

Professional Experience

Assistant Professor of Exercise Physiology

Aug 2025 – Present

Troy University
College of Health Sciences
School of Allied Health
Troy, AL

Strength and Conditioning Program Coordinator

Aug 2025 – Present

Troy University
College of Health Sciences
School of Allied Health
Troy, AL

T32 Post-doctoral Fellow

May 2024 – Aug 2025

Interdisciplinary Training in Pathobiology and Rehabilitation Medicine
NIH National Center for Medical Rehabilitation Research
School of Medicine, Division of Gerontology, Geriatrics,
and Palliative Care
Center for Exercise Medicine
University of Alabama in Birmingham
Birmingham, AL

- Clinical study design, recruitment, and implementation
- Completion of administrative duties related to ethical review
- Development of an independent line of research
- Assist with center of exercise medicine biological sample collection and preparation
- Facilitate muscle sample collections within UAB critical care units

Post-doctoral Associate

August 2022 – May 2024

Esser Lab, Department of Physiology and Aging University
of Florida
Gainesville, FL

- Engaged with research duties related to applied and molecular assessment of skeletal muscle, RNA, and circadian physiology.
- Created experimental designs using *in-situ* muscle stimulation as a model for resistance₁

training

- Performed Husbandry duties related to pre-clinical research experiments
- Assisted other post-doctoral researchers in performing circadian experiments, editing manuscripts, editing NIH grants, and planning experimental designs
- Mentored Graduate and Undergraduate students

Graduate Teaching and Research Assistant

January 2020- August 2022

Molecular and Applied Science Laboratory, Department of
Kinesiology
Auburn University, Auburn, AL

- Taught 6 credit hours of senior level courses per semester
- Primary strength and conditioning specialist – evaluated experimental designs, research training validity, and led strength testing assessments
- Engage in applied and molecular exercise physiology, strength and conditioning, and muscle physiology research
- Helped perform collection of biological samples from humans
- Assisted other PhD student with applied and wet lab experiments.
- Mentored undergraduate and master student

Assistant Strength Coach

August 2017- May 2018

USA Team Handball
Auburn Olympic Training Site, Auburn, AL

- Monitor strength and conditioning sessions for male and female athletes
- Ensure efficacy and safety of lifting technique
- Worked one-on-one with new athletes to prepare them for the physical demands of practice.

Undergraduate Volunteer and Research Intern

August 2016- December 2019

Molecular and Applied Science Laboratory Auburn
University, Auburn, AL

- Assisted with training of trained and untrained research participants to ensure adherence to experimental design and safety.
- Performed wet lab assessments with graduate students.
- Assisted with literature review for manuscripts
- Assisted with preparations for muscle sample collections.

Education

Doctor of Philosophy in Exercise Science

August 2022

Auburn University, Auburn, AL GPA: 3.76

Master of Science in Exercise Science

December 2019

Auburn University, Auburn, AL GPA: 4.0

Bachelor of Science

December 2017

Major: Fitness, Performance, and Conditioning

Auburn University, Auburn, AL GPA: 3.6

Publications

Published

Agyin-Birikorang, A., Lennon, S., Smith, K. S., Van Der Pol, W., Smith, M. A., **Sexton, C. L.**, Lamb, D. A., Young, K. C., Mobley, C. B., & Huggins, K. W. (2025). Fecal Microbiota and Associated Metabolites are Minimally Affected by Ten Weeks of Resistance Training in Younger and Older Adults. *Sports*, 13(4), 98.

Coelho-Junior, H. J., Marzetti, E., **Sexton, C. L.**, Wu, K., Mankowski, R., Anton, S. D., Leeuwenburgh, C., & Picca, A. (2024). Mitochondrial quality control measures, systemic inflammation, and lower-limb muscle power in older adults: a PROMPT secondary analysis. *J Nutr Health Aging*, 28(12), 100408. <https://doi.org/10.1016/j.jnha.2024.100408>

Beausejour, J. P., Knowles, K. S., Pagan, J. I., Rodriguez, J. P., Sheldon, D., Ruple, B. A., Plotkin, D. L., Smith, M. A., Godwin, J. S., **Sexton, C. L.**, McIntosh, M. C., Kontos, N. J., Libardi, C. A., Young, K., Roberts, M. D., & Stock, M. S. (2024). The effects of resistance training to near volitional failure on motor unit recruitment during neuromuscular fatigue. *PeerJ*, 12, e18163. <https://doi.org/10.7717/peerj.18163>

Ruple, B. A., Vann, C. G., **Sexton, C. L.**, Osburn, S. C., Smith, M. A., Godwin, J. S., Mumford, P. W., Stock, M. S., Roberts, M. D., & Young, K. C. (2024). Peripheral quantitative computed tomography is a valid imaging technique for tracking changes in skeletal muscle cross-sectional area. *Clin Physiol Funct Imaging*, 44(5), 407-414. <https://doi.org/10.1111/cpf.12885>

Mattingly, M. L., Ruple, B., **Sexton, C. L.**, Godwin, J., McIntosh, M. C., Smith, M. A., Plotkin, D. L., Michel, J. M., Anglin, D. A., & Kontos, N. J. (n.d.). Resistance training in humans and mechanical overload in rodents do not elevate muscle protein lactylation Short title: Protein lactylation and muscle hypertrophy. *Frontiers in Physiology*, 14, 1281702.

Godwin, J. S., **Sexton, C. L.**, Kontos, N. J., Ruple, B. A., Willoughby, D. S., Young, K. C., Mobley, C. B., & Roberts, M. D. (2023). Extracellular matrix content and remodeling markers do not differ in college-aged men classified as higher and lower responders to resistance training. *Journal of Applied Physiology* (Bethesda, Md.: 1985), 134(3), 731–741. <https://doi.org/10.1152/jappphysiol.00596.2022>

McIntosh, M. C., **Sexton, C. L.**, Godwin, J. S., Ruple, B. A., Michel, J. M., Plotkin, D. L., Ziegenfuss, T. N., Lopez, H. L., Smith, R., Dwaraka, V. B., Sharples, A. P., Dalbo, V. J., Mobley, C. B., Vann, C.

G., & Roberts, M. D. (2023). Different Resistance Exercise Loading Paradigms Similarly Affect Skeletal Muscle Gene Expression Patterns of Myostatin-Related Targets and mTORC1 Signaling Markers. *Cells*, *12*(6), 898. <https://doi.org/10.3390/cells12060898>

Mesquita, P. H. C., Godwin, J. S., Ruple, B. A., **Sexton, C. L.**, McIntosh, M. C., Mueller, B. J., Osburn, S. C., Mobley, C. B., Libardi, C. A., Young, K. C., Gladden, L. B., Roberts, M. D., & Kavazis, A. N. (2023). Resistance training diminishes mitochondrial adaptations to subsequent endurance training in healthy untrained men. *The Journal of Physiology*, *601*(17), 3825–3846. <https://doi.org/10.1113/JP284822>

Ruple, B. A., Plotkin, D. L., Smith, M. A., Godwin, J. S., **Sexton, C. L.**, McIntosh, M. C., Kontos, N.J., Beausejour, J. P., Pagan, J. I., Rodriguez, J. P., Sheldon, D., Knowles, K. S., Libardi, C. A., Young, K. C., Stock, M. S., & Roberts, M. D. (2023). The effects of resistance training to near failure on strength, hypertrophy, and motor unit adaptations in previously trained adults. *Physiological Reports*, *11*(9), e15679. <https://doi.org/10.14814/phy2.15679>

Sexton, C. L., Godwin, J. S., McIntosh, M. C., Ruple, B. A., Osburn, S. C., Hollingsworth, B. R., Kontos, N. J., Agostinelli, P. J., Kavazis, A. N., Ziegenfuss, T. N., Lopez, H. L., Smith, R., Young, K. C., Dwaraka, V. B., Frugé, A. D., Mobley, C. B., Sharples, A. P., & Roberts, M. D. (2023). Skeletal Muscle DNA Methylation and mRNA Responses to a Bout of Higher versus Lower Load Resistance Exercise in Previously Trained Men. *Cells*, *12*(2), 263. <https://doi.org/10.3390/cells12020263>

Smith, M. A., **Sexton, C. L.**, Smith, K. A., Osburn, S. C., Godwin, J. S., Beausejour, J. P., Ruple, B. A., Goodlett, M. D., Edison, J. L., Fruge, A. D., Robinson, A. T., Gladden, L. B., Young, K. C., & Roberts, M. D. (2023). Molecular predictors of resistance training outcomes in young untrained female adults. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *134*(3), 491–507. <https://doi.org/10.1152/jappphysiol.00605.2022>

Ruple, B. A., Mesquita, P. H. C., Godwin, J. S., **Sexton, C. L.**, Osburn, S. C., McIntosh, M. C., Kavazis, A. N., Libardi, C. A., Young, K. C., & Roberts, M. D. (2022). Changes in vastus lateralis fibre cross-sectional area, pennation angle and fascicle length do not predict changes in muscle cross-sectional area. *Experimental Physiology*, *107*(11), 1216–1224. <https://doi.org/10.1113/EP090666>

Ruple, B. A., Smith, M. A., Osburn, S. C., **Sexton, C. L.**, Godwin, J. S., Edison, J. L., Poole, C. N., Stock, M. S., Fruge, A. D., Young, K. C., & Roberts, M. D. (2022). Comparisons between skeletal muscle imaging techniques and histology in tracking midhigh hypertrophic adaptations following 10 wk of resistance training. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *133*(2), 416–425. <https://doi.org/10.1152/jappphysiol.00219.2022>

Vann, C. G., **Sexton, C. L.**, Osburn, S. C., Smith, M. A., Haun, C. T., Rumbley, M. N., Mumford, P. W., Montgomery, N. T., Ruple, B. A., McKendry, J., Mcleod, J., Bashir, A., Beyers, R. J., Brook, M. S., Smith, K., Atherton, P. J., Beck, D. T., McDonald, J. R., Young, K. C., ... Roberts, M. D. (2022). Effects of High-Volume Versus High-Load Resistance Training on Skeletal Muscle Growth and Molecular Adaptations. *Frontiers in Physiology*, *13*, 857555. <https://doi.org/10.3389/fphys.2022.857555>

Fox, C. D., Mesquita, P. H. C., Godwin, J. S., Angleri, V., Damas, F., Ruple, B. A., **Sexton, C. L.**, Brown, M. D., Kavazis, A. N., Young, K. C., Ugrinowitsch, C., Libardi, C. A., & Roberts, M. D. (2021). Frequent Manipulation of Resistance Training Variables Promotes Myofibrillar Spacing Changes in Resistance-Trained Individuals. *Frontiers in Physiology*, *12*, 773995. <https://doi.org/10.3389/fphys.2021.773995>

- Ruple, B. A., Godwin, J. S., Mesquita, P. H. C., Osburn, S. C., **Sexton, C. L.**, Smith, M. A., Ogletree, J. C., Goodlett, M. D., Edison, J. L., Ferrando, A. A., Fruge, A. D., Kavazis, A. N., Young, K. C., & Roberts, M. D. (2021). Myofibril and Mitochondrial Area Changes in Type I and II Fibers Following 10 Weeks of Resistance Training in Previously Untrained Men. *Frontiers in Physiology*, *12*, 728683. <https://doi.org/10.3389/fphys.2021.728683>
- Ruple, B. A., Godwin, J. S., Mesquita, P. H. C., Osburn, S. C., Vann, C. G., Lamb, D. A., **Sexton, C. L.**, Candow, D. G., Forbes, S. C., Frugé, A. D., Kavazis, A. N., Young, K. C., Seaborne, R. A., Sharples, A. P., & Roberts, M. D. (2021). Resistance training rejuvenates the mitochondrial methylome in aged human skeletal muscle. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, *35*(9), e21864. <https://doi.org/10.1096/fj.202100873RR>
- Sexton, C. L.**, Smith, M. A., Smith, K. S., Osburn, S. C., Godwin, J. S., Ruple, B. A., Hendricks, A. M., Mobley, C. B., Goodlett, M. D., Frugé, A. D., Young, K. C., & Roberts, M. D. (2021). Effects of Peanut Protein Supplementation on Resistance Training Adaptations in Younger Adults. *Nutrients*, *13*(11), 3981. <https://doi.org/10.3390/nu13113981>
- Vann, C. G., Morton, R. W., Mobley, C. B., Vechetti, I. J., Ferguson, B. K., Haun, C. T., Osburn, S. C., **Sexton, C. L.**, Fox, C. D., Romero, M. A., Roberson, P. A., Oikawa, S. Y., McGlory, C., Young, K. C., McCarthy, J. J., Phillips, S. M., & Roberts, M. D. (2021). An intron variant of the GLI family zinc finger 3 (GLI3) gene differentiates resistance training-induced muscle fiber hypertrophy in younger men. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, *35*(5), e21587. <https://doi.org/10.1096/fj.202100113RR>
- Vann, C. G., Osburn, S. C., Mumford, P. W., Roberson, P. A., Fox, C. D., **Sexton, C. L.**, Johnson, M.-R., Johnson, J. S., Shake, J., Moore, J. H., Millevoi, K., Beck, D. T., Badisa, V. L. D., Mwashote, B. M., Ibeanusi, V., Singh, R. K., & Roberts, M. D. (2020). Skeletal Muscle Protein Composition Adaptations to 10 Weeks of High-Load Resistance Training in Previously-Trained Males. *Frontiers in Physiology*, *11*, 259. <https://doi.org/10.3389/fphys.2020.00259>

In Review

- Sexton, C.L.**, Merez-Perez, S., Papanikolaou, K., Kaminski, T.M., Nowacka-Chmielewska, M., Rodak, P., Lin, Y., Buford, T.W., Morris, P.E., Englund, D.A., Mankowski, R.T., *The Role of Adipose Tissue in Critical Illness-Induced Skeletal Muscle Wasting – New Considerations for Treatment Approaches* Submitted to Journal of Applied Physiology - 03/31/25

In Preparation

- Sexton, C.L.**, Merez-Perez, S., Papanikolaou, K., Lin, Y., Buford, T.W., Morris, P.E., Englund, D.A., Mankowski, R.T. *Methods paper - Senescence as a link to a chronic bioenergetic dysfunction in the critical illness-induced physical function loss and the effect of age* (expected submission May 2025 - Target Journal undecided)
- Mueller, B., Fox, C.D., Parry, H.A., Mesquita, H.C., Vann, C.G., Ruple, B.A., **Sexton, C.L.**, Godwin, J.S., McIntosh, M.M., Beck, D.T., Young, K.C., Phillips, S.M., Kavazis, A.N., Roberts, M.D. *Skeletal muscle mitochondrial marker responses to a single bout and six weeks of high load versus high volume resistance training in previously trained men.* (Expected Submission April 2025) Target Journal Undecided

Sexton, C.L., Knaus, K.R., Viggars, M.R., Douglas, C.M., , McCulloch, A., Esser, K.A. (expected submission 2025) Skeletal muscle regional transcriptomic response to simulated resistance training in female mice. Target journal not yet decided

Rola S. Zeidan, Carolina Abrahan, **Casey Sexton**, Shannon Sykes, Fang-Chi Hsu, Heather Kates, Timothy Garrett, Stephanie E. Wohlgemuth, Yi Lin, Christiaan Leeuwenburgh, Stephen D. Anton, Robert T. Mankowski (Expected submission 2025) *Metabolomic Analysis of The Impact of Curcumin Supplementation on Physical Function in Moderately Active Older Adults with Low-Grade Inflammation*. Target Journal not yet decided

Invited Seminars

ICAR seminar series Fall 2025 – Title TBD
Oct 10th, 2025

Invited Presentations at International Conference

Wu Tsai Human Performance Alliance Symposium- Invited short presentation/ abstract
Sexton, C.L., Viggars, M.R., Douglas, C.M., Esser, K.A.
Title: Specificity of Contraction: Molecular Signatures of Endurance and Resistance Exercise

Published Abstracts and Poster Presentations Local, Regional, National, and International Conferences

Knaus, K. R., Viggars, M.R., **Sexton, C.L.**, McCulloch, A.D., Esser, K.A. (2025) *3D Modeling Characterization of Regional Mechanical Stimuli of Mouse Dorsiflexor Muscles During Resistance Exercise*. International Society of Biomechanics Meeting (Submitted)

Mueller, Breanna J.; **Sexton, Casey L.**; Godwin, Joshua S.; McIntosh, Mason C.; Ruple, Bradley A.; Kontos, Nicholas J.; Young, Kaelin C.; Fruge, Andrew D.; Mobley, Christopher B.; Roberts, Michael D.; and Kavazis, Andreas N. FACSM (2024) "MITOCHONDRIAL MRNA ACUTE RESPONSE TO BOUTS OF HIGH- AND LOW-LOAD RESISTANCE TRAINING," International Journal of Exercise Science: Conference Proceedings: Vol. 16: Iss. 3, Article 110. Available at: <https://digitalcommons.wku.edu/ijesab/vol16/iss3/110>

McIntosh, M., **Sexton, C.**, Godwin, J., Ruple, B., Osburn, S., Michel, J., Plotkin, D., Mobley, C., & Roberts, M. (2023). *TRANSIENT RESPONSES OF MYOSTATIN SIGNALING MARKERS TO ACUTE BOUTS OF RESISTANCE TRAINING*. 16(2), 14.

McIntosh, M., **Sexton, C.**, Godwin, J., Ruple, B., Ziegenfuss, T., Lopez, H., Smith, R., Dwaraka, V., Sharples, A., & Vann, C. (2023). Different resistance exercise loading paradigms similarly affect methylation status and mRNA expression patterns of myostatin-related genes in skeletal muscle. *Physiology*, 38(S1), 5730417.

Mesquita, P., Godwin, J., Ruple, B., **Sexton, C.**, McIntosh, M., Osburn, S., Mueller, B., Kontos, N., Libardi, C., & Young, K. (2023). *EFFECTS OF RESISTANCE TRAINING ON MITOCHONDRIAL*

- Mueller, B., Mesquita, P., Ruple, B., Godwin, J., **Sexton, C.**, Osburn, S., McIntosh, M., Libardi, C., Young, K., & Roberts, M. (2023). *A COMPARISON OF TECHNIQUES ASSESSING THE MORPHOLOGICAL CHARACTERISTICS OF SKELETAL MUSCLE FIBERS*. 16(2), 251.
- McIntosh, M., Libardi, C., Godwin, J., Smith, M., **Sexton, C.**, Ruple, B., Mobley, C., Young, K., Kavazis, A., & Roberts, M. (2022). RESISTANCE TRAINING INCREASES SARCOLEMMA PROTEIN CONCENTRATIONS IN UNTRAINED COLLEGE-AGED WOMEN: 2316. *Medicine & Science in Sports & Exercise*, 54(9S), 677.
- Ruple, B. A., Mesquita, P. H., Godwin, J. S., **Sexton, C. L.**, Osburn, S. C., McIntosh, M. C., Kavazis, A. N., Libardi, C. A., Young, K. C., & Roberts, M. D. (2022). Changes in vastus lateralis fibre cross-sectional area, pennation angle and fascicle length do not predict changes in muscle cross-sectional area. *Experimental Physiology*, 107(11), 1216–1224.
- Sexton, C.**, Godwin, J., Ruple, B., McIntosh, M., Osburn, S., Hollingsworth, B., Agostinelli, P., Kavazis, A., Zeigenfuss, T., & Lopez, H. (2022). Global DNA Methylation Status in Relation to Resistance Training with High vs Low Loads to Failure. *The FASEB Journal*, 36.
- Godwin, J. S., Ruple, B., **Sexton, C.**, Smith, M., Fruge, A., Young, K., Mobley, C., & Roberts, M. (2022). Extracellular Matrix Content and Remodeling Does Not Differ Between Higher- Responders and Lower-Responders to Resistance Training. *The FASEB Journal*, 36.
- McIntosh, M., **Sexton, C.**, Godwin, J., Ruple, B., Osburn, S., Hollingsworth, B., Agostinelli, P., Kavazis, A., Ziegenfuss, T., & Lopez, H. (2022). Effects of different types of resistance exercise failure training on the methylation status of genes that drive skeletal muscle hypertrophy. *The FASEB Journal*, 36.
- Ruple, B. A., Smith, M. A., Osburn, S. C., **Sexton, C. L.**, Godwin, J. S., Stock, M. S., Poole, C. N., Roberts, M. D., & Young, K. C. (2022). Agreement Between MRI, Ultrasound, and Histology in Detecting Size Changes of the Vastus Lateralis Following Resistance Training. *The FASEB Journal*, 36.
- Kirby, A., Woodie, L., **Sexton, C.**, Roberts, M., Young, K., & Greene, M. (2020, November). The Effect of Macronutrient Cycling on Metabolic Flexibility in the Presence of Excess Adiposity. In *OBESITY* (Vol. 28, pp. 166-166). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY.
- Fox, C. D., Vann, C. G., Osburn, S. C., **Sexton, C.**, Smith, M. A., Moore, J. H., Phillips, S. M., Young, K. C., Roberts, M. D. Effects of Six Weeks of Unilateral High-volume Versus High-intensity Resistance Training on Vastus Lateralis Muscle Morphology in Previously Trained, College-aged Males. *Medicine & Science in Sports & Exercise*, 52(7s):828, 2020.
- Sexton, C.**, Vann, C., Osburn, S., Smith, M., Rumbley, M., Beck D., Young K., Roberts, M. Effects of High-Load And High-Volume Resistance Training on Maximal Strength, Peak Torque, And Mean Torque. *Medicine & Science in Sports & Exercise*, 52(7s):213-214, 2020.
- Smith, M., Vann, C., **Sexton, C.**, Osburn, S., Beck D., McDonald, J., Roberts M., Young, K. High- Volume and High-Intensity Resistance Training Effects on Upper-Leg Lean Tissue Mass and Muscle Cross-Sectional Area. *Medicine & Science in Sports & Exercise*, 52(7s):19, 2020.
- Vann, C., **Sexton, C.**, Osburn S., Smith, M., Fox, C., Ferguson B., Ruple, B., Haun, C., Young, K., Beck, D., McDonald, J., Phillips, S., Roberts, M. Effects of High-Load Versus High-Volume Resistance

Training on Muscle Sarcoplasmic, Actin, And Myosin Protein Concentrations. *Medicine & Science in Sports & Exercise*, 52(7s):828-829, 2020.

Vann, C., Morton R., Ferguson, B., Osburn, S., **Sexton, C.**, Oikawa, S., McGlory, C., Young K., Phillips, S., Roberts, M. Targeted SNP interrogation to determine if select polymorphisms are associated with skeletal hypertrophy following 12 weeks of resistance training. *The FASEB Journal*, 34(S1):1-1, 2020

Sexton, C., Vann, C., Osburn, S., Roberson, P., Fox, C., Johnson, M, Shake, J., Roberts, M. *Fat-Free Mass and Knee Extensor Peak Torque at Pre are Predictive of Changes in Squat Max Following 10 Weeks of Moderate-to-low-volume, High-load Resistance Training in College Aged Men: A35* Proceedings of the Sixteenth International Society of Sports Nutrition (ISSN) Conference and Expo. *J Int Soc Sports Nutr* **17**, 23 (2020). <https://doi.org/10.1186/s12970-020-00352-x>

Gilliam A., Woodie L., **Sexton C.**, Patodia S., Song E., Roberts M., Young K., Greene M., Kirby A. Effects of macronutrient cycling on energy expenditure and spontaneous activity in obese rats. Poster presented at VCOM Auburn Research Day, 2020. Awarded 2nd place in the biomedical research competition.

Patodia S., Woodie L., **Sexton C.**, Gilliam A., Song E., Roberts M., Young K., Greene M., Kirby A. The effect of macronutrient cycling on serum markers of metabolic syndrome. Poster presented at VCOM Auburn Research Day, 2020. Awarded 3rd place in the biomedical research competition.

Song E., Woodie L., **Sexton C.**, Gilliam A., Patodia S., Roberts M., Young K., Greene M., Kirby A. Effect of macronutrient cycling on metabolic flexibility in obese rats. Poster presented at VCOM Auburn Research Day, 2020.

Gilliam A., Woodie L., **Sexton C.**, Patodia S., Song E., Roberts M., Young K., Greene M., Kirby A. The effect of macronutrient cycling on metabolic phenotype and markers of metabolic syndrome in a western diet-induced rat model of obesity. Orally presented at ALOMA 6th Annual Science & Management CME Conference, 2020.

DeGregory V., Woodie L., **Sexton C.**, Nakashima J., Shealey H., Roberts M., Young K., Greene M., Kirby A. The effect of macronutrient cycling on respiratory quotient in a high-fat Western diet-induced rat model of obesity. Poster presented at VCOM Auburn Research Day, 2019

Nakashima J., Woodie L., **Sexton C.**, DeGregory V., Shealey H., Roberts M., Young K., Greene M., Kirby A. The effect of diet quality on sleep and activity in a high-fat Western diet- induced rat model of obesity. Poster presented at VCOM Auburn Research Day, 2019

Fellowship

Interdisciplinary Training in Pathobiology and Rehabilitation Medicine

NIH National Center for Medical Rehabilitation Research

Center for Exercise Medicine

Mentoring Committee:

Robert Mankowski, PhD

Peter Morris, MD

Certifications

Certified Strength and Conditioning Specialist

2018- Present

National Strength and Conditioning Association

Phlebotomy Certification

2021

Auburn University

pQCT scanning system certified

2021

Bone Diagnostic LLC

Skills

Wet Lab Techniques

- Bioluminescent recording •BCAs •Wester blotting •PCR •Immunohistochemistry, Histology, and the preparation of muscle for cryosectioning •Protein, DNA, and RNA isolations
- Deuterium oxide administration • Enzyme activity assays •Management of hazardous materials

Applied Laboratory Techniques

- In-vivo* muscle e-stim (mouse model) •Isokinetic dynamometry •Dynamic maximum strength testing
- Phlebotomy •DEXA scans •pQCT scans •ultrasound imaging •rodent dissections, husbandry, and body composition assessment •Aseptic surgical technique •Hands-on first aid training (no certification)

Additional Skills

- Electronic management of data •Microsoft office advanced proficiency •Statistical analysis using SPSS, Jamovi, GraphPad, and Excel •Interpersonal communication skills •Laboratory ‘handyman’ skills •Ability to lift and move heavy objects in workplace setting

Courses Taught

Undergraduate

KINE 3873 – Legal and Illegal Sports Supplements KINE 4600

– Strength Development

KINE 4630 – Strength and Conditioning Prep

Grants Applied For

Title: *A unique molecular interrogation of the muscle transcriptome following a bout of high load versus low load resistance exercise (2020-2021)*

Funding Agency: The National Strength and Conditioning Association Foundation Total Costs:
\$15,000- **Not Funded**
Role: Study Coordinator **Site:**
Auburn University

