

CURRICULUM VITAE

Petey W. Mumford

Lindenwood University
School of Health Sciences
209 South Kingshighway3 0 287

St. Charles, MO 63301

Phone: (636) 949-4779

Pmumford@lindenwood.edu

ACADEMIC QUALIFICATIONS

- Ph.D.** Exercise Science, Auburn University, Auburn, Alabama. 2019
- M.Ed.** Exercise Science, Wichita State University, Wichita, Kansas. 2015
- B.S.** General Management, Kansas State University, Manhattan, Kansas. 2012

EXPERIENCE erTnET /P -7 0() swT18f422

EXS 31600: Spring 2020

Physiology of Exercise Lab

Auburn University

KINE 3873: Fall 2016

Legal and Illegal Sports Supplements

KINE 3400: Fall 2016

Health Promotion in the Workplace

KINE 3681: Spring 2017

Physiology of Exercise Lab

PHED 1003: Spring 2017

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2. **Mumford PW**, Romero MA, Osburn SC, Roberson PA, Mobley CB, Vann CG, Brown MD, Kavazis AN, Young KC, Roberts MD. Skeletal muscle LINE-1 retrotransposon activity is upregulated in older versus younger rats. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*. 2019. PMID: 31188650
3. Parry HA, Mobley CB, **Mumford PW**, Romero MA, Haun CT, Zhang Y, Roberson PA, Zempleni J, Ferrando AA, Vechetti IJ, McCarthy JJ, Young KC, Roberts MD, Kavazis AN. Bovine Milk Extracellular Vesicles (EVs) Modification Elicits Skeletal Muscle Growth in Rats. *Frontiers in Physiology*. 2019. PMID: 31040795
4. Haun CT, Vann CG, Osburn SC, **Mumford PW**, Roberson PA, Romero MA, Fox CD, Johnson CA, Parry HA, Kavazis AN, Moon JR, Badsia VLD, Mwashote BM, Ibeanusi V, Young KC, Roberts MD. Muscle fiber hypertrophy in response to 6 weeks of high-volume resistance training in trained young men is largely attributed to sarcoplasmic hypertrophy. *PLOS ONE*. 2019. PMID: 31166954
5. Haun CT, Vann CG, Mobley CB, Osburn SC, **Mumford PW**, Roberson PA, Romero MA, Fox CD, Parry HA, Kavazis AN, Moon JR, Young KC, Roberts MD. Pre-training skeletal muscle fiber size and predominant fiber type best predict hypertrophic responses to 6 weeks of resistance training in previously trained young men. *Frontiers in Physiology* 2019. PMID: 30971942
6. Parry HA, Kephart WC, **Mumford PW**, Romero MA, Mobley CB, Zhang Y, Roberts MD, Kavazis AN. Ketogenic diet increases mitochondria volume in the liver and skeletal muscle without altering oxidative stress markers in rats. *Heliyon*. 2018. PMID: 30533548
7. Roberson PA, Romero MA, **Mumford PW**, Osburn SC, Haun CT, Vann CG, Kluess HA, Roberts MD. Protein supplementation throughout 10 weeks of progressive run training is not beneficial for time trial improvement. *Frontiers in Nutrition*. 2018. PMID: 30456213
8. McAdam JS, McGinnis KD, Beck DT, Haun CT, Romero MA, **Mumford PW**, Roberson PA, Young KC, Lohse KR, Lockwood CM, Roberts MD, Sefton JM. Effect of whey protein supplementation on physical performance and body composition in Army initial entry training soldiers. *Nutrients*. 2018. PMID: 30200582
9. **Mumford PW**, Kephart WC, Romero MA, Haun CT, Mobley CB, Osburn SC, Healy JC, Moore A, Pascoe DC, Ruffin WC, Beck DT, Martin JS, Roberts MD, Young KC. Effect of One Week Betalain-Rich Beetroot Concentrate Supplementation on Cycling Performance and Select Physiological Parameters. *Eur J Appl Physiol*. 2018. PMID: 30155761
10. Haun C, Vann C, Mobley C, Roberson P, Osburn S, Holmes H, **Mumford PW**, Romero M, Young K, Moon J, Gladden L, Arnold R, Israetel M, Newton A, Roberts M. Effects of

graded whey supplementation during extreme-volume resistance training. *Frontiers in Nutrition*. 2018. PMID: 30255024

11. Haun CT, Mobley CB, Vann CG, Romero MA, Roberson PA, **Mumford PW**, Kephart WC, Healy JC, Patel RK, Osburn SC, Beck DT, Lockwood CM, Roberts MD. Soy protein supplementation is not androgenic or estrogenic in college-aged men when combined with resistance exercise training. *Scientific Reports*. 2018. 12221. PMID: 30097662
12. Roberts MD, Haun CT, Mobley CB, **Mumford PW**, Romero MA, Roberson PA, Vann CG, McCarthy JJ. Physiological differences between low versus high skeletal muscle hypertrophic responders to resistance exercise training: current perspectives and future research directions. *Frontiers in Physiology*. 2018. PMID: 30022953
13. Roberts MD, Romero MA, Mobley CB, **Mumford PW**, Roberson PA, Haun CT, Vann CG, Osburn SC, Holmes HH, Greer RA, Lockwood CM, Parry HA, Kavazis AN. Skeletal muscle mitochondrial volume and myozenin-1 protein differences exist between high versus low anabolic responders to resistance training. *PeerJ*. 2018. 5338. PMID: 30065891
14. Martin JS, **Mumford PW**, Martin AM, Moore AN, Pascoe DD. Unilateral application of an external pneumatic compression therapy improves skin blood flow and vascular reactivity bilaterally. *PeerJ*. 2018. 4878. PMID: 29868282
15. **Mumford PW**, Romero MA, Mao X, Mobley CB, Kephart WC, Haun CT, Roberson PA, Young KC, Martin JS, Roberts MD. Cross-talk between androgen and Wnt signaling potentially contributes to age-related skeletal muscle atrophy in rats. *Journal of Applied Physiology*. 2018. 486-494. PMID: 29722624
16. Roberson PA, Haun CT, Mobley CB, Romero MA, **Mumford PW**, Young KC, Martin JS, Roberts MD. Skeletal Muscle Amino Acid Transporter and BCAT2 Expression Prior to and Following Interval Running or Resistance Exercise in Mode-Specific Trained Males. *Amino Acids*. 2018. 961-965. PMID: 29725856
17. Mobley CB, Haun CT, Roberson PA, **Mumford PW**, Kephart WC, Romero MA, Osburn SC, Vann CG, Lockwood CM, Robert MD. Biomarkers associated with low, moderate, and high skeletal muscle hypertrophy following 12 weeks of resistance training. *PLOS ONE*. 2018. 195203. PMID: 29621305
18. Kephart WC, Pledge CD, Roberson PA, **Mumford PW**, Romero MA, Mobley CB, Martin JS, Young KC, Lowery RP, Wilson JM, Huggins KW, Roberts MD. The Three-Month Effects of a Ketogenic Diet on Body Composition, Blood Parameters, and Performance Metrics in CrossFit Trainees: A Pilot Study. *Sports*. 2018. E1. PMID: 29910305

19. Romero MA, Mobley CB, Roberson PA, Haun CT, Kephart WC, **Mumford PW**, Healy JC, Beck DT, Young KC, Lockwood C, Martin JS, Roberts MD. Resistance exercise-mediated reductions in LINE-1 retrotransposon activity may drive increases in satellite

Safety of a Thermogenic Supplement in Addition to an Energy-Restricted Diet in Apparently Healthy Females. *J Diet Suppl.* 2017. 653-666. PMID: 28388294

27. Mobley CB, Holland AM, Kephart WC, **Mumford PW**, Lowery RP, Kavazis AN, Wilson JM, Roberts MD. Progressive resistance-loaded voluntary wheel running increases hypertrophy and differentially affects muscle protein synthesis, ribosome biogenesis, and proteolytic markers in rat muscle. *J Anim Physiol Anim Nutr (Berl).* 2017. 317-329. PMID: 28294417
28. Mobley CB, **Mumford PW**, McCarthy JJ, Miller ME, Young KC, Martin JS, Beck DT, Lockwood CM, Roberts MD. Whey protein-derived exosomes increase protein synthesis and hypertrophy in C2-C12 myotubes. *J Dairy Sci.* 2017. 48-64. PMID: 28341051
29. Wilborn CD, Outlaw JJ, **Mumford PW**, SL Urbina, S Hayward, MD Roberts, LW Taylor, CA Foster. A Pilot Study Examining the Effects of 8-Week Whey Protein versus Whey Protein Plus Creatine Supplementation on Body Composition and Performance Variables in Resistance-Trained Women. *Ann Nutr Metab.* 2016. 190-199. PMID: 27866187
30. Hyatt H, Kephart W, Holland AM, **Mumford PW**, Mobley CB, Lowery R, Roberts M*, Wilson J, Kavazis A. A ketogenic diet in rodents elicits improved mitochondrial adaptations in response to resistance exercise training compared to an isocaloric Western diet. *Frontiers in Physiology, section Exercise Physiology.* 2016. 533. PMID: 27877138
31. Mobley CB, **Mumford PW**, Kephart W, Conover C, Beggs L, Balaez A, Yarrow J, Borst

does not

7. Haun C, Vann C, Mobley C, Roberson P, Osburn S, Holmes H, **Mumford PW**, Romero M, Young K, Moon J, Gladden L, Arnold R, Israetel M, Newton A, Roberts M. Effects of graded whey supplementation during extreme-volume resistance training. 2018 Integrative Physiology of Exercise Meeting. San Diego, CA.
8. Pascoe D.D, McDaniel J.H, Roberts R.F., **Mumford PW.**, Taylor C.N. Case Studies: Abnormal hand temperature response resulting from exposure to varying environmental temperatures. 14th European Association of Thermology Congress "Thermology in Medicine: Clinical Thermometry and Thermal Imaging". July 2018
9. Parry HA, Kephart WC, **Mumford PW**, Romero MA, Haun CT, Mobley CB, Zhang Y, Roberts MD, Kavazis AN. Lifelong Ketogenic Diet Feeding Increases Longevity, But Does Not Alter Oxidative Stress Markers in Rats. 2018 ACSM Annual Meeting. Minneapolis, MN.
10. Haun CT, Mobley CB, Vann CG, Romero MA, Roberson PA, **Mumford PW**, Kephart WC, Healy JC, Patel RK, Osburn SC, Beck DT, Roberts MD. Soy Protein Supplementation is not Adipogenic or Estrogenic in Young Men When Combined with Resistance Training. 2018 ACSM Annual Meeting. Minneapolis, MN.
11. Romero MA, Mobley CB, Roberson PA, Haun omero uy p0.6 (r)-6 (t)4.3 ()22.1 (W [(S)2 (C)13. (s)-2.1

16. **Mumford PW**, Mobley CB, Kephart WC, Haun CT, Romero M, Mao X, Osburn SC, Young KC, Beck DT, Martin JS, Lowery RP, Wilson JM, Roberts MD. The Relationship Between Serum Testosterone and Skeletal Muscle Wnt Signaling Markers In 3-24-month Old Rats. ACSM's 64th Annual Meeting, 8th World Congress on Exercise is Medicine and World Congress on the Basic Science of Exercise and the Brain. Denver, CO. May 30-June 4, 2017.
17. Colquhoun RJ, Haun CT, **Mumford PW**, Roberson PA, Pascoe DD, Feeny MP, Young KC, Martin JS, Roberts MD, Muddle TWD, Riffe JJ, Luera MJ, Magrini MA, Mackey CS, Stock MS, Jenkins NDM, DeFreitas JM. The Effects of a Muscle Biopsy on Motor Unit Firing Properties. 2017 ACSM Annual Meeting. Denver, CO.
18. Kephart WC, **Mumford PW**, Solorzano D, Osburn SC, Patel RK, Anderson RG, Healy J, Moore A, Martin JS, Young KC, Lowery RP, Wilson JM, Roberts MD. Effects of Short-term Ketogenic Dieting or Ketone Salt Supplementation Lipogenic Gene Expression Adipose Tissue. 2017 ACSM Annual Meeting. Denver, CO.
19. Martin JS, **Mumford PW**, Haun CT, Roberson PA, Colquhoun RJ, Feeney MP, Luera MJ, Mackey CS, Muddle TW, Riffe JJ, Young KC, Pascoe DD, Defreitas JM, Jenkins NDM, Roberts MD. Effects of a Pre-Workout Supplement on Hyperemia Following Leg Extension Resistance Exercise at Different Intensities. 2017 ACSM Annual Meeting. Denver, CO.
20. Roberson PA, Kephart WC, Pledge C, **Mumford PW**, Huggins KW, Martin JS, Young KC, Lowery RP, Wilson JM, Roberts MD. The Physiological Effects of 12-weeks of Ketogenic Dieting While Cross-training. 2017 ACSM Annual Meeting. Denver CO.
21. Romero MA, Hyatt HW, Kephart WC, **Mumford PW**, Lowery RP, Wilson JM, Roberts MD, Kavazis A. The Effects of a Long-Term Ketogenic Diet on Molecular Markers of Cardiac Hypertrophy. 2017 Experimental Biology Annual Meeting. Chicago, IL.
22. Luera M, Muddle T, Haun CT, Colquhoun R, **Mumford PW**, Roberson P, Feeny M, DeFreitas J, Young K, Martin J, Roberts M, Jenkins N. Oxygenation of the vastus lateralis during high- versus low-load fatiguing leg extension exercise. 2017 NSCA National Conference. Las Vegas, NV.
23. Haun CT, **Mumford PW**, Hyde P, Fairman C, Kephart W, Beck DT, Moon J, Roberts M, Kendall K, Young K. Effects of a popular women's thermogenic supplement during an energy-restricted high protein diet on changes in body composition and clinical safety markers. 2016 13th Annual International Society of Sports Nutrition (ISSN) Conference. Tampa, FL.
24. Holland AM, Kephart W, **Mumford PW**, Mobley CB, Lowery R, Wilson J, Roberts M. Associations in body fat and liver triglyceride content with serum health markers in sedentary and exercised rats fed a ketogenic diet, Western diet or standard chow over a 6-week period. 2016 13th Annual International Society of Sports Nutrition (ISSN) Conference. Tampa, FL.

25. Kephart W, **Mumford PW**, Lowery R, Roberts M, Wilson J. The ketogenic diet improves rotarod performance in young and older rats. 2016 13th Annual International Society of Sports Nutrition (ISSN) Conference. Tampa, FL.
26. **Mumford PW**, Holland AM, Kephart W, Lowery R, Mobley CB, Patel R, Newton A, Beck D, Roberts M, Wilson J, Young K. Effects of a ketogenic diet with exercise on serum markers of bone metabolism, IGF-1 and femoral bone mass in rats. 2016 13th Annual International Society of Sports Nutrition (ISSN) Conference. Tampa, FL.
27. **Mumford PW**, Mobley CB, Kephart W, Haun C, Holland AM, Osburn S, Beck D, Martin J, Young K, Kavazis A, Lowery R, Wilson J, Roberts M. Markers of Muscle Protein Synthesis and Breakdown in Fast-twitch Skeletal Muscle of Rodents Aged 3 to 24 months. 100th Annual Experimental Biology Meeting. San Diego, CA, April 2-6, 2016.
28. Mobley CB, **Mumford PW**, Kephart W, Haun C, Holland AM, Osburn S, Beck D, Martin J, Young K, Kavazis A, Lowery R, Wilson J, Roberts M. Effects of Aging on Markers of Ribosome Biogenesis in Fast- and Slow-Twitch Skeletal Muscle in Rodents Aged 3 to 24 Months. 100th Annual Experimental Biology Meeting. San Diego, CA, April 2-6, 2016.
29. Kephart W, Holland AM, **Mumford PW**, Mobley CB, Lowery R, Roberts M, Wilson J. The Effects of Intermittent Ketogenic Dieting as well as Ketone Salt supplementation on Body Composition and Circulating Health Biomarkers in Exercising Rodents. 100th Annual Experimental Biology Meeting. San Diego, CA, April 2-6, 2016.
30. Haun C, **Mumford PW**, Mobley CB, Kephart W, Holland AM, Osburn S, Beck D, Martin J, Young K, Kavazis A, Lowery R, Wilson J, Roberts M. Markers of Muscle Protein Synthesis and Breakdown in Slow-twitch Skeletal Muscle of Rodents Aged 3 to 24 months. 100th Annual Experimental Biology Meeting. San Diego, CA. San Diego, CA, April 2-6, 2016.
31. Hyatt H, Mobley CB, Kephart W, Holland AM, **Mumford PW**, Lowery R, Roberts M, Wilson J, Kavazis A. Differences in Gastrocnemius mRNA expression in Sedentary and Chronically Resistance Trained Rats Fed a Standard Chow Diet, a Low-Carbohydrate Diet, or a Western Diet. 100th Annual Experimental Biology Meeting. San Diego, CA, April 2-6, 2016.
32. Holland AM, Kephart W, **Mumford PW**, Lowery R, Mobley CB, Healy J, Shake J, Patel R, Roberts M, Wilson J. The Effects of a Ketogenic Diet and Physical Activity on Adipose Tissue Characteristics. 100th Annual Experimental Biology Meeting. San Diego, CA, April 2-6, 2016.
33. Holland AM, Kephart W, Lowery R, **Mumford PW**, Mobley CB, McCloskey A, Shake J,

35. **Mumford PW**, Kephart W, McCloskey A, Holland AM, Shake J, Mobley CB, Young K, Moon J, Roberts M. Ten weeks of branched chain amino acid supplementation improves select performance and immunological variables in trained cyclists. 12

Wilson JM, Roberts MD. Effects of short-term ketogenic dieting or ketone salt supplementation on tissue ketone levels and tissue mRNA expression patterns related to oxidative stress defense. September 2016. Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL.

24. **Mumford PW**, Kephart W, Holland AM, Haun C, Mobley CB, Lowery R, Roberts M, Wilson J. Body composition responses to a six-week low-carbohydrate diet with resistance exercise and supplemental ketones in rodents. Southeastern Chapter of the American College of Sports Medicine Meeting. Greenville, SC. February 18-20, 2016.
25. Haun C, Kephart W, Holland AM, **Mumford PW**, Mobley CB, Fox C, McCloskey A, Shake J, Mesquita P, Kavazis A, Young K, Newton A, Lowery R, Wilson J, Roberts M. A low-carbohydrate diet with adequate protein does not impair the hypertrophic response to acute and chronic resistance exercise in rodents. Southeastern Chapter of the American College of Sports Medicine Meeting. Greenville, SC. February 18-20, 2016.
26. Kephart W, Holland AM, Lowery R, **Mumford PW**, Mobley CB, McCloskey A, Shake J, Mesquita P, Young K, Martin J, Beck D, McCullough D, Kavazis A, Roberts M, Wilson J. Six weeks of a low carbohydrate diet with or without exercise favorably alters hepatic NF- B signaling and serum markers related to overall health in rats. Southeastern Chapter of the American College of Sports Medicine Meeting. Greenville, SC. February 18-20, 2016.
27. Holland AM, Kephart W, Lowery R, **Mumford PW**, Mobley CB, McCloskey A, Shake J, Mesquita P, Kavazis A, Wilson J, Roberts M. The influence of a ketogenic diet and exercise on adipogenic and lipogenic markers in omental and subcutaneous fat pads of rats. Southeastern Chapter of the American College of Sports Medicine Meeting. Greenville, SC. February 18-20, 2016.
28. Haun C, Kephart W, Holland AM, **Mumford PW**, Mobley CB, Fox C, McCloskey A, Shake J, Mesquita P, Kavazis A, Young K, Newton A, Lowery R, Wilson J*, Roberts M* (*denotes co-PIs). Six weeks of a low carbohydrate diet with or without exercise favorably alters hepatic NF- B signaling and serum markers related to overall health in rats. 3rd Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL. Sept 25, 2015.
29. **Mumford PW**, Mobley CB, Martin J, Lockwood C, Roberts M. The anabolic response in C2C12 myotubes treated with whey protein is not attenuated with leucine transporter knockdown. 3rd Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL. Sept 25, 2015.
30. Hyatt H, Kephart W, Holland AM, **Mumford PW**, Mobley CB, Lowery R, Roberts M, Wilson J*, Kavazis A* (*denotes co-PIs). Skeletal muscle mitochondrial coupling in chronic resistance exercise rats fed three different diets. 3rd Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL. Sept 25, 2015.
31. Kephart W, Holland AM, Lowery R, **Mumford PW**, Mobley CB, McCloskey A, Shake J, Mesquita P, Young K, Martin J, Beck D, McCullough D, Kavazis A, Roberts M*, Wilson J* (*denotes co-PIs). Six weeks of a low carbohydrate diet with or without exercise favorably alters hepatic NF- B signaling and serum markers related to overall health in

rats. 3rd Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL. Sept 25, 2015.

32. Holland AM, Kephart W, Lowery R, **Mumford PW**, Mobley CB, McCloskey A, Shake J, Mesquita P, Kavazis A, Wilson J*, Roberts M* (*denotes co-PIs). The influence of a low carbohydrate diet and exercise on adipogenic, lipogenic, and nutrient partitioning markers in omental and subcutaneous fat pads of rats. 3rd Annual UAB Center for Exercise Medicine Symposium. Birmingham, AL. Sept 25, 2015.

STATISTICAL CONSULTING

Published Manuscripts

1. Martin JS, **Mumford PW**, Martin AM, Moore AN, Pascoe DD. Unilateral application of an external pneumatic compression therapy improves skin blood flow and vascular reactivity bilaterally. PeerJ. 2018 May.

Funding Agency: Florida A&M University
Total Costs: \$135,000-**Funded**
Role: Co-Coordinator
Site: Auburn University

Grant Title: Effects of a novel plant extract on cycling performance, oxygen consumption, hemodynamics and markers of red blood cell physiology (2016-2017)
Funding Agency: FutureCeuticals
Total Costs: \$137,845-**Funded**
Role: Coordinator
Site: Auburn University/VCOM-Auburn

Grant Title: The effects of a thermogenic aid on human acute and chronic metabolism markers (2015-2016)
Funding Agency: Maximum Human Performance
Total Costs: \$73,575-**Funded**
Role: Coordinator
Site: Auburn University

Grant Title: Acute effects of OxySport on lipolysis and basal metabolic rate, as well as chronic effects of OxySPORT on body composition in overweight, college-aged males. (2015-2016)
Funding Agency: MusclePharm Inc
Total Costs: \$82,250-**Funded**
Role: Coordinator
Site: Auburn University

Grant Title: Effects of aging and nutrition on various physiological systems. (2015-2016)
Funding Agency: University of Tampa and Human Longevity, Inc.
Total Costs: \$231,000-**Funded**
Role: Coordinator
Site: Auburn University

Grant Title: [no title], contract to assist in the dissemination of research. (2015)
Funding Agency: University of Mary Hardin-Baylor
Total Costs: \$1,600-**Funded**
Role: Coordinator
Site: Auburn University

Grant Title: [no title], contract to assist in the dissemination of research. (2015)
Funding Agency: University of Mary Hardin-Baylor
Total Costs: \$2,400-**Funded**
Role: Coordinator
Site: Auburn University

2018- Kids in Science, Auburn, Alabama
2017- Kids in Science, Auburn, Alabama
2016- Neon Vibe 5K, Auburn, Alabama
2015- Kids in Science, Auburn, Alabama

PROFESSIONAL REFERENCES

Dr. Michael Roberts

Associate Professor, School of Kinesiology
Director, Molecular and Applied Sciences Laboratory
Affiliate Research Professor, Edward Via College of Osteopathic Medicine – Auburn
Campus
Auburn University
mdr0024@auburn.edu
(334)-844-1925

Dr. Kaelin Young

Associate Professor
Department of Cell Bio and Physiology
Edward Via College of Osteopathic Medicine- Auburn Campus
Associate Director, Molecular and Applied Sciences Laboratory,
Auburn University
Kyoung@auburn.vcom.edu
(253)-255-5617

Dr. Michael Rogers

Professor, Department of Human Performance Studies
Graduate Coordinator, Exercise Science Program
Director, Center for Physical Activity and Aging
Chair, WSU Institutional Review Board
Wichita State University
Michael.Rogers@wichita.edu
(316) 978-5959

Dr. Dave Pascoe

Emeritus Professor
Former Assistant Director, School of Kinesiology
Former Director, Thermal and Infrared Laboratory
Former Director, Gastrointestinal Research Center
Auburn University
pascodd@auburn.edu
(334) 844-1619