

# **Leadership Curriculum Vitae**

## **James A. Carson**

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## **Summary**

*James Carson, Ph.D.*, is a Professor in the Department of Kinesiology & Sports Management at Texas A&M University. Before moving to Texas A&M, he served as Senior Associate Dean for Research and Graduate Studies in the College of Health Professions at the University of Tennessee Health Science Center in Memphis (UTHSC). He also served as Executive Director of the Tennessee Institute for Regenerative Medicine. He has been a tenured Professor in the Department of Physical Therapy at UTHSC and the Department of Exercise Science at the Arnold School of Public Health at the University of South Carolina (USC). While on the faculty at USC, he served as Department Chair and the Associate Director for the Center for Colon Cancer Research at USC. Dr. Carson is a physiologist who incorporates preclinical disease modeling with analysis using molecular biology, cell biology, physiology, and genetics techniques. He is the author of over 125 peer-reviewed muscle biology/physiology and exercise publications. The NIH and other federal agencies have funded his research through several mechanisms. He has been a regular grant review panel member for several federal funding agencies, including the NIH and Veterans Affairs. He is an Associate Editor for two journals. In his various administrative roles, he has been heavily involved in academic program growth, program restructuring, faculty recruitment, faculty mentorship and student mentorship in research.

## Education

- BS Business Administration, Insurance and Risk Management, The Ohio State University, Columbus, Ohio
- Ph.D. Exercise Science, College of Education, The Ohio State University, Columbus.

## Professional Training

Post-Doctoral Research Fellow, Dept. of Integrative Biology, Pharmacology, and Physiology, University of Texas Medical School, Houston. *Principal Investigator: Frank Booth Ph.D.* NRSA NIH Post-Doctoral Fellowship Awarded to James Carson

Post-Doctoral Research Fellow, Huffington Aging Center / Department of Cell Biology, Baylor College of Medicine, Houston, TX. *Principal Investigator: Robert J. Schwartz. Ph.D.*

## Positions, Scientific Appointments, and Honors

### *Positions & Employment*

- 2024 – Present Professor, Kinesiology & Sports Management, Texas A&M University
- 2022 - 2024 Executive Director, Tennessee Institute for Regenerative Medicine (TennIRM)
- 2021 – 2022 Deputy Director, Tennessee Institute for Regenerative Medicine (TennIRM)
- 2019 – 2024 Chief, Division of Rehabilitation Science, College of Health Professions, UTHSC
- 2018 – 2024 Senior Associate Dean for Research and Graduate Studies, College of Health Professions, UTHSC
- 2018 – 2024 Professor, Physical Therapy Department, College of Health Professions, UTHSC
- 2014 – 2018 Chair, Exercise Science Department, U. South Carolina
- 2013 – 2018 Associate Director, The Center for Colon Cancer Research at USC
- 2011 – 2018 Professor, Exercise Science, Arnold School of Public Health, U South Carolina
- 2007 – 2014 Director of Graduate Studies, Exercise Science Dept., U South Carolina
- 2005 – 2011 Associate Professor, Division of Applied Physiology, Arnold School of Public Health, University of South Carolina, Columbia, SC
- 2004 - 2008 Division Head, Applied Physiology, Arnold School of Public Health, U South Carolina
- 1999 – 2005 Assistant Professor, Division of Applied Physiology, Arnold School of Public Health, U South Carolina
- 1997 – 1999 Post-Doctoral Research Fellow, Cell Biology/Huffington Aging Center, Baylor College of Medicine, Houston, Texas
- 1993 - 1997 Post-Doctoral Research Fellow, Physiology and Cell Biology Department, University Texas Medical School, Houston, Texas
- 1991 - 1993 Graduate Research Assistant, Exercise Science, The Ohio State

### *Professional Organizations*

- American Physiological Society (APS), Member 1999 – Present
- American College of Sports Medicine (ACSM), Member 1999 – Present
- National Strength & Conditioning Association (NSCA), Member 1999 – Present
- Society on Cachexia, Sarcopenia & Wasting Disorders (SCWD), Member 2014 – Present

### *Professional Service*

- Diversity Committee, American Kinesiology Association, 2018 - 2020
- Diversity & Leadership Training Program, American College of Sports Medicine. 2013 – 2016
- Executive Board, Southeast Chapter American College Sports Medicine. Elected 2014 – 16

- Muscle Biology Steering Committee, American Physiological Society, Appointed. 2012 – 2016
- Exercise Physiology Councilor, Environmental Exercise Section, American Physiological Society. Elected 2012 –15.
- Co-chair 2014 ACSM/APS Integrative Exercise Meeting, Appointed, 2013 - 14
- Nominated to run for ACSM Board of Trustees election (not elected), 2013
- American College of Sports Medicine Science *Integration & Leadership, Committee*. 2009 – 12
- American College of Sports Medicine *Research Advisory Committee*, 2006 – 2009

### *Editorial Duties*

- Associate Editor, Journal of Cachexia, Sarcopenia and Muscle (JCSM), *Gender Research Basic*, 2018 - present
- Associate Editor, Medicine & Science in Sports & Exercise (MSSE) 2017 – present
- Editorial Board, Journal of Applied Physiology, 1999 – 2002; 2013 – 2022
- Editorial Board, Sports Medicine and Health Science, 2019 – present
- Editorial Board, American Journal of Physiology Integrative & Regulatory. 2009 – 2015
- Editorial Board, Exercise & Sports Science Reviews, American College Sports Medicine. 2011 – 2014

### *Grant Review (selected)*

- Veterans Affairs Cellular & Molecular Medicine Subcommittee Grant Review; Standing Panel Member, 2013 – 16; 2019 – 2024; Panel Chair, 2020 –2024.
- NASA NSPIRES, Space Biology Research Studies, Ad Hoc, 08/2023.
- NIH/CSR Tumor Cell Biology (renamed Cancer Cell Biology) Study Section, standing panel member 10/2019 – 6/2023
- Florida Department of Health, Oak Ridge Associated Universities, Ad Hoc Grant Review. 2017, 2018, 2019, 2020, 2021, 2022, 2023
- NIH/NCI Special Emphasis Panel ZCA1 TCRB-V (M1) NCI Clinical and Translational R21 and R03 Review, Ad Hoc 03/2021
- NIH/CSR Tumor Cell Biology Study Section, external reviewer, 06/2015, 02/2017, 10/2017, 06/2018, 02/2019, 06/2019
- NIH/NCI Special Emphasis Panel ZCA1 RTRB-U(C1) TEP-14: SBIR Contract Review, 03/2019
- NASA Human Exploration Research Opportunities Musculoskeletal and Countermeasures Grant Review Panel, 02/2019
- NIH/NCI Program Project (P01) III Review, ZCA1 RPRB-J (J1). 09/2018
- NIH/CSR SMEP Study Section external reviewer, 06/2014, 10/2014, 06/2017
- NASA Human Exploration Research Opportunities Radiobiology, 03/2017
- NIH/NCI Provocative Questions: Cancer Therapies and Outcomes, reviewer, 03/2013, 10/ 2014

### Honors

- Health Professions Faculty Organization Faculty Appreciation Award, 2022. Acknowledgement of gratitude for service to the students and faculty of the UTHSC College of Health Professions
- Prometheus Basic Science Lecture, International Conference on Cachexia, Sarcopenia and Muscle Wasting, 2021. Awarded In acknowledgment of historical contributions to the field.
- USC Educational Foundation Award for Research in Health Sciences, 2017
- Distinguished Research Leadership Award, South Carolina Governor's School Science & Math, 2016
- Inducted into Delta Omega Society – Mu Chapter, Honorary Society in Public Health, 2015
- “STAR” Award for Excellence in Peer Review, American Physiological Society, 2011
- Public Health Faculty Research Award, University of South Carolina, 2009
- Awarded Fellow Status (FACSM), American College of Sports Medicine, 2007
- Nominated for the Arnold School of Public Health Keith Teaching Award, 2004, 2009, 2012, 2013.
- Nominated for the University of South Carolina Key Award for Integrating Undergraduate Teaching and Research, 2007.
- Varsity letter Football, The Ohio State University, 1981, 1982, 1983;

- Linemen of the week Ohio State Football, Ohio State vs. Illinois, 1982;
- Ironman Award Ohio State Football Fall, 1982

### University Service (selected)

- Director, Tennessee Institute for Regenerative Medicine (TennIRM). 2022 – 2024
- Dean College of Dentistry UTHSC Search, Search Committee member, 2023 - 2024
- Vice Chancellor for Research UTHSC Search, Search Committee member 2023
- UTHSC Strategic Plan: Diversity, Equity & Inclusion Cross-cutting Workgroup member, 2022 – 2023
- UTHSC Strategic Plan: Research, Innovation & Entrepreneurship Workgroup member, 2022 - 2023
- Basic Science Implementation Team Leader, Strategic Plan for Research, UTHSC, 2022 - 2023
- Deputy Director, Tennessee Institute for Regenerative Medicine (TennIRM). 2021 – 2022
- UTHSC Strategic Plan for Research Committee, Vice Chancellor for Research, UTHSC, 2020 – 2021
- Diversity Equity & Inclusion UTHSC-wide Committee, 2019 - present
- Graduate Studies Council, Graduate School, UTHSC, 2018 – present
- Vice Chancellor Research Cabinet, UTHSC, 2019-present
- UTHSC Research Space Committee, UTHSC, 2019 - present
- UTHSC Research Implementation Committee (COVID), UTHSC, 2020 – 2022
- University-wide NIH Fellowships Advisor, USC Fellowships & Scholar Programs, 2013 – 2018
- Faculty advisor for Exercise Science Majors Club Student Organization, 2013 – 2018.
- Faculty advisor for South Carolina Club Lacrosse Student Organization. 2014 - 2018
- University SC VP Research Aspire-I Review Committee, 2014
- Integrated Biomedical Sciences Graduate Program Steering Committee. 2010 – 2016
- Judge for the Junior Science & Humanities Symposium. 2010, 2011, 2012, 2014, 2015, 2016, 2017
- University Athletics Advisory Committee. ELECTED, 3-year term, 2013 – 2016.
- Faculty advisor for South Carolina Club Football Student Organization. 2010 – 2014.
- University Committee on Tenure and Promotion. ELECTED, 3-yr term, served 2013 – 2014.
- Animal Care Users Group. Appointed. University-wide committee, 2010 – 2014.
- *Institutional Animal Use and Care Committee*, President appointed. 2001-2009.

### College Service (selected)

- Chair, College Health Professions Strategic Plan: Expanding Research Workgroup, 2023 – present.
- Faculty Research Committee Organizer, College of Health Professions, UTHSC. 2019 to present
- Dean's College Council, College of Health Professions, UTHSC. 2018 - present
- Chair Search, Program Director for Physical Therapy Department, College of Health Professions, U. of Tennessee Health Science Center, 2022.
- Chair Search, Department Chair for Physical Therapy Department, College of Health Professions, U. of Tennessee Health Science Center, 2021.
- Chair Search, Assistant Dean for Finance, College of Health Professions, University of Tennessee Health Science Center, 2021.
- Chair Search, cluster faculty hire, Center for Muscle Metabolism & Neuropathology, College of Health Professions, University of Tennessee Health Science Center, 2019 - 2020
- Chair Search, Department Chair for Physical Therapy Department, College of Health Professions, U. of Tennessee Health Science Center, 2019.
- Chair Search Committee, Assistant Dean for Finance, College of Health Professions, University of Tennessee Health Science Center, 2019.
- Chair Search Committee, Chair Department of Epidemiology, Arnold School of Public Health, University of South Carolina, 2016.

## Scholarship: Publications

My Bibliography NIH: <https://www.ncbi.nlm.nih.gov/myncbi/1JCmb1CFIhCQA/bibliography/public/>

Google Scholar: [J Carson Google Scholar](#)

h-index - 63; i10-index - 134

Articles cited over 100x – 36

Scopus Author ID: 7201381039; ORCID ID: [orcid.org/0000-0003-3733-8796](https://orcid.org/0000-0003-3733-8796)

### Published / In Press (since 2018):

\* denotes mentorship: Student or post-doc author contribution under J. Carson's supervision

+ denotes leadership: corresponding author / senior author

126. Zhan Q\*, Halle JL\*, Counts BR\*, **Carson JA+**. mTORC1 and BMP-Smad1/5 Regulation of Serum-Stimulated Myotube Hypertrophy: A Role for Autophagy. *Am J Physiol Cell*, in press 2024. IF 5.5

125. Chaib M, Holt JR, Fisher EL, Sipe LM, Bohm MS, Joseph SC, Simmons BW, Eugin Simon S, Yarbro JR, Tanveer U, Halle JL\*, **Carson JA**, Hollingsworth TJ, Wei Q, Rathmell JC, Thomas PG, Hayes DN, Makowski L. [Protein kinase C delta regulates mononuclear phagocytes and hinders response to immunotherapy in cancer](#). *Sci Adv*. 2023 Dec 22;9(51):eadd3231. doi: 10.1126/sciadv.add3231. PMID: 38134280; PMCID: PMC10745701. IF 15.4

124. Halle JL\*, Counts BR\*, Quan Zhan\*, James KM\*<sup>1</sup>, Puppa MJ, Always SE, **Carson JA+**. [Mouse Skeletal Muscle Adaptations to Different Durations of Treadmill Exercise After the Cessation of FOLFOX Chemotherapy](#). *Front Physiol*. 2023 Nov 1;14:1283674. doi: 10.3389/fphys.2023.1283674. PMID: 38028800; PMCID: PMC10648895. IF 4.0

123. Snoke DB, Bellefleur E, Rehman HT, **Carson JA**, Poynter ME, Dittus KL, Toth MJ. [Skeletal muscle adaptations in patients with lung cancer: Longitudinal observations from the whole body to cellular level](#). *J Cachexia Sarcopenia Muscle*. 2023 Sep 19. doi: 10.1002/jcsm.13332. Epub ahead of print. PMID: 37727010. IF 8.9

122. Halle JL\*, Counts BR\*, Paez HG, Baumfalk DR, Zhang Q\*, Mohamed JS, Glazer ES, Puppa MJ, Smuder AJ, Alway SE, **Carson JA+**. [Recovery from FOLFOX Chemotherapy-induced Systemic and Skeletal Muscle Metabolic Dysfunction in Mice](#). *Am J Physiol Endocrinol Metab*. 2023 Aug 1;325(2):E132-E151. doi: 10.1152/ajpendo.00096.2023. Epub 2023 Jun 28. PMID: 37378624; PMCID: PMC10393342. IF 5.9

121. Alway SE, Paez HG, Pitzer CR, Ferrandi PJ, Khan MM, Mohamed JS, **Carson JA**, Deschenes MR. [Mitochondria transplant therapy improves regeneration and restoration of injured skeletal muscle](#). *J Cachexia Sarcopenia Muscle*. 2023 Feb;14(1):493-507. doi: 10.1002/jcsm.13153. Epub 2023 Jan 5. PMID: 36604839; PMCID: PMC9891964. IF 8.9

120. Halle, J.L.\*; B.R. Counts-Franch\*, Q. Zhang\* and **J.A. Carson+**. [Short Duration Treadmill Exercise Improves Physical Function and Skeletal Muscle Mitochondria Protein Expression After Recovery from FOLFOX Chemotherapy in Male Mice](#). *FASEB J*. 2022 Aug;36(8):e22437. doi: 10.1096/fj.202200460R. PMID: 35816153 IF 5.9

119. VanderVeen BN, Cardaci TD, Madero SS, McDonald SJ, Bullard BM, Price RL, **Carson JA**, Fan D, Murphy EA. [5 fluorouracil disrupts skeletal muscle immune cells and impairs skeletal muscle repair and remodeling](#). *J Appl Physiol* (1985). 2022 Oct 1;133(4):834-849. doi: 10.1152/jappphysiol.00325.2022. Epub 2022 Aug 25. PMID: 36007896; PMCID: PMC9529268. IF. 3.9

118. Sipe LM, Chaib M, Korba EB, Jo H, Lovely MC, Counts BR\*, Tanveer U, Holt JR, Clements JC, John NA, Daria D, Marion TN, Bohm MS, Sekhri R, Pingili AK, Teng B, **Carson JA**, Hayes DN, Davis MJ, Cook KL, Pierre JF, Makowski L. [Response to immune checkpoint blockade improved in preclinical model of breast cancer after bariatric surgery](#). *Elife*. 2022 Jul 1;11:e79143. doi: 10.7554/eLife.79143. PMID: 35775614; PMCID: PMC9342954. IF 8.7

117. Rana M, Kansal R, Chaib M, Teng B, Morrison M, Hayes DN, Stanfill AG, Shibata D, **Carson JA**, Makowski L, Glazer ES. [The pancreatic cancer immune tumor microenvironment is negatively remodeled by gemcitabine while TGF-β receptor plus dual checkpoint inhibition maintains antitumor immune cells](#). *Mol Carcinog*. 2022 Jun;61(6):549-557. doi: 10.1002/mc.23401. Epub 2022 Mar 23. PMID: 35319799. IF 4.8

116. Chaib M, Sipe LM, Yarbro JR, Bohm MS, Counts BR\*, Tanveer U, Pingili AK, Daria D, Marion TN, **Carson JA**, Thomas PG, Makowski L. [PKC agonism restricts innate immune suppression, promotes antigen cross-presentation and synergizes with agonistic CD40 antibody therapy to activate CD8+ T cells in breast cancer](#). *Cancer Lett*. 2022 Jan 21;50304-3835(22)00025-8. doi: 10.1016/j.canlet.2022.01.017. PMID: 35074498. IF 8.7

115. Counts B.R.\*; Halle, J.L.\*; **J.A. Carson+**. [Early Onset Physical Inactivity and Metabolic Dysfunction in Tumor Bearing Mice is Associate with Accelerated Cachexia](#). *Med Sci Sports Exerc*. 2022 Jan 1;54(1):77-88. doi: 10.1249/MSS.0000000000002772. PMID: 34431825. IF 6.3

114. Halle, J.L.\* , B.R. Counts-Franch\*, R. M. Prince and **J.A. Carson+**. [The Effect of Mechanical Stretch on Myotube Growth Suppression by Colon-26 Tumor-Derived Factors](#). *Front Cell Dev Biol.* 2021 Jul 30;9:690452. doi: 10.3389/fcell.2021.690452. PMID: 34395422; PMCID: PMC8363303. IF 6.6
113. Fix, DK\*, BR Counts\*, A.J. Smuder, M.A. Sarynski, H.J. Koh, and **J.A. Carson+**. [Wheel running improves fasting-induced AMPK signaling in skeletal muscle from tumor-bearing mice](#). *Physiol Rep.* 2021 Jul;9(14):e14924. doi: 10.14814/phy2.14924. PMID: 34270178; PMCID: PMC8284248. IF 2.3
112. VanderVeen BN, Sougiannis AT, Velazquez KT, **Carson JA**, Fan D and Murphy EA (2020) [The Acute Effects of 5 Fluorouracil on Skeletal Muscle Resident and Infiltrating Immune Cells in Mice](#). *Front. Physiol.* 11:593468. doi: 10.3389/fphys.2020.593468 2020. IF 4.1
111. VanderVeen BN\*, Fix DK\*, Counts BR, **Carson JA+**. [The Effect of Wheel Exercise on Functional Indices of Cachexia in Tumor-bearing Mice](#). *Med Sci Sports Exerc.* 2020 Nov;52(11):2320-2330. doi: 10.1249/MSS.0000000000002393. PMID: 33064407; PMCID: PMC7573199. IF 6.3
110. Hardee JP\*, Fix DK\*, Koh HJ, Wang X, Goldsmith EC, **Carson JA+**. [Repeated eccentric contractions positively regulate muscle oxidative metabolism and protein synthesis during cancer cachexia in mice](#). *J Appl Physiol (1985).* 2020;128(6):1666-1676. PMID: 32407241 PMCID: [PMC7311684](#) DOI: [10.1152/jappphysiol.00908.2019](#) IF 3.6
109. Counts BR\*, Hardee JP\*, Fix DK\*, VanderVeen BN\*, Montalvo RN\*, **Carson JA+**. [Cachexia Disrupts Diurnal Regulation of Activity, Feeding, and Muscle mTORC1 in Mice](#). *Med Sci Sports Exerc.* 2020;52(3):577-587. Med PMID: 32058469 PMCID: [PMC7182083](#) IF 5.4
108. Guigni BA, van der Velden J, Kinsey CM, **Carson JA**, Toth MJ. . [Effects of conditioned media from murine lung cancer cells and human tumor cells on cultured myotubes](#) *Am J Physiol Endocrinol Metab.* 2020;318(1):E22-E32. doi:10.1152/ajpendo.00310.2019 PMID: 31689144 PMCID: PMC6985792 DOI: 10.1152/ajpendo.00310.2019 IF 3.6
107. Counts R\*, Fix DK\*, Hetzler KL\*, **Carson JA+**. [The Effect of Estradiol Administration on Muscle Mass Loss and Cachexia Progression in Female \*Apc\*<sup>Min/+</sup> Mice](#). *Front Endocrinol (Lausanne).* 2019;10:720. doi: 10.3389/fendo.2019.00720. PubMed PMID: 31736871; PubMed Central PMCID: PMC6838005.
106. Guigni BA, Fix DK\*, Bivona JJ 3rd, Palmer BM, **Carson JA**, Toth MJ. Electrical stimulation prevents doxorubicin-induced atrophy and mitochondrial loss in cultured myotubes. *Am J Physiol Cell Physiol.* 2019;317(6):C1213-C1228. PMID: 31532714 PMCID: [PMC6957384](#) DOI: [10.1152/ajpcell.00148.2019](#)
105. Fix DK\*, VanderVeen BN\*, Counts BR\*, **Carson JA+**. [Regulation of Skeletal Muscle DRP-1 and FIS-1 Protein Expression by IL-6 Signaling](#). *Oxid Med Cell Longev.* 2019;2019:8908457. doi: 10.1155/2019/8908457. eCollection 2019. PubMed PMID: 30918582; PubMed Central PMCID: PMC6408992.
104. Sougiannis AT, VanderVeen BN\*, Enos RT, Velazquez KT, Bader JE, Carson M, Chatzistamou I, Walla M, Pena MM, Kubinak JL, Nagarkatti M, **Carson JA**, Murphy EA. [Impact of 5 fluorouracil chemotherapy on gut inflammation, functional parameters, and gut microbiota](#). *Brain Behav Immun.* 2019 Aug;80:44-55. doi: 10.1016/j.bbi.2019.02.020. Epub 2019 Feb 23. PubMed PMID: 30807838; PubMed Central PMCID: PMC6660349.
103. Velázquez KT, Enos RT, Bader JE, Sougiannis AT, Carson MS, Chatzistamou I, **Carson JA**, Nagarkatti PS, Nagarkatti M, Murphy EA. [Prolonged high-fat-diet feeding promotes non-alcoholic fatty liver disease and alters gut microbiota in mice](#). *World J Hepatol.* 2019 Aug 27;11(8):619-637. doi: 10.4254/wjh.v11.i8.619. PubMed PMID: 31528245; PubMed Central PMCID: PMC6717713.
102. Choi RH, McConahay A, Silvestre JG, Moriscot AS, **Carson JA**, Koh HJ. [TRB3 regulates skeletal muscle mass in food deprivation-induced atrophy](#). *FASEB J.* 2019 Apr;33(4):5654-5666. doi: 10.1096/fj.201802145RR. Epub 2019 Jan 25. PubMed PMID: 30681896; PubMed Central PMCID: PMC6436654.
101. Sato S\*, Gao S\*, Puppa MJ\*, Kostek MC, Wilson LB, **Carson JA+**. [High-Frequency Stimulation on Skeletal Muscle Maintenance in Female Cachectic Mice](#). *Med Sci Sports Exerc.* 2019 Sep;51(9):1828-1837. doi: 10.1249/MSS.0000000000001991. PubMed PMID: 30933004; PubMed Central PMCID: PMC6697199.
100. VanderVeen BN\*, Fix DK\*, Montalvo RN\*, Counts BR\*, Smuder AJ, Murphy EA, Koh HJ, **Carson JA+**. [The regulation of skeletal muscle fatigability and mitochondrial function by chronically elevated interleukin-6](#). *Exp Physiol.* 2019 Mar;104(3):385-397. doi: 10.1113/EP087429. Epub 2019 Jan 15. PubMed PMID: 30576589; PubMed Central PMCID: PMC6750733.
99. Bowyer KP, **Carson JA**, Davis JM, Wang X. [The influence of exercise training dose on fasting acylated ghrelin concentration in older women](#). *J Behav Med.* 2018 Nov 17;. doi: 10.1007/s10865-018-9990-z. PubMed PMID: 30448936; PubMed Central PMCID: PMC6525072.



98. Hardee JP\*, Fix DK\*, Wang X, Goldsmith EC, Koh HJ, **Carson JA+**. [Systemic IL-6 regulation of eccentric contraction-induced muscle protein synthesis](#). *Am J Physiol Cell Physiol*. 2018 Jul 1;315(1):C91-C103. doi: 10.1152/ajpcell.00063.2018. PubMed PMID: 29641213; PubMed Central PMCID: PMC6087730.
97. Hardee JP\*, Counts BR\*, Gao S\*, VanderVeen BN\*, Fix DK\*, Koh HJ, **Carson JA+**. [Inflammatory signaling regulates eccentric contraction-induced protein synthesis in cachectic skeletal muscle](#). *J Cachexia Sarcopenia Muscle*. 2018 Apr;9(2):369-383. doi: 10.1002/jcsm.12271. PubMed PMID: 29215198; PubMed Central PMCID: PMC5879978.
96. Fix DK\*, Hardee JP\*, Gao S\*, VanderVeen BN\*, Velázquez KT\*, **Carson JA+**. [Role of gp130 in basal and exercise-trained skeletal muscle mitochondrial quality control](#). *J Appl Physiol* (1985). 2018 Jun 1;124(6):1456-1470. doi: 10.1152/jappphysiol.01063.2017PubMed PMID: 29389248; PubMed Central PMCID: PMC6032094.
95. VanderVeen BN\*, Hardee JP\*, Fix DK\*, **Carson JA+**. [Skeletal muscle function during the progression of cancer cachexia in the male Apc<sup>Min/+</sup> mouse](#). *J Appl Physiol* (1985). 2018 Mar 1;124(3):684-695. doi: 10.1152/jappphysiol.00897.2017. PubMed PMID: 29122966; PubMed Central PMCID: PMC5899274.
94. Bader JE, Enos RT, Velázquez KT\*, Carson MS, Nagarkatti M, Nagarkatti PS, Chatzistamou I, Davis JM, **Carson JA**, Robinson CM, Murphy EA. [Macrophage depletion using clodronate liposomes decreases tumorigenesis and alters gut microbiota in the AOM/DSS mouse model of colon cancer](#). *Am J Physiol Gastrointest Liver Physiol*. 2018 Jan 1;314(1):G22-G31. doi: 10.1152/ajpgi.00229.2017. PubMed PMID: 29025731; PubMed Central PMCID: PMC5866374.
93. Kaur K\*, Saxena A, Debnath I, O'Brien JL, Ajami NJ, Auchtung TA, Petrosino JF, Sougiannis AJ, Depaep S, Chumanevich A, Gummadidala PM, Omebeyinje MH, Banerjee S, Chatzistamou I, Chakraborty P, Fayad R, Berger FG, **Carson JA**, Chanda A. [Antibiotic-mediated bacteriome depletion in Apc<sup>Min/+</sup> mice is associated with reduction in mucus-producing goblet cells and increased colorectal cancer progression](#). *Cancer Med*. 2018 May;7(5):2003-2012. doi: 10.1002/cam4.1460. PubMed PMID: 29624892; PubMed Central PMCID: PMC5943478.

## Refereed Literature Reviews / Book Chapters (since 2018)

21. Hardee, J.P\*+, and **J.A. Carson**. [Muscular Contractions Therapeutic Potential for Cancer-induced Wasting](#). *Am J Physiol Cell Physiol*. 2022 Aug 1;323(2):C378-C384. doi: 10.1152/ajpcell.00021.2022. Epub 2022 Jun 15. PMID: 35704693 (refereed)
20. Halle, J.L.\*+, B.R. Counts\*, and **J.A. Carson+**. Exercise as a Therapy for Cancer-Induced Muscle Wasting. *Sports Medicine and Health Science*. 2020 2(4): 186 - 194 (invited refereed)
19. *Vanderveen BN\**, EA Murphey, and **JA Carson+**. [The Impact of Immune Cells on the Skeletal Muscle Microenvironment during Cancer Cachexia](#). *Frontiers in Physiology*, section Striated Muscle Physiology 2020 Aug 31;11:1037. doi: 10.3389/fphys.2020.01037. PMID: 32982782 (invited refereed)
18. Burini, R.C., E. Anderson, J.L. Durstine, and **J.A. Carson+**. [Inflammation, physical activity, and Chronic Disease: An evolutionary perspective](#). *Sports Medicine and Health Science* 2020 2(1): 1-6. <https://doi.org/10.1016/j.smhs.2020.03.004> (invited refereed)
17. Hardee JP\*, Counts BR\*, **Carson JA+**. [Understanding the Role of Exercise in Cancer Cachexia Therapy](#). *Am J Lifestyle Med*. 2019 Jan-Feb;13(1):46-60. doi: 10.1177/1559827617725283. eCollection 2019 Jan-Feb. PubMed PMID: 30627079; PubMed Central PMCID: PMC6311610. (invited refereed)
16. *Montalvo RN\**, Counts BR\*, **Carson JA+**. [Understanding sex differences in the regulation of cancer-induced muscle wasting](#). *Curr Opin Support Palliat Care*. 2018 Dec;12(4):394-403. doi: 10.1097/SPC.0000000000000380. Review. PubMed PMID: 30102621; PubMed Central PMCID: PMC6239206. (invited refereed)
15. *Montalvo RN\**, Hardee JP\*, VanderVeen BN\*, **Carson JA+**. [Resistance Exercise's Ability to Reverse Cancer-Induced Anabolic Resistance](#). *Exerc Sport Sci Rev*. 2018 Oct;46(4):247-253. doi: 10.1249/JES.0000000000000159. Review. PubMed PMID: 30001273; PubMed Central PMCID: PMC6138526. (invited refereed)
14. **Carson, JA+**, J.K. Petrella, V. Yingling, M.R. Marshall, J. O., J.J. Sherwood. Undergraduate Research in Kinesiology: Examples to Enhance Student Outcomes. *Kinesiology Review* (American Kinesiology Association). Vol 7(4):305-313 2018 (invited, refereed)

## Presentations: Abstracts (since 2020)

### 2023

- Zhang Q, **Carson JA**. The role of osteocalcin administration in the regulation of physical and metabolic function during FOLFOX treatment and recovery. UTHSC Center for Cancer Research, Research in Progress Seminar. December 2023.
- Paez HP, Pitzer CR, Ferrandi PJ, Halle JL, **Carson JA**, Mohamed JS, Alway SE. High-fat diet induced obesity uncouples mitochondrial respiration in young and aged sarcopenic skeletal muscle. UTHSC Department of Physiology Annual Research Retreat. November, 2023. *1<sup>st</sup> place poster presentation*.
- Halle JL, **Carson JA**. AMPK's role in disrupted metabolism during FOLFOX chemotherapy treatment and recovery. UTHSC Center for Cancer Research, Research in Progress Seminar. November 2023.
- Zhang Q, Halle JL, **Carson JA**. mTORC1 and BMP-Smad1/5 regulation of serum-stimulated myotube hypertrophy: A role for autophagy. Tennessee Institute of Regenerative Medicine (TennIRM) Annual Meeting. September 2023.
- Halle JL, Zhang Q, **Carson JA**. The effect of sex and FOLFOX chemotherapy on the IL-6 regulation of C26-tumor induced disruptions to body composition and physical function in mice. Tennessee Institute of Regenerative Medicine (TennIRM) Annual Meeting. September 2023.
- Halle JL, Zhang Q, Paez HP, Alway SE, **Carson JA**. Metabolic Dysfunction during Recovery from Colorectal Cancer Chemotherapy: Role for Skeletal Muscle AMPK Signaling. 16<sup>th</sup> Cachexia Conference in Stockholm. June 17-19, 2023.
- Zhang Q, Halle JL, Carson JA. Skeletal muscle biochemical adaptations to different treadmill exercise durations following FOLFOX chemotherapy treatment in mice. ACSM. Denver, CO. May 2023.
- Zhang Q, Halle JL, **Carson JA**. Impact of Treadmill Exercise Duration on Circulating Osteocalcin Levels after Recovery from FOLFOX Chemotherapy. UTHSC Graduate Research Day. Memphis, TN. May 2023.
- Halle JL, Zhang Q, **Carson JA**. AMPK Signaling's Role in Disrupted Metabolism during Treatment and Recovery from Colorectal Cancer Chemotherapy. UTHSC Graduate Research Day. Memphis, TN. May 2023. *1<sup>st</sup> place oral presentation*.
- Halle JL, Zhang Q, Paez HP, Alway SE, **Carson JA**. AMPK Signaling's Role in Disrupted Metabolism during Treatment and Recovery from Colorectal Cancer Chemotherapy. Oklahoma Gero-Oncology Symposium. Oklahoma City, OK. April 2023.
- Baumfalk DR, Halle JL, Carson JA, Smuder AJ. Effects of FOLFOX Chemotherapy Regimen and Exercise on Circulating Factors of Cardiovascular Disease in Mice. American Physiology Summit. Long Beach, CA. April 2023.
- Baumfalk DR, Halle JL, Carson JA, Smuder AJ. Effects of FOLFOX on Circulating Hormones and Inflammation in Mice. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Zhang Q, Halle JL, Carson JA. Autophagy flux regulation by mTORC1 and BMP Signaling during Serum-induced Myotube Hypertrophy. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Halle JL, Zhang Q, Paez HP, Alway SE, Carson JA. Systemic and Skeletal Muscle Metabolic Dysfunction during FOLFOX chemotherapy: A Role for AMPK regulation of Autophagy. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Halle JL, Zhang Q, Paez HP, Alway SE, **Carson JA**. Metabolic Dysfunction during Recovery from Colorectal Cancer Chemotherapy: Role for Skeletal Muscle AMPK Signaling. 16<sup>th</sup> Cachexia Conference in Stockholm. June 17-19, 2023.
- Zhang Q, Halle JL, **Carson JA**. Skeletal muscle biochemical adaptations to different treadmill exercise durations following FOLFOX chemotherapy treatment in mice. ACSM. Denver, CO. May 2023.
- Halle JL, Zhang Q, Paez HP, Alway SE, **Carson JA**. AMPK Signaling's Role in Disrupted Metabolism during Treatment and Recovery from Colorectal Cancer Chemotherapy. Oklahoma Gero-Oncology Symposium. Oklahoma City, OK. April 2023.
- Baumfalk DR, Halle JL, **Carson JA**, Smuder AJ. Effects of FOLFOX Chemotherapy Regimen and Exercise on Circulating Factors of Cardiovascular Disease in Mice. American Physiology Summit. Long Beach, CA. April 2023.
- Baumfalk DR, Halle JL, **Carson JA**, Smuder AJ. Effects of FOLFOX on Circulating Hormones and Inflammation in Mice. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Zhang Q, Halle JL, **Carson JA**. Autophagy flux regulation by mTORC1 and BMP Signaling during Serum-induced Myotube Hypertrophy. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Halle JL, Zhang Q, Paez HP, Alway SE, **Carson JA**. Systemic and Skeletal Muscle Metabolic Dysfunction during FOLFOX chemotherapy: A Role for AMPK regulation of Autophagy. Advances in Skeletal Muscle Biology Conference. Gainesville, FL. March 2023.
- Counts Halle JL, Carson JA. Effects of contraction and feeding on skeletal muscle protein synthesis during the initiation of cachexia. FASEB. Philadelphia, PA. April 2022.



Halle JL, Counts BR, Carson JA. Short-duration aerobic exercise improves chemotherapy induced physical dysfunction in mice. FASEB. Philadelphia, PA. April 2022.

Lin J, Counts B, Powell Z, Ramanathan C, Carson J, Puppa M. The role of skeletal muscle intrinsic clock in the development and progression of cancer cachexia. FASEB. Philadelphia, PA. April 2022.

Halle JL, Counts BR, Carson JA. Effects of exercise dose on chemotherapy induced physical dysfunction in male mice. ACSM. San Diego, CA. May 2022.

Halle JL, Counts-Franch BR, Carson JA. Chronic Fatigue and Metabolic Dysfunction in Mice Following FOLFOX Chemotherapy Treatment. UTHSC Center for Cancer Research Symposium Eureka Moments. Memphis, TN. December 2021.

Counts BR, Halle JL, Carson JA. Feeding and fasting regulation of skeletal muscle protein synthesis during the initiation of cachexia. UTHSC Center for Cancer Research Symposium Eureka Moments. Memphis, TN. December 2021. Lightning Round Talk, 1<sup>st</sup> place

Counts BR, Halle JL, Carson JA. Effect of feeding on skeletal muscle protein synthesis in tumor bearing mice: a role for AMPK. Cancer Cachexia Society. Virtual. September 2021.

Halle JL, Counts BR, Carson JA. Long-term Ramifications of Folfox Chemotherapy on Body Composition, Fatigue, and Systemic Metabolism in Mice. Cancer Cachexia Society. Virtual. September 2021.

Counts-Franch BR, Halle JL, Carson JA. Early-Onset Metabolic Dysfunction in Tumor Bearing Mice is Associated with Accelerated Cachexia. Metabolism, Immunity, & Inflammation of the Mid-South. Virtual. April 2021. *Short-Talk*.

Halle JL, Counts-Franch BR, Carson JA. Folfox Chemotherapy Induces Metabolic Dysfunction and Fatigue in Mice. Metabolism, Immunity, & Inflammation of the Mid-South. Virtual. April 2021. *Lightening Round Talk-5minutes*.

Halle JL, Counts BR, Carson JA. The Effect of Mechanical Stretch on Myotube Growth Suppression by Tumor-derived Factors. FASEB. Virtual. April 2021.

Counts-Franch BR, Halle JL, Carson JA. Early-Onset Physical Inactivity in Tumor Bearing Mice is Associated with Accelerated Cachexia. SEACSM. Virtual. February 2021. *Top 8 Finalist Doctoral Poster Competition. 2<sup>nd</sup> place*.

Counts BR, **Halle JL**, Carson JA. Folfox Chemotherapy induces Chronic Metabolic Dysfunction and Fatigue in Mice. International Conference on Cachexia, Sarcopenia and Muscle Wasting Disorders. Virtual. December 2020

Counts BR, Halle JL, Carson JA. Lewis Lung Carcinoma Growth Rate is Associated with Early Onset Metabolic and Activity Dysfunction in Male Mice. Cancer Cachexia Society. September 2020. Virtual

Halle JL, Counts BR, Carson JA. Lasting Effects of Folfox Chemotherapy on Whole Body Fatigue and Metabolic Function in Mice. Cancer Cachexia Society. September 2020. Virtual

Counts BR, Halle JL, Carson JA. Diurnal physical activity regulates skeletal muscle ULK1 phosphorylation in tumor bearing male mice. ACSM Annual Meeting. May 2020. San Francisco, CA.

Halle JL, Fix DK, Counts BR, Carson JA. Skeletal Muscle Raptor and TSC1/2 Differential Response to Activity and Fasting in the Tumor Environment. ACSM Annual Meeting. May 2020. San Francisco, CA.

Counts BR, Halle JL, Carson JA. Cancer Attenuates Nutrient Activation of Skeletal Muscle mTORC1 in Female Mice. FASEB. April 2020. San Diego, CA.

Halle JL, Fix DK, Counts BR, Carson JA. Exercise Improves the Fasting Regulation of Skeletal Muscle Protein Synthesis in Tumor Bearing Mice. FASEB. April 2020. San Diego, CA.

## **Presentations: Speaking**

### *Research talks (since 2020)*

Kinesiology Seminar Series, Texas A & M University. Invited seminar speaker in person. November 30, 2023.

Exercise Science Research Center Seminar Series, University of Arkansas, Fayetteville. Invited seminar speaker in person. November 3, 2023.

Endocrine Grand Rounds, University of Tennessee Health Science Center. Invited research lecture in person. September 14, 2023.

OK Symposium on Pancreatic Cancer Cachexia. OU Health Stephenson Cancer Center. Oklahoma City, invited plenary lecture in person. August 25, 2023.

Kappa Delta Foundation Orthopaedic Research Internship Program Seminar Series. Basic Biology of Cachexia: A role for muscle metabolism. UTHSC. Invited speaker in person July 5, 2023.

16<sup>th</sup> International Conference on Cachexia, Sarcopenia and Muscle Wasting, Stockholm, Sweden, invited speaker in person, *Session: The fat story of sarcopenia – the fat in muscle*. June 17, 2023.

2023 Oklahoma Geoscience Symposium, Oklahoma Nathan Shock Center on Aging, Gero-Oncology, invited plenary lecture. April 4, 2023.

18<sup>th</sup> International Biochemistry of Exercise Conference, Cancer and Exercise Symposium, Toronto, Canada. Invited speaker May 28, 2022

College of Health Sciences Seminar Series, University of Memphis: *“Disrupted Muscle Metabolism in Cancer: A role for exercise”*. Invited speaker in person April 8, 2022

Biological Sciences seminar Series, Tennessee State University: *“Disrupted Muscle Metabolism in Cancer and Treatment: A role for exercise”*. Invited speaker March 30, 2022

International Society for Cachexia, Sarcopenia, and Muscle Wasting Disorders Virtual Congress 2021, Prometheus Basic Science Keynote Lecture: *“Understanding the Importance of Altered Muscle Responsiveness to the Systemic Environment in Cancer Cachexia Progression”*. invited speaker December 11, 2021

Exercise Physiology Seminar Series, University of Texas A&M. Invited Speaker (Virtual). *“Disrupted Muscle Metabolism in Cancer and Treatment: A role for exercise”*. October 22, 2021

Cancer Cachexia Society Annual Conference, University of Florida: Symposia, Biological Variables in Cancer Cachexia. *“Understanding Female Systemic and Skeletal Muscle Metabolic Dysfunction with Cancer Cachexia”*. Invited Speaker August 29, 2021.

Cancer Grand Rounds, University of Tennessee Health Science Center. *“Disrupted Muscle Metabolism in Cancer Cachexia & Treatment: A Role for Inactivity”*. Invited Speaker 02/23/2021

Seminar Series, Translational Research Institute, Advent Health, Orlando, FL. Invited Speaker. *“Disrupted Muscle Metabolism in Cancer Cachexia: A Role for Exercise”*. 12/17/2020

Seminar Series, College of Pharmacy, University of Houston. Invited Speaker. *“Cancer-induced Muscle Wasting is Linked to Disrupted Mitochondrial Quality Control and Anabolic Resistance”*. 10/22/2020

Center for Exercise Science, University of Florida. Invited Speaker. *“Disrupted Muscle Metabolism in Cancer Cachexia: A role for exercise”*. 10/15/2020

AcePre Collaboration Group, University of South Carolina School of Medicine. Invited Speaker. *“Long-term Effects of Chemotherapy on Systemic Metabolism and Function: A Role for Muscle Metabolic Dysfunction”*. 09/21/2020

Endocrine Grand Rounds, University of Tennessee Health Science Center. *“Understanding Drivers of Cancer-induced Muscle Wasting: Interactions with Inflammation, Sex & Exercise”*. Invited Speaker 03/15/2020

### *Instructional / Professional / Service Talks (since 2020)*

Germantown Public Schools Health Seminar for Teachers and Staff: Exercise & Weight Loss, Invited speaker, virtual, December 11, 2-23. Germantown TN

Society for Sarcopenia, Cachexia and Wasting Disorders 2023 Virtual Update conference, December 8-9, 2023. Invited Session Chair and moderator: *“Cachexia across the spectrum of diseases.”*

Regenerative and Rehabilitation Sciences Seminar Series, UTHSC, presenter/moderator. October 25, 2023. *“Professional Development Round Table Discussion: Successfully engaging in the peer review process of manuscripts for scientific journals”*.

Tennessee Institute of Regenerative Medicine (TennIRM) Annual Symposium. Presenter. September 22, 2022. *“TennIRM Overview 2023”*.

Skeletal Muscle Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. August 22, 2022. *“Phosphoproteomics of three exercise modalities identifies canonical signaling and C18ORF25 as an AMPK substrate regulating skeletal muscle function”*.

Regenerative and Rehabilitation Sciences Seminar Series, UTHSC, presenter. February 16, 2022. *“Graduate Student Professional Development: Beyond a proposal, designing an impactful, innovative, and rigorous research”*.

Tennessee Institute of Regenerative Medicine (TennIRM) Annual Symposium. Presenter. February 2, 2022. *"Division of Regenerative and Rehabilitation Sciences: Status and Opportunities"*.

Cachexia Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. December 6, 2021. *"Activation of Ak-mTORC1 signaling reverts cancer dependent muscle wasting "*.

Rehabilitation Sciences Seminar Series, Professional Development Seminar. College of Health Professions. Invited Speaker. November 17, 2021. *"NIH Fellowship Evaluation and Content: The F31 Research Plan"*

Rehabilitation Sciences Seminar Series, Professional Development Seminar. College of Health Professions. Invited Speaker. September 08, 2021. *"Critical Components of a Research Report (Pt 2)"*

Skeletal Muscle Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. August 23, 2021. *"Perturbed BMP signaling and denervation promote muscle wasting in cancer cachexia"*.

Share IT, Lunch Workshop Series, College of Health Professions UTHSC. Invited Speaker. April 21, 2021. *"Maximizing UTHSC campus research resources, facilities, and centers in grant applications & research program."*

Cachexia Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. March 22, 2021. *"Targeting Mitochondria by SS-31 Ameliorates Energy Status in Cancer- and Chemotherapy-Induced Cachexia"*.

Skeletal Muscle Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. February 15, 2021. *"Inhibition of prostaglandin-degrading enzyme 15-PGDH rejuvenates aged muscle mass and strength"*.

Rehabilitation Sciences Seminar Series, Round Table Discussion. Discussion moderator and lecturer. February 10, 2021. *"The Framework for Research Design in 2021: Hypothesis driven research versus the research question"*.

Rehabilitation Sciences Seminar Series, Professional Development Seminar. College of Health Professions. Invited Speaker. February 3, 2021. *"Critical Components of a Research Report (Part 1)"*

Obesity Journal Club, Le Bonheur Children's Hospital and UTHSC Pediatrics. Presenter. November 19, 2020. Research Article Presentation. *"Antibody mediated inhibition of GDF15- reverses cancer cachexia in mice"*

Share IT, Lunch Workshop Series, College of Health Professions UTHSC. Invited Speaker. October 28, 2020. *"The value of forming research teams and participating in team science"*

Cachexia Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. October 26, 2020. *"Antibody mediated inhibition of GDF15-GFRAL activity reverses cancer cachexia in mice"*.

Rehabilitation Sciences Seminar Series, Professional Development Seminar. College of Health Professions. Invited Speaker. September 16, 2020. *"NIH Fellowship Evaluation and Content"*

Cancer Cachexia Society Virtual Conference, Cancer Cachexia Society & the Future Session, Session co-chair, 09/11/2020

Share IT, Lunch Workshop Series, College of Health Professions UTHSC. Invited Speaker. September 2, 2020. *"CoHP Pre-Award Grants Training / Management Workshop."*

Skeletal Muscle Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. August 10, 2020. *"The role of raptor in the mechanical load-induced regulation of mTOR signaling, protein synthesis, and skeletal muscle hypertrophy"*.

Skeletal Muscle Journal Club, Division of Rehabilitation Sciences, COHP. Presenter. June 8, 2020. *"Contraction-regulated mTORC1 and protein synthesis" Influence of AMPK and Glycogen"*.

Share IT, Lunch Workshop Series, College of Health Professions UTHSC. Invited Speaker. April 23, 2020. *"Being prepared to collaborate on an NIH Grant Submission: Preparing your NIH Bio & facilities page."*

## Research Mentorship

### *Mentored High School Research*

- 9 International Exchange High School Students
- 30 South Carolina High School Students

### *Mentored Undergraduate Research Programs, James Carson mentor*

- 20 University of South Carolina Magellan Scholar, Honors College, SURF program research fellows
- 8 mentored undergraduate students received research awards.
- Chair of 9 Undergraduate Honors Research Thesis
- 18 students Mentored as part of Undergraduate Research Programs

### *Last 3 years at UTHSC*

- 2023 Kappa Delta Orthopedic Research Summer Program. **Chloe Haller**, Cornell University
- 2023 SRS UTHSC Graduate School Summer Research Program. **Anusha Malik**, Rhodes College.
- 2022 Kappa Delta Orthopedic Research Summer Program. **Alexa Tokofsky**, U. North Carolina Charlotte

### *Masters in Medical Laboratory Science Research Experience, James Carson mentor*

- *Jada King, Clinical Laboratory Science Student, Summer 2023*
- *Lauren Shine, Clinical Laboratory Science Student, Summer 2022*
- *Shawn Rennison, Clinical Laboratory Sciences Student, Summer 2022*
- *Tamela Isabel, Summer 2022*
- *Robert Hatfield, Clinical Laboratory Science Student, Summer 2019*

### *UTHSC Medical Student Research Experience, James Carson mentor*

- *Kylie James, UTHSC/College of Medicine Sponsored Medical Student Research Fellowship (MSRF) Program, 2023*

### *Doctoral Student Supervision*

*Completed PhDs as Chair (16) \*Completed Dissertation and defended 7m after J. Carson left USC, J Carson still directed.*

- Brittany Counts, December 2021,
- Dennis Fix\*, Summer 2019,
- Brandon Vanderveen\*, Spring 2019
- Justin Hardee, Fall 2017
- Song Gao, Spring 2017
- Kamaljeet Kaur, Spring 2016
- Kimbell Hetzler, Fall 2015
- Aditii Narsale, Spring 2014
- Melissa Pupa, Fall 2013
- Suichi Sato , Summer 2012
- Kandy Velasquez, Summer 2012
- Jim White, Spring 2011
- Tyrone Washington, Spring 2008
- Ray Thompson, Summer 2007
- Kristen Mehl-Baltgalvis, Summer 2007
- Joseph McClung, Summer 2005

*Completed PhDs as member of dissertation committee (12)*

- Yaya Zhang, April 2023
- Alex Souganis, June 2020
- Arpit Saxena, Spring 2015
- Jenny Stiener, Fall 2012
- Brad Gordon, Spring 2012
- Diana Delgado, Summer 2012
- Yin Xiong, Fall 2006
- Martin Carmichael , Fall 2005
- Adrian Brown, Spring 2004
- Joel Atance, Spring 2004
- Angela Murphy, Summer 2004
- Laura Fulk, Fall 2004.

*External Dissertation reviewer: Ayiesha Saleem, York University ,Toronto Canada August 2013*

*In Progress Doctoral Candidates:*

- Committee Chair and Advisor for 2 students
- Committee member for 4 students

*Post-Doctoral Fellow Supervision*

Kandy Velazquez, PhD;	2016 – 2017 (NIH Diversity Post-Doctoral Supplement)
Maria Lima, PhD;	2009 – 2011 (co-supervised with Dr. John Baynes)
Jonathon Brock, PhD;	2007- 2008 (co-supervised with Dr, John Baynes)

*Masters Student Supervision*

- Chair Master's Thesis Committee 5 students
- *Master's Thesis Committee Member 6 students*
- Supervised Exercise Science Masters Student Projects 8 students

## Research Grants

### Active

1 R21 AR079843-01A1 Carson JA PI NIH/NIAMS 07/2022 – 06/2024

*Muscle GPRC6A regulation of protein turnover with overload and disuse recovery*

Major Goal: Our central hypothesis is that disrupted skeletal muscle GPRC6A signaling will attenuate overload induced hypertrophy and atrophy recovery. Furthermore, GPRC6A activation will accelerate load-induced muscle mass and functional adaptations.

A21-0886 (Alway, SE PI) DOD – Army - MRMC 03/01 2021 – 02/29/2024

Role: Carson JA Co-I

*Using mitochondria therapy to improve restoration of neuromuscular function following injury*

Major goal: This project seeks to test a novel strategy using mitochondria transplantation for restoration of neuromuscular structure and function after injury, which is relevant to returning military personnel to combat arenas and restoring function of civilians injured in areas of conflict.

### Submitted, not funded (Since 2020)

W81XWH-21-PCARP-TRPA, Glazer E PI; DOD Pancreatic Cancer Research Program 10/01/2023 - 09/30/2026

Role: Carson, James A. (Co-I)

*Evaluating the interactive effects of Bromo- and ExtraTerminal Domain Proteins in Pancreatic Adenocarcinoma-induced Cachexia*

1 U54 TR003723-01A1 (K Johnson Lead PI) NIH / NCATS 07/2022 – 06/2027

Role: Carson JA KL2 MPI

Tennessee Clinical & Translational Institute (TN-CTSI)

Score 28 not funded.

1 U54 TR003723-01 (K Johnson Lead PI) NIH / NCATS 07/2021 – 06/2026

Role: Carson JA KL2 MPI

Tennessee Clinical & Translational Institute (TN-CTSI)

Score 40 not funded.

W81XWH-21-PCARP-TRPA, Glazer E PI; DOD Pancreatic Cancer Research Program 09/01/2022 - 08/31/2025

Role: Carson, James A. (Partnering PI)

*Understanding Pancreatic Cancer-Induced Metabolic Disruptions to Improve Therapeutic Efficacy*

1R01 Xiao Zhousheng PI NIH / NHLBI 07/01/2022 - 06/30/2027

Role: Carson JA co-I

*Role of PC1/PC2 Complex in Adipocyte Metabolism*

1 R01 AR080394-01A1 Mohamed, Junaith PI NIH / NIAMS 07/01/2022 - 06/30/27

Role: Carson JA co-I

*Molecular Mechanisms of Skeletal Muscle Wasting in Cerebral Ischemic Stroke*

R01CA260727-01 (Toth M Lead PI, Carson JA Co-PI) NIH/NCI 04/2021 -03/2026

*Muscle contraction to benefit skeletal muscle size and function during cancer treatment*

1 R21 CA257857-01 (E Glazer PI, Carson JA Co-PI) NIH/NCI 04/2021 – 03/2023

*TGF-beta mediated Cachexia in Pancreatic Cancer*

FOA Title: Research Answers to National Cancer Institute's (NCI) Provocative Questions

1 R21 CA264066-01 (Carson lead PI) NIH/NCI 07/2021 – 06/2023

*GPRC6A as a Therapeutic Target to Reverse Cancer Cachexia*

FOA Title: Research Answers to National Cancer Institute's (NCI) Provocative Questions

1 R21 AR079843-01 NIH/NIAMS 07/2021 – 06/2023 19<sup>th</sup>

*percental*

*Muscle GPRC6A regulation of protein turnover with overload and disuse recovery*



### Completed Grant Funding (Selected)

NIH National Institutes of Health-Related funding as PI. Principle Investigator for F32, R03, R21, R01, R01-renewed: "hit for the cycle"

1R21CA231131-01A1 (Carson, JA PI) NIH/NCI 05/08/2019 – 04/30/2022  
(PQ 12) *The Regulation of Physical Function and Skeletal Muscle Metabolic Signaling After Cessation of 5-Fluorouracil Treatment*

1R03NS114616-01A1 (PI Kahn, UTHSC Neurology) NIH/NINDS 09/1/2020 – 8/31/2022  
Role: Carson JA Co-I

*Examining Progression of a Neurodegenerative Disorder*

Major Goal: Determine disease progression and identify potential pathways that are the most likely targets of disease modifying intervention for UTBF E210K Neuroregression Syndrome.

RO1 (Toth M PI, Vermont College of Medicine) NIH/NIAMS 6/01/2019 – 5/30/2022  
Role: Carson JA Co-I (sub contract)

*Skeletal Muscle Atrophy and Dysfunction in Human Cancer*

1 RO1 CA121249-01A2 Carson (PI) NIH/ NCI 02/2014 – 3/2021  
Cachexia in *Apc<sup>MIN/+</sup>* mice: The role of IL-6

RO1 CA121249-01A2 (Carson PI) NIH / NCI 03/2008 – 03/2013  
Title: Cachexia in *Apc<sup>MIN/+</sup>* mice: The role of IL-6

RO3 AR051434-01A1 (Carson PI) NIH / NIAMS 07/2005 – 06 2007  
Title: Androgen's role in skeletal muscle regeneration

F32 AR008328-01 (Carson PI, Booth Mentor) NIH / NIAMS 06/1994 – 05/1997  
NRSA, Post-Doctoral Training Fellowship,  
Title: Chicken  $\alpha$ -actin promoter function during hypertrophy

### Teaching (last 4 years)

#### *Courses developed at University of Tennessee Health Science Center*

- RSHP 880 : Special Topics in Rehabilitation Science, approved 2019
- RSHP 919 : Rehabilitation Science Seminar, approved 2019

#### *Courses taught at University of Tennessee Health Science Center*

- RSHP 919: Rehabilitation Science Seminar, Spring 2022 (1h), 5 PhD students
- RSHP 919: Rehabilitation Science Seminar, Fall 2021 (1h), 6 PhD students
- RSHP 840: Special Topics in Rehabilitation Sciences, (1-3h) Fall 2021. 5 PhD students
- RSHP 919: Rehabilitation Science Seminar, Fall 2020 (1h), 6 PhD students
- RSHP 840: Special Topics in Rehabilitation Sciences, (1h) Fall 2020. 6 PhD students
- RSHP 919 : Rehabilitation Science Seminar, Fall 2019 (1h), 3 PhD students

#### *Course Lectures provided at University of Tennessee Health Science Center*

- *PHYS 819 : Physiology Graduate Seminar, Fall 2019 (1H), 3 PhD students*

#### *Course Practicum Experiences provided at University of Tennessee Health Science Center*

- *CLS-794 : Research Practicum Clinical Laboratory Science, Summer 2019, 2021, 2022 (4H),*

### Prior University Service, University of South Carolina

- University Faculty Athletics Representative (FAR) Search Committee, Appointed by Provost Office, Fall 2013.
- University Committee on Tenure and Promotion (UCTP). ELECTED, 3 year term. Serve on faculty review panels and review and present faculty files to the full committee. 2013 – 2014 (resigned to become Department Chair)
- Faculty advisor for Exercise Science Club Student Organization. 2013 – 2018
- University Athletics Advisory Committee. ELECTED, 3 year term. University-wide committee to advise the Faculty Senate on University Athletic matters. 2013 – 2016.

- Integrated Biomedical Sciences Graduate Program Steering Committee. Appointed. 2010 – 2016
- Animal Care Users Group. Appointed. New University-wide committee to examine issues related to animal research on the South Carolina campus. 2010 – Present
- Faculty advisor for South Carolina Club Football Student Organization. 2010 – 2014.
- Institutional Animal Use and Care Committee, University of South Carolina, *University President appointed full committee member*. 2001 - 2009.
- University-wide Search Committee for Head Veterinarian, University South Carolina 2006 – 2007.
- University of South Carolina Faculty Senate. Appointed faculty senator representing the School of Public Health and the Department of Exercise Science. 2002 – 2004.
- Institutional Animal Use and Care Committee, University of South Carolina, *University President appointed alternate*. 2000-2001.

### **Prior Service Arnold School of Public Health, University of South Carolina**

- Chair Search Committee for Department Epidemiology and Biostatistics Chair, 2016- 2017
- Search Committee Member Cluster Hire in Physical Activity 2011
- *Director Physical Activity Research Task Force (future directions) 2010 – 2012*
- *CEPH Certification Committee, Arnold School of Public Health 2009 – 2010*
- *Research Advisory Committee. Arnold School of Public Health 2007- Present*
- *ASPH Council of Graduate Directors, Arnold School of Public Health 2007- 2018*
- *Graduate Student Awards Committee, Arnold School of Public Health 2007- 2014*
- *Tenure & Promotion Committee, Arnold School of Public Health 2005 – 2018*
- *Research Faculty Review Committee, School of Public Health 2005- 2007*
- *CEPH Committee for Criteria, School of Public Health 2000 – 2001*
- *Grievance Committee, School of Public Health 2000 – 2002*
- *Human Subject Research Approval Committee School of Public Health. 2001 -2002*

### **Prior Service Department of Exercise Science, University of South Carolina**

- Member Search Committee for EXSC Chair, 2013 –May 2014.
- Member Search Committee for 2 EXSC faculty positions, 2013 –2014
- Chair Cluster Search Committee Exercise Science 2012 -2013
- Director of the Weekly Exercise Science Department Seminar Series 2002 – 2018
- Director of Graduate Studies 2007 – 2015
- Undergraduate Advisory Committee 2010 – 2018
- Search committee MC/R tenure track faculty search 2011 – 201
- Integrative Muscle Biology Journal Club, weekly 2001 – 2018
- Director Applied Physiology Division, 2004 – 2008
- Co-Director of Scientific Foundations Undergraduate Track, 2001 – 2010
- Chair Search Committee, Exercise Science tenure track Assistant Professor 2007 – 2008
- Search Committee Member, Exercise Science tenure track Assistant Professor 2006-2007
- Exercise Science Graduate Committee 2001 – 2005
- Exercise Science Laboratory Equipment Safety Course 1999 – 2006
- Integrative Muscle Biology laboratory Meeting, weekly 1999 - present
- Faculty Meetings, Science Department 1999 – present
- Undergraduate Committee, 1999 – 2001
- Exercise Science Student Laboratory Risk Management Group , 1999 – 2000

### **Certifications**

- Certified Olympic Lifting Club Coach, USA Weightlifting, 2002
- Certified Strength and Conditioning Specialist (CSCS), National Strength and Conditioning Association (NSCA) (1992, expired).
- Class D licensed youth soccer coach through US Soccer Association, 2000.
- National Youth Soccer Coaching Diploma, National Soccer Coaches Association of America 2001.