advisory Committee (2014–2017).

-Organize symposiums for annual Experimental Biology meeting
(undergraduate, graduate student and post-doctoral fellow) outreach and educational programs
liaison to Educational Committee of American Physiological Society

-Develop and implement trainee
-Serve as
-Communicate and address the

needs of trainees.

The Community

Interim Graduate Director, Serving the Department of Health, Nutrition and Human Sciences as the graduate director, FSU (2024–present).