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EDUCATION

Doctor of Philosophy (2003)
University of Florida, Gainesville, Florida

Master of Science (2001)
University of Florida, Gainesville, Florida

Bachelor of Science (1999)
Louisiana State University, Baton Rouge, Louisiana

Freshman Year (1996)
University of Maine, Orono, Maine

CURRENT POSITION

Wayne T. Smith Distinguished Professor
Auburn University – School of Kinesiology, Auburn, AL (Aug. 2022 – present)

PEER REVIEWED PUBLICATIONS

133. Mesquita PHC, Osburn SC, Godwin JS, Roberts MD, Kavazis AN. Effects of aging and long-term physical activity on mitochondrial physiology and redox state of the cortex and cerebellum of female rats. Physiol Rep. 10:e15542. 2022.

132. Yap KN, Andreasen VA, Williams AS, Yamada KY, Zikeli S, Kavazis AN, and Hood WR. The persistent effects of corticosterone administration during lactation on the physiology of maternal and offspring mitochondria. J Exp Biol. 225:jeb244171. 2022.

131. Ruple BA, Mesquita PHC, Godwin JS, Sexton CL, Osburn SC, McIntosh MC, Kavazis AN, Libardi CA, Young KC, and Roberts MD. Changes in vastus lateralis fibre cross-sectional area, pennation angle and fascicle length do not predict changes in muscle cross-sectional area. Exp Physiol. 107:1216-1224. 2022.

130. Osburn SC, Mesquita PHC, Neal FK, Rumbley MN, Holmes MT, Ruple BA, Mobley CB, Brown MD, McCullough DJ, Kavazis AN, and Roberts MD. Long-term voluntary wheel running effects on markers of long interspersed nuclear element-1 in skeletal muscle, liver, and brain tissue of female rats. Am J Physiol Cell Physiol. 323:C907-C919. 2022.

129. Niitepõld K, Parry HA, Harris NR, Appel AG, de Roode JC, Kavazis AN, and Hood WR. Flying on empty: Reduced mitochondrial function and flight capacity in food-deprived monarch butterflies. J Exp Biol. 225:jeb244431. 2022.

128. Finger JW Jr, Kelley MD, Hamilton MT, Zhang Y, Elsey RM, Mendonça MT, and Kavazis AN. Changes in antioxidant enzyme levels following capture in juvenile American Alligators (*Alligator mississippiensis*) are tissue dependent. Can. J. Zool. 100: 428-435. 2022.

127. Klabacka RL, Parry HA, Yap KN, Cook RA, Herron VA, Horne LM, Wolak ME, Maldonado JA, Fujita MK, Kavazis AN, Oaks JR, and Schwartz TS. Reduced mitochondrial respiration in hybrid asexual lizards. Am Nat. 199:719-728. 2022.

126. Finger JW Jr, Kelley MD, Zhang Y, Ka C, Hamilton MT, Elsey RM, Kavazis AN, and Mendonça MT. Relationships of brain glucocorticoid receptors and commonly used stress parameters with body condition of juvenile American alligators (*Alligator mississippiensis*). S Am J Herpetol. 23: 42-48. 2022.

125. Molina EM, Kavazis AN, Mendonça MT, and Akingbemi BT. Effects of different DDE exposure paradigms on testicular steroid hormone secretion and hepatic oxidative stress in male Long-Evans rats. Gen Comp Endocrinol. 317:113963. 2022.

124. Keesling R, Kavazis AN, Wax B, Miller MW, and Vickers B. A comparison of three different warm-ups on 800-meter running performance in elite division I track athletes – a pilot study. Int J Exerc Sci. 14:1400-1407. 2022.

123. Fox CD, Mesquita PHC, Godwin JS, Angleri V, Damas F, Ruple BA, Sexton CL, Brown MD, Kavazis AN, Young KC, Ugrinowitsch C, Libardi CA, and Roberts MD. Frequent manipulation of resistance training variables promotes myofibrillar spacing changes in resistance-trained individuals. Front Physiol. 12: 773995. 2021.

122. Ruple BA, Godwin JS, Mesquita PHC, Osburn SC, Sexton CL, Smith MA, Ogletree JC, Goodlett MD, Edison JL, Ferrando AA, Fruge AD, Kavazis AN, Young KC, and Roberts MD. Myofibril and mitochondrial area changes in type I and II fibers following 10 weeks of resistance training in previously untrained men. Front Physiol. 12:728683. 2021.

121. Parry HA, Randall RB, Hyatt HW, Hood WR, and Kavazis AN. Short and long-term effect of reproduction on mitochondrial dynamics and autophagy in rats. Heliyon. 7:e08070. 2021.

120. Mesquita PHC, Vann CG, Phillips SM, McKendry J, Young KC, Kavazis AN, and Roberts MD. Skeletal muscle ribosome and mitochondrial biogenesis in response to different exercise training modalities. Front Physiol. 12:725866. 2021.

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116. Parry HA, Yap KN, Hill GE, Hood WR, Gladden LB, Eddy M, and Kavazis AN. Development of a mobile mitochondrial physiology laboratory for measuring mitochondrial energetics in the field. J Vis Exp. 174. 2021.

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114. Zhang Y, Hill GE, Ge Z, Park NR, Taylor HA, Andreasen V, Tardy L, Kavazis AN, Bonneaud C, and Hood WR. Effects of a bacterial infection on mitochondrial function and oxidative stress in a songbird. Physiol Biochem Zool. 94:71-82. 2021.

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111. Finger JW Jr, Kelley MD, Zhang Y, Hamilton MT, Elsey RM, Mendonça MT, and Kavazis AN. Short-term capture stress and its effects on corticosterone levels and heat shock proteins in captive American alligators (*Alligator mississippiensis*). Can J Zool. 99:665-671. 2021.

110. Finger JW Jr, Kelley MD, Zhang Y, Hamilton MT, Elsey RM, Mendonça MT, and Kavazis AN. Antioxidant enzymes in destructible and non-destructible tissues in American alligators (*Alligator mississippiensis*). S Am J Herpetol. 20: 33-41. 2021.

109. Montalvo RN, Doerr V, Kwon OS, Talbert EE, Yoo JK, Hwang MH, Nguyen BL, Christou DD, Kavazis AN, and Smuder AJ. Protection against doxorubicin-induced cardiac dysfunction is not maintained following prolonged autophagy inhibition. Int J Mol Sci. 21:E8105. 2020.

108. Mesquita PHC, Lamb DA, Parry HA, Moore JH, Smith MA, Vann CG, Osburn SC, Fox CD, Ruple BA, Huggins KW, Fruge AD, Young KC, Kavazis AN, and Roberts MD. Acute and chronic effects of resistance training on skeletal muscle markers of mitochondrial remodeling in older adults. Physiol Rep. 8:e14526. 2020.

107. Park NR, Taylor HA, Andreasen VA, Williams AS, Niitepõld K, Yap KN, Kavazis AN, and Hood WR. Mitochondrial physiology varies with parity and body mass in the laboratory mouse (Mus musculus). J Comp Physiol B. 190:465-477. 2020.

106. Porcelli S, Rasica L, Ferguson BS, Kavazis AN, McDonald J, Hogan MC, Grassi B, and Gladden LB. Effect of acute nitrite infusion on contractile economy and metabolism in isolated skeletal muscle in situ during hypoxia. J Physiol. 598:2371-2384. 2020.

105. Lamb DA, Moore JH, Mesquita PHC, Smith MA, Vann CG, Osburn SC, Fox CD, Lopez HL, Ziegenfuss TN, Huggins KW, Goodlett MD, Fruge AD, Kavazis AN, Young KC, and Roberts MD. Resistance training increases muscle NAD+ and NADH concentrations as well as NAMPT protein levels and global sirtuin activity in middle-aged, overweight, untrained individuals. Aging (Albany NY). 12:9447-9460. 2020.

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101. Roberts MD, Mobley CB, Vann CG, Haun CT, Schoenfeld BJ, Young KC, and Kavazis AN. Synergist ablation-induced hypertrophy occurs more rapidly in the plantaris than soleus muscle in rats due to different molecular mechanisms. Am J Physiol Regul Integr Comp Physiol. 318:R360-R368. 2020.

100. Mota GR, Rightmire ZB, Martin JS, McDonald JR, Kavazis AN, Pascoe DD, and Gladden LB. Ischemic preconditioning has no effect on maximal arm cycling exercise in women. Eur J Appl Physiol. 120:369-380. 2020.

99. Vann CG, Roberson PA, Osburn SC, Mumford PW, Romero MA, Fox CD, Moore JH, Haun CT, Beck DT, Moon JR, Kavazis AN, Young KC, Badisa VLD, Mwashote BM, Ibeanusi V, Singh RK, and Roberts MD. Skeletal Muscle Myofibrillar Protein Abundance Is Higher in Resistance-Trained Men, and Aging in the Absence of Training May Have an Opposite Effect. Sports (Basel). 8:E7. 2020.

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94. Hood WR, Zhang Y, Taylor HA, Park NR, Beatty AE, Weaver RJ, Yap KN, and Kavazis AN. Prior reproduction alters how mitochondria respond to an oxidative event. J Exp Biol. 222:jeb195545. 2019.

93. Haun CT, Vann CG, Osburn SC, Mumford PW, Roberson PA, Romero MA, Fox CD, Johnson CA, Parry HA, Kavazis AN, Moon JR, Badisa VLD, Mwashote BM, Ibeanusi V, Young KC, and 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. 14:e0215267. 2019.

92. Parry HA, Mobley CB, Mumford PW, Romero MA, Haun CT, Zhang Y, Roberson PA, Zempleni J, Ferrando AA, Vechetti IJ Jr, McCarthy JJ, Young KC, Roberts MD, and Kavazis AN. Bovine milk extracellular vesicles (EVs) modification elicits skeletal muscle growth in rats. Front Physiol. 10:436. 2019.

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88. Hyatt HW, Zhang Y, Hood WR, and Kavazis AN. Changes in metabolism, mitochondrial function, and oxidative stress between female rats under nonreproductive and 3 reproductive conditions. Reprod Sci. 26:114-127. 2019.

87. Parry HA, Kephart WC, Mumford PW, Romero MA, Mobley CB, Zhang Y, Roberts MD, and Kavazis AN. Ketogenic diet increases mitochondria volume in the liver and skeletal muscle without altering oxidative stress markers in rats. Heliyon. 4:e00975. 2018.

86. Hood WR, Zhang Y, Mowry AV, Hyatt HW, and Kavazis AN. Life history trade-offs within the context of mitochondrial hormesis. Integr Comp Biol. 58:567-577. 2018.

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82. Koch RE, Kavazis AN, Hasselquist D, Hood WR, Zhang Y, Toomey MB, and Hill GE. No evidence that carotenoid pigments boost either immune or antioxidant defenses in a songbird. Nat Commun. 9:491. 2018.

81. Zhang Y, Humes F, Almond G, Kavazis AN, and Hood WR. A mitohormetic response to pro-oxidant exposure in the house mouse. Am J Physiol Regul Integr Comp Physiol. 314:R122-R134. 2018.

80. Smuder AJ, Sollanek KJ, Nelson WB, Min K, Talbert EE, Kavazis AN, Hudson MB, Sandri M, Szeto HH, and Powers SK. Crosstalk between autophagy and oxidative stress regulates proteolysis in the diaphragm during mechanical ventilation. Free Radic Biol Med. 115:179-190. 2018.

79. Mobley CB, Holland AM, Kephart WC, Mumford PW, Lowery RP, Kavazis AN, Wilson JM, and 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). 102:317-329. 2018.

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76. Finger JW Jr, Botero J, Zhang Y, Still SE, Hoffman AJ, Kavazis AN, Cristol DA, and Wada H. No effect of lifelong methylmercury exposure on oxidative status in zebra finches (*Taeniopygia guttata*): A demonstration of methylmercury-induced selection? Bull Environ Contam Toxicol. 99:668-672. 2017.

75. Kephart WC, Mumford PW, Mao X, Romero MA, Hyatt HW, Zhang Y, Mobley CB, Quindry JC, Young KC, Beck DT, Martin JS, McCullough DJ, D'Agostino DP, Lowery RP, Wilson JM, Kavazis AN, and

Roberts MD. The 1-week and 8-month effects of a ketogenic diet or ketone salt supplementation on multi-organ markers of oxidative stress and mitochondrial function in rats. Nutrients. 9:1019. 2017.

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69. Hyatt HW, Smuder AJ, Sollanek KJ, Morton AB, Roberts MD, and Kavazis AN. Comparative changes in antioxidant enzymes and oxidative stress in cardiac, fast twitch and slow twitch skeletal muscles following endurance exercise training. Int J Physiol Pathophysiol Pharmacol. 8:160-168. 2016.

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67. Hyatt HW, Kephart WC, Holland AM, Mumford P, Mobley CB, Lowery RP, Roberts MD, Wilson JM, and Kavazis AN. A ketogenic diet in rodents elicits improved mitochondrial adaptations in response to resistance exercise training compared to an isocaloric western diet. Front Physiol. 7:533. 2016.

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a low voluntary wheel running rat model performing three levels of physical activity. Physiol Rep. 3:e12619. 2015.

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50. Smuder AJ, Kavazis AN, Min K, and Powers SK. Doxorubicin-induced markers of myocardial autophagic signaling in sedentary and exercise trained animals. J Appl Physiol. 115:176-185. 2013.

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MAJOR GRANTS AND FUNDING

Title: Mitochondria dysfunction as a contributor to racial disparities in vascular health and hypertension
Role: Co-Investigator – (Austin T. Robinson, Principal Investigator)
Funding Agency: National Institutes of Health (2022 – 2025)

Title: A mobile mitochondria laboratory (AU MitoMobile) to lead the world in measuring bioenergetics in natural settings
Role: Co-Principal Investigator – (Geoffrey Hill and Wendy Hood Co-Principal Investigators)
Funding Agency: Presidential Awards for Interdisciplinary Research (PAIR) Program (2018 – 2021)

Title: RII Track-2 FEC-Genome to fitness: An analysis of the stress response in Peromyscus
Role: Co-Investigator – (Hippokratis Kiaris, Principal Investigator; Wendy R. Hood, Co-Principal Investigator)
Funding Agency: National Science Foundation (2017 – 2022)

Title: Effects of mitohormesis on reproduction and longevity
Role: Co-Investigator – (Wendy R. Hood, Principal Investigator)
Funding Agency: National Science Foundation (2015 – 2020)

Title: The mechanistic basis for improved metabolic health in females following lactation
Role: Co-Principal Investigator – (Wendy R. Hood, Co-Principal Investigator)
Funding Agency: National Institutes of Health (2015 – 2018)