CURRICULUM VITAE

Owen F. Salmon, M.S. (Ph.D. Candidate)

Department of Health, Human Performance and Recreation (HHPR)
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Personal Statement

My research focuses on integrating wearable sensors, neuroimaging, and physiological monitoring to capture real-time insights into human health and performance. I have applied these methods in clinical research to advance neurorehabilitation strategies for conditions such as Parkinson's disease and cerebral palsy, as well as in human performance studies examining human factors in operational environments. This dual focus bridges laboratory-based discovery with translational applications across both clinical and military domains.

Education

Baylor University
Doctor of Philosophy (Ph.D.) Exercise & Nutrition Sciences *May 2026*
Graduate Minor in Statistics
Dissertation: *Neurophysiological and Behavioral Effects of Acute Cold Exposure on Mental Workload During Simulated Prehospital Medical Tasks*

University of Texas at El Paso (UTEP)
Master of Science (M.S.) in Kinesiology; *May 2021*
Thesis: *The effects of a combined multi-stressor environment and fatigue on pistol shooting performance.*

University of Nebraska-Lincoln (UNL)
Bachelor of Science (B.S.) in Exercise Science, *May 2018*

Employment History: Academic and Professional

Graduate Researcher – Human & Environmental Physiology Laboratory: 2022 - Present
Baylor University

- Led neurorehabilitation studies investigating brain activation changes in Parkinson's disease patients undergoing exercise therapy, contributing to evidence-based treatment strategies
- Co-developed novel analytical pipelines for interpreting neuroimaging data across neurological conditions, including Parkinson's disease, Cerebral Palsy, and mild traumatic brain injury (mTBI)
- Authored 8 peer-reviewed publications (including 2 first author), showcasing strong scientific communication in physiology-focused and military-relevant scholarly journals

- Presented 11 research posters at national and international conferences, demonstrating the ability to engage diverse audiences and translate findings into clinical and human-performance applications
- Initiated and designed three collaborative research projects on cold exposure physiology, highlighting innovation and protocol development
- Oversaw data collection and analysis for five major lab projects; lead developer of custom R programs to visualize and interpret sensor-based output
- Created Python-based cognitive tasks simulating real-world decision-making, supporting translational research and behavioral assessment
- Mentored 3 undergraduate research assistants and 2 graduate research assistants, fostering collaboration, technical skill development, and independent problem-solving across multiple human-subject research studies
- Contributed to the successful acquisition of over $1.14 million in competitive research funding through strategic data contributions and execution of key project milestones

Teacher of Record: Baylor University 2022 – Present

Developed course curriculum, experimental procedures, and learning outcomes for exercise physiology and human anatomy laboratory sections.

- HP 2420 Exercise Physiology Laboratory *(Fall 2023 – Present)*
  - Achieved an average teaching evaluation of 5.63/6.00 across five laboratory sections
- HP 1420 Human Anatomy Laboratory *(Fall 2022 – Spring 2024)*
  - Achieved an average teaching evaluation of 5.82/6.00 across six laboratory sections
  - ***Awarded Outstanding Graduate Instructor in the field of STEM 2022 - 2023***
  - *Recognized for Excellence in Teaching (Fall 2023 – Fall 2024)*

Graduate Researcher – Human & Environmental Physiology Laboratory: University of Texas at El Paso (UTEP) 2019 – 2022

- Specialized in the application and interpretation of neuromuscular sensors (e.g., electromyography [EMG]) to detect exertional fatigue during real-world performance scenarios
- Designed and tested a novel intermittent hypoxia protocol to evaluate its therapeutic potential for enhancing neuroplasticity and motor function
- Authored 6 peer-reviewed publications (including 1 first author), demonstrating effective scientific communication for neuromuscular physiologists and military research audiences
- Presented 12 research posters at national and international conferences, showcasing technical expertise and translational relevance
- Co-developed research initiatives that secured $94,080 in competitive grant funding through collaborative proposal writing and project execution
- Created custom marksmanship simulations for military-focused research and Reserve Officer Training Corps (ROTC) applications, integrating cognitive and motor performance metrics
- Built and installed a controlled environmental chamber to simulate cold and heat exposure for human performance and physiological stress testing

Teacher of Record: University of Texas at El Paso (UTEP) 2019 – 2022

Developed course curriculum, defined learning outcomes, and coordinated teaching assistant responsibilities for junior and senior-level Kinesiology courses.

- KIN 3331 Anatomical Kinesiology *(Spring 2022)*
- KIN4442 Geriatric Fitness Programming *(Fall 2021 - Spring 2022)*

Teaching Assistant: University of Texas at El Paso (UTEP) 2021

Developed and taught laboratory course curriculum and assisted the primary professor with grading for undergraduate courses.

- KIN 4341 Practical Applications of Strength & Conditioning

Medical Research Assistant: Celerion, Lincoln, NE 2017 – 2019

- Performed diagnostic procedures and ancillary testing, including ECG acquisition, vital sign monitoring, phlebotomy, and pharmaceutical dosing, in accordance with study protocols and GCP standards
- Processed and handled human biological samples (e.g., blood, urine) for laboratory analysis, ensuring sample integrity and chain-of-custody compliance
- Monitored participant health and safety during first-in-human drug trials, escalating adverse events, and ensuring adherence to inclusion/exclusion criteria
- Collaborated with clinical operations and data management teams to ensure accurate and timely transmission of source data to pharmaceutical and biotechnology sponsors
- Maintained protocol fidelity and documentation accuracy across multiple Phase I studies, contributing to regulatory compliance and trial efficiency

Exercise Physiologist: Madonna ProActive, Lincoln, NE 2016 – 2019

- Designed and implemented individualized and group exercise programs for high school athletes, collegiate athletes, and geriatric clients, optimizing performance and functional outcomes
- Collaborated with interdisciplinary teams in a Cardiac Rehabilitation setting to develop personalized exercise prescriptions based on patient history, diagnostic data, and clinical goals
- Conducted cardiopulmonary monitoring and fitness assessments to evaluate patient response to exercise testing, informing progression strategies and safety protocols
- Tracked physiological metrics and adapted interventions to support recovery, cardiovascular health, and long-term adherence to the therapeutic exercise plan

Research Grants and Funded Projects

*Total Career Funding:**$1,237,341***

*Total Funding at Baylor University: **$1,143,261***
*External Funding:**$1,111,320***
*Internal Funding:**$31,941***

*Total Funding at the University of Texas at El Paso: **$94,080***
*External Funding:**$74,269***
*Internal Funding:**$19,841***

Active Funded Projects

1. **Primary-Investigator:** "*Neurophysiological and Behavioral Effects of Acute Cold Exposure on Mental Workload During Simulated Prehospital Medical Tasks*" Department of Health, Human Performance and Recreation Dissertation Funding, **Awarded:** $3,000

   Contribution: Conceptualized study designed and developed novel simulation scenarios aligned to test the performance of emergency medical providers interacting with medical equipment in cold weather environments.

2. Research Assistant: "*Arctic Acclimatization and Sleep Optimization (ARKTOS) Research Center*" National Institute of Standards and Technology, **Awarded:** $1,000,000

   Contribution: Developed capabilities and system integration for neurophysiological monitoring, assisted in the curation of pilot data, and coordinated undergraduate research assistants to achieve key project milestones.

3. Research Assistant: "*Examining the Neurophysiological Responses Associated with Emerging Night Vision Goggle Technology: Equipment Support Grant*" EOTech (2023-2024), **Awarded:** $19,999

   Contribution: Conducted literature reviews, designed figures, and refined proposal sections. Mentored an early-career graduate student in manuscript development using a tiered-mentorship approach.

4. Co-Investigator: "*Impact of an Activities-Based Locomotor Training Program versus Traditional Physical Therapy in Children with Cerebral Palsy on Activity, Participation and Neurophysiological Adaptations*" Baylor University, Robbins College Research Award, **Awarded:** $14,112

   Contribution: Assisted in data collection, data analysis, and refining study methodology.

5. Co-Investigator: "*The Impact of High-Intensity Training using a Non-Motorized Treadmill on Neuroplastic Changes in Individuals with Parkinson's Disease*" Baylor University, Robbins College Research Award, **Awarded:** $14,829

   Contribution: performed literature reviews, refined study methodology, and coordinated with clinicians for a multi-site collaboration. Managed data collection and data analysis strategy for the study.

Pending Research Projects:

1. Study Coordinator: "*Development of an Accelerated Extreme Cold-Weather and High Altitude Acclimatization Procedures for Warfighters*" Department of Defense Special Operations Command (2024) **White Paper, Submitted:** $1,358,000

Contribution: Developed study methodology, generated preliminary data and figures for proposal sections.

Previously Funded Projects:

1. Co-Investigator: "*Operational Environments Influence on Neurophysiology to Improve Multimodal Data Fusion Algorithms*" Department of Defense (2022-2023), **Awarded:** $50,000

   Contribution: Conducted literature reviews, developed and refined study methodology, and generated preliminary data and figures for the proposal.

2. Research Assistant: "*Examining Electrocardiogram and Electrodermal Activity in Children with Autism Spectrum Disorder during Horseback Riding Therapy*. University of Colorado Anschutz School of Medicine (2022), **Awarded:** 41,321

   Contribution: Performed literature reviews and built a custom data analysis program to support project methodology.

3. Co-Investigator: "*Does Vitamin D and Iron Status Mitigate Systemic Inflammation and Improve Skeletal Muscle Health? Interaction Among Nutrients From an Animal Source Food Matrix*" National Cattlemen's Beef Association (NCBA) (2021-2022), **Awarded:** $44,269

   Contribution: Conducted literature reviews, developed and refined study methodology, and generated preliminary data and figures for the proposal.

4. Co-Investigator: "*Neurophysiological Biofeedback Integration Tool (NBIT)*" DoD XTech HBCU (2021), Step 1 **Awarded:** $25,000

   Contribution: Conducted literature reviews, developed and refined study methodology, and generated preliminary data and figures for the proposal.

5. Co-Investigator: "*Stress and Muscle Activity Biomarker Expression Associated with Cycle Ergometry Exercises and the Use of Compressive Arm Sleeves*" University of Texas at El Paso (2020) **Awarded:** $7,400

   Contribution: Developed and refined study methodology, coordinated data collection, and assisted in participant recruitment.

6. Co-Investigator: "*Development of a Neuromuscular Rehabilitation Training Device for the Early Phase of Myoelectric Prosthetic Learning*" University of Texas Research Award – University Research Institute (2020), **Awarded** $5,000

   Contribution: Conducted literature reviews, developed and refined study methodology, and generated preliminary data and figures for the proposal.

7. Co-Investigator: "*Acute altitude exposure effects on cognition, muscle function, mobility, metabolism, and marksmanship: A translational study for improving field manuals and standard operating procedures for the modern warfighter*" College of Health Sciences Grants for Strategic Transformation Applied and Translational Research Fund, University of Texas at El Paso (2020), **Awarded:** $5,000

   Contribution: Conducted literature reviews, developed and refined study methodology, assisted in proposal writing, and managed data analysis plan.

8. Co-Investigator: "*Capital Equipment for the Development and Improvement of Future Clinical Professionals*" Blue Bell Foundation Grant (2019), **Awarded:** $5,000

   Contribution: Assisted in the formulation and editing of the research proposal.

9. Principal-Investigator: "*Investigation of Quadriceps to Hamstring Co-activation Patterns During Repetitive Drop Landing Tasks Under Various Levels of Fatigue*" Dodson Research Grant, University of Texas at El Paso (2019), **Awarded:** $2,441

   Contribution: developed research concept, methodology, and writing of the entire proposal.

Non-Funded Grant Proposals

1. Co-Investigator: "*Targeted Hemorrhagic and Ischemic Assessment Device Methodology Development for the Identification and Tracking of Internal Bleeding during Prolonged Field Care*" Department of Defense Special Operations Command (2023), Invited, Scored, Not Funded: *$594,679*

2. Co-Investigator: "*Determine the Physiological Impact of Blood Loss during Sustained Operational Performance in Cold and Hypoxic Environments*" Department of Defense Peer Reviewed Medical Research Program (2023), Invited, Scored, Not Funded: $586,394

3. Co-Investigator: "*Determine Real-Time Cerebral Neuroplastic Changes during Therapeutic Horseback Riding in Children with Autism Utilizing Functional Near-Infrared Spectroscopy*". Department of Defense, Autism Research Program (2023), invited, Scored, Not Funded: $623,854

4. Co-Principal Investigator: "*Improving Clinical and Neurophysiological Assessment Tools in Patients with Chronic Spinal Cord Injuries During Dose-Dependent Intermittent Hypoxic Treatment*" Department of Defense Congressionally Directed Medical Research Program (2022) Invited, Not Funded: $1,724,098

5. Principal Investigator: "*Terrestrial Altitude versus Simulated Altitude: A Pilot Investigation of Compensatory Mechanisms, Blood Biomarkers, and Changes in Cognitive Performance*" Wilderness Medical Society (2021), Scored, Unfunded: $4,792

6. Co-Investigator: "*Influence of Over-The-Counter Medications on the Rate of Hypoxia, Cognition, and Flight Performance in Pilots*" Federal Aviation Administration (2021), Not Funded: $145,342

7. Co-Investigator: "*Tracking Sensorimotor Function and Neuromuscular Degradation Utilizing the Electromechanical Delay Approach*" National Aeronautics and Space Administration (2021), Invited, Submitted, Not Funded: $150,000.

8. Co-Investigator: "*Reduced Oxygenation Habitation as a Countermeasure for Microgravity Exposure and Resource Preservation*" National Aeronautics and Space Administration (NASA), Invited, Submitted, Not Funded: $150,000.

9. Co-Investigator: "*Comparing glucose, insulin, and metabolic flexibility after meals containing beef versus plant-based alternatives in diabetic, Hispanic/Latinx men and women and translating physiological research from bench to bedside with online nutrition education on including beef in a healthy diabetic diet*" National Cattlemen's Beef Association (2021). Invited, Submitted, Not Funded: $196,552.

10. Principal Investigator: "*The Effects of Hydration Practices on Work Performance During a Self-Paced Fatiguing Task in a Hot and Dry Environment*" Dodson Research Grant, University of Texas at El Paso (2021), Scored, Not Funded: $2,150

11. Co-Investigator: "*Optimal astronaut and spacesuit weight for sustained work on future Mars missions*" National Aeronautics and Space Administration (2020), Invited, Submitted, Not Funded: $150,000

12. Co-Investigator: "*Determining a Sustainable Work Capacity for Astronauts in Lunar and Martian Environments*" National Aeronautics and Space Administration (2020), Invited, Submitted, Not Funded: $150,000

13. Co-Investigator: "*Tracking sensorimotor function and neuromuscular degradation utilizing voluntary electromechanical delay and reflex-electromechanical delay*" National Aeronautics and Space Administration (2020), Invited, Submitted, Not Funded: $150,000

14. Principal investigator: "*Alterations in Human Performance During Acute Exposure to a Combined Hypoxia and Cold Environment*" Dodson Research Grant University of Texas at El Paso (2020), Submitted, Not Funded: $2,250

15. Co-Investigator: "*Implementation of a Neuromusculoskeletal Rehabilitation Device for Soldiers with Limb Loss or Limb Trauma*" Department of Defense (2019), Invited, Not Funded: $1,500,000

Research

In Review Publications

1. Ugale, C.B., **Salmon, O.F.,** Segovia, M.D., & Smith, C.M. (In Review). Methodology for Non-Invasively Identifying and Tracking Mild Traumatic Brain Injuries Using Functional Near-Infrared Spectroscopy and a Short Reaction Time Testing Protocol. *MethodsX*

2. Smith, C.M., **Salmon, O.F.**, Segovia, M.D., Statz, T.X., Ugale, C.B., Rauth, R.M., Mastrodicasa M. J., Shim, J. (In Review). Hemodynamic Responses of the Prefrontal Cortex Following Cold Water Immersion during an Eyes-Closed Balance Assessment. *European Journal of Applied Physiology*

3. Smith, C.M., **Salmon, O.F**., Statz, T.X., Segovia, M.D., Ugale, C.B., Rauth, R.M. (In Review). Cold Water Immersion: Simultaneous Assessment of Cerebral Oxygenation, Vascular Function, and Thermoregulatory Responses. *Journal of Military Medicine*

4. Rauth R.M., Thompson, J.R., **Salmon, O.F.,** Segovia, M.D., Ugale C.B., Shim, J., Smith, C.M. (In Review). Night Vision Goggles: Influence of Cognition, Gait, and Tactical Tasks. *Journal of Special Operations Medicine*

Peer-Reviewed Publications

5. **Salmon, O.F.,** Statz, T.X., Ugale, C.B., Segovia, M.D., Thompson, J.R., Dobbs, H.D., Rauth, R.M., Smith, C.M. (2025). Performance-Based Differences in Prefrontal Cortex Activation: Assessing Dynamic Marksmanship Performance Using Functional Near-Infrared Spectroscopy. *Journal of Special Operations Medicine*

   Journal: Special Operations Medicine is a Q3 journal in Medicine with an H-index of 28. This journal is the leading journal in tactical, operational, and clinical medicine, specifically addressing the work of Special Operations medical professionals.

   Contribution: My Role in this publication was the primary author, designing the study, managing data collection, performing all statistical analyses, and writing the manuscript.

   Summary: This manuscript investigated the usability of neuroimaging over the prefrontal cortex to assess group performance differences during a dynamic marksmanship task.

6. Smith, C.M. & **Salmon, O.F.** (2024). Safety and Effectiveness of Acute Intermittent Hypoxia during a Single Treatment at Different Hypoxic Severities. *Respiratory Physiology & Neurobiology*

   Journal: Respiratory Physiology & Neurobiology is a Q2 journal in Pulmonary and Respiratory Medicine with an H-index score of 109. This journal has a CiteScore of 4.7 and is ranked 56/144 in Pulmonary and Respiratory Medicine.

   Contribution: My Role in this publication was the co-author who recruited participants, managed data collection, performed statistical analysis, and contributed to the writing of the manuscript

   Summary: This manuscript examined the safety and effectiveness of therapeutic intermittent hypoxia used to induce neuroplasticity.

7. Ugale, C.B., **Salmon, O.F.,** Segovia, M.D., Smith, C.M. (2024). Impact of Acute Hypoxic Exposure on Neuromuscular and Hemodynamic Responses During Step Intensity Dynamic Constant External Resistance Leg Extension Exercise. *Journal of Electromyography and Kinesiology*

   Journal: JEK is a Q2 journal in Neuroscience with an H-index score of 109. This journal has a CiteScore of 4.8 with a ranking of 146/373 in Neurology (Clinical).

   Contribution: My Role in this publication was a co-author and co-mentor of the primary author, who designed the study, assisted in performing statistical analysis, and writing of the manuscript.

   Summary: This manuscript highlights the impact of acute altitude exposures on muscle function at varying levels of intensity.

8. Segovia, M.D., **Salmon, O.F**., Ugale, C.B., Smith, C.M. (2024). The Effects of Cold Exposure, Hypoxia, and Fatigue on Pistol Marksmanship and Target Engagement Decision Making in Trained Marksmen. *Journal of Strength and Conditioning Research*

   Journal: JSCR is a Q1 journal in Medicine with an H-index score of 151. This is a leading journal in the field of Strength and Conditioning with one of the only Tactical Training certifications. JSCR has a CiteScore of 6.9 and a ranking of 21/226 in Physical Therapy, Sports Therapy, and Rehabilitation.

   Contribution: My Role in this publication was a co-author and co-mentor of the primary author, who designed the study, assisted in performing statistical analysis, and writing of the manuscript.

   Summary: This manuscript identified the impact of multi-environmental stressors on tactical performance in trained marksmen. This article aims to guide future research and standard operating procedures for extreme cold-weather tactical decisions.

9. Smith, C.M., Ugale, C.B., Segovia, M.D., Lee, K.M., Galluci, A.R., Thompson, J.R., Dobbs, H.B., **Salmon, O.F.** (2024). Tracking the Recovery of a Mild Traumatic Brain Injury Patient Utilizing a 60-s Combined Functional Near-Infrared Spectroscopy and Psychomotor Testing Approach: A Case Study. *Journal of Clinical Case Reports, Medical Images, and Health Sciences*

   Journal: JCRMIHS is a Q1 journal in Clinical Case Reports with an impact factor of 2.5. This manuscript was our team's first published peer-reviewed case study, and this journal specializes in open-access case reports for clinical dissemination.

   Contribution: My Role in this publication was a co-author, who wrote and designed the study protocol and coordinated data collection, as well as co-writing and editing the final manuscript.

Summary: This manuscript is the first case study to track a traumatic brain injury shortly after occurrence until a return to play decision was made. I co-developed the neuroimaging methodology for identifying and tracking mild traumatic brain injuries in field settings.

10. **Salmon, O.F.,** Segovia, M.D., Ugale, C.B., Smith, C.M. (2023). The Impact of Cold, Hypoxia, and Physical Exertion Multi-Stressor Environments on Pistol Accuracy and Tactical Performance. *Journal of Thermal Biology*

    Journal: JTB is a Q1 journal in Biology with an H-index score of 75. This manuscript was an invited, special edition publication with a focus on environmental stressors on human performance and safety. JTB has a CiteScore of 5.2 and is ranked 33/213 in Agricultural & Biological Sciences.

    Contribution: My Role in this publication was the primary author, designed the study, performed the statistical analysis, and writing of the manuscript.

    Summary: This manuscript is the first to examine the impact of multi-stressor environments on tactical performance.

11. Smith C.M., Segovia M.D., **Salmon, O.F.** (2023). Impact of Reduced Weight on Motor and Cognitive Function in Astronaut Analogs: A Simulated Lunar Gravity Workload Study. *Acta Astronautica*

    Journal: Acta Astronautica is a Q1 journal in Aerospace Engineering with an H-index score of 97. This was a flagship paper in the issue it was published in. Furthermore, Acta Astronautica is the leading international journal on space engineering and physiology. This journal has a CiteScore of 4.4 with a ranking of 31/91 in Astronomy and Astrophysics.

    Contribution: My Role in this publication was the study coordinator, performed all statistical analyses, and co-wrote the manuscript.

    Summary: This manuscript is the first to examine the impacts of sustained terrestrial movements on cognitive load, error rates, and physiological responses. The goal of this paper was to help shape the physical and cognitive load monitoring and standard operating procedures in the upcoming Artemis Missions, focusing on lunar exploration.

12. Smith, C.M., **Salmon, O.F**., Jenkins, J.R. (2023). Neuromuscular and Muscle Tissue Hemodynamic Responses When Exposed to Normobaric Hypoxia during Lower-Body Fatiguing Muscle Actions. *Journal of Musculoskeletal and Neuronal Interactions*

    Journal: JMNI is a Q3 journal in Physiology with an H-index score of 70. This journal has a CiteScore of 3.1 with a ranking of 124/298 in Orthopedics and Sports Medicine.

    Contribution: My Role in this publication was the co-author, who wrote and designed the study protocol, performed all statistical analyses, and co-wrote the manuscript.

    Summary: This manuscript combined the neuromuscular and hemodynamic responses during localized fatigue under normoxic and hypoxic conditions.

13. **Salmon, O.F**., Housh, T.J., Hill, E.C., Keller, J.L., Anders, J.V., Johnson, G.O., Schmidt, R.J., Smith, C.M. (2022) Changes in Neuromuscular Response Patterns Following 4-weeks of Leg Press Training During Isokinetic Leg Extensions. *Journal of Strength & Conditioning Research*

    Journal: JSCR is a Q1 journal in Medicine with an H-index score of 151. This is a leading journal in the field of Strength and Conditioning with one of the only Tactical Training certifications. JSCR has a CiteScore of 6.9 and a ranking of 21/226 in Physical Therapy, Sports Therapy, and Rehabilitation.

    Contribution: My Role in this publication was to perform the primary statistical analysis and wrote the entire manuscript.

    Summary: This manuscript examined the velocity-based improvements in performance and the associated neuromuscular adaptations following a structured training program in ROTC members.

14. Shoemaker, M.E., **Salmon O.F.,** Smith, C.M., Duarte-Gardea, M.O., Cramer J.T. (2022). Influence of Vitamin D, and Iron Status on Skeletal Muscle Health: A Narrative Review. *Nutrients*

    Journal: Nutrients is a Q1 journal in Nutrition and Dietetics as well as Food Sciences with an H-index score of 178. This was an invited review from a funded grant. Nutrients has a CiteScore of 9.0 with a ranking of 39/359 in Food Science.

    Contribution: My Role in this publication was the applied physiologist, author of the muscular physiology and inflammation sections, performed literature review analysis and formulation of review tables, was a co-investigator on the grant, and assisted in writing the manuscript.

    Summary: This manuscript was from a funded research project where I served as the Co-investigator and specialized as the neuromuscular physiologist. This review article was the first to examine and synthesize available literature targeting muscle health and Vitamin D, and Iron status.

15. Jenkins, J.R, **Salmon, O.F.,** Smith, C.M. (2022). Cognitive Function is Unaffected during Acute Hypoxic Exposure but was Improved Following Exercise, *International Journal of Exercise Science*

    Journal: International Journal of Exercise Science is a Q1 journal in Occupational Therapy as well as a Q2 in Health and Physical Therapy with an H-index score of 12. This journal has a CiteScore of 2.9 with a ranking of 5/28 in Occupational Therapy.

    Contribution: My Role in this publication was a co-author, who wrote and designed the study protocol and coordinated data collection, as well as co-writing and editing the final manuscript.

    Summary: This manuscript examined the impact of acute hypoxic exposures on cognitive function in a tactical population.

16. Smith, C.M., **Salmon, O.F.,** Jenkins, J.R. (2021). Effect of Moderate and Severe Hypoxic Exposure Coupled With Fatigue on Psychomotor Vigilance Testing, Muscle Tissue Oxygenation, and Muscular Performance. *Current Research in Physiology*

    Journal: CRP is a Q3 journal in Physiology and Medicine with an H-index score of 8. This journal has a CiteScore of 1.6 with a ranking of 77/102 in Physiology (Medical).

    Contribution: My Role in this publication was the co-author, who wrote and designed the study protocol, performed all statistical analyses, and co-wrote the manuscript.

    Summary: This manuscript examined the role of hypoxic severity in impacting psychomotor vigilance, lower-body strength, and muscle tissue oxygenation for operators who work in high-altitude environments.

17. Jenkins, J.R., **Salmon, O.F.,** Smith, C.M. (2021) Moderate and Severe Acute Normobaric Hypoxia and the 3 Repetition Deadlift, Hand-Release Push-Up, and Leg Tuck Event from the Army Combat Fitness Test. *Military Medicine*

    Journal: International Journal of Exercise Science is a Q1 journal in Occupational Therapy as well as a Q2 in Health and Physical Therapy with an H-index score of 12. This journal has a CiteScore of 2.9 with a ranking of 5/28 in Occupational Therapy.

    Contribution: My Role in this publication was the co-author, who wrote and designed the study protocol, performed all statistical analyses, and co-wrote the manuscript.

    Summary: This manuscript examined the impact of acute hypoxic exposures on performance during tasks of the Army Combat Fitness Test (ACFT)

18. Jenkins, J.R., **Salmon, O.F.,** Hill, E.C., Boyle, J.B., Smith, C.M. (2021). Neuromuscular Responses at Acute Moderate and Severe Hypoxic Exposure During Fatiguing Exercise of the Biceps Brachii. *Current Research in Physiology.*

    Journal: CRP is a Q3 journal in Physiology and Medicine with an H-index score of 8. This journal has a CiteScore of 1.6 with a ranking of 77/102 in Physiology (Medical).

    Contribution: My Role in this publication was the co-author, who wrote and designed the study protocol, performed all statistical analyses, and co-wrote the manuscript.

    Summary: This manuscript examined how the severity of hypoxia impacts the time course of localized muscle fatigue of the upper body during repetitive muscular contractions performed until voluntary fatigue.

19. **Salmon, O.F.** (2021). The Effects of a Combined Multi-Stressor Environment and Fatigue on Pistol Shooting Performance (Master's Thesis, The University of Texas at El Paso). *ProQuest Dissertations and Theses Global*

Media Appearances and Unpublished Work

1. Smith, C. M., & **Salmon, O. F.** (2020). COVID-19 Survival Survey. Results published in the *University Campus Newsfeed*. The University of Texas at El Paso. Available at:

https://www.utep.edu/newsfeed/campus/utep-survey-reveals-hidden-health-and-wellness-benefits-of-covid-19-pandemic.html

Contribution: Designed and developed survey questions, coordinated the translation and creation of a Spanish-language version, and conducted data analysis.

**Transitioned research directive during the height of COVID-19 closures when human-subject research was paused*

Conference Presentations

1. Boddy, A., Smith, C., **Salmon, O.,** Mastrodicasa, M., Silva, A., Barrett, T. (2025). Functional and Neuroplastic Changes Following a 4-Week Non-Motorized Treadmill Training Program: A Pilot Study. *International Congress of Parkinson's Disease and Movement Disorders* (Abstract Presentation)

2. **Salmon, O.,** Statz, T., Mastrodicasa, M., Segovia, M., Ugale, C., Rauth, R., Smith, C. (2025). Beyond Cold Hands: Investigating Sex-Specific Differences in Cerebral Hemodynamics Following Cold Exposure. *Advancing Systems and Practice through Innovation, Research and Education (ASPIRE) Human Factors and Ergonomics Society (HFES) International Meeting* (Abstract Presentation)

3. Rauth, R.M., Thompson, J.R., Segovia, M.D., **Salmon, O.F.**, Ugale, C.B., Smith, C.M. (2025). Night Vision Goggles' Impact on Neurophysiology and the Relation to Tactical Performance, Obstacle Clearance and Cognitive Assessments. *Military Health System Research Symposium Meeting* (Abstract Presentation)

4. Rossler, K., Smith, C.M., **Salmon, O.F.**, Ugale, C.B., Segovia, M.D., Rauth, R.M., Statz, T.X. (2025). Conducting a Simulated Cold Weather Operation to Examine Anxiety and Capabilities to Perform Combat Casualty Care Skills. *Military Health System Research Symposium Meeting* (Abstract Presentation)

5. Smith, C.M., Rossler, K., Segovia, M.D., Rauth, R.M., **Salmon, O.F.**, Ugale, C.B., Statz, T.X. (2025). Impact of Cold Air and Cold Water Immersion on Neural Activation Over the Prefrontal Cortex during Marksmanship Assessments. *Military Health System Research Symposium Meeting* (Abstract Presentation)

6. Smith, C.M., Ugale, C.B., Segovia, M.D., Lee, K.M., Galluci, A.R., Thompson, J.R., Dobbs, H.B., **Salmon, O.F.** (2025) Novel Functional Near-Infrared Spectroscopy Signal Analysis Methodology for the Identification of Mild Traumatic Brain Injuries in Field and Clinical Evaluations. *Military Health System Research Symposium Meeting* (Abstract Presentation)

7. Ardolino E.M., Flores, M.B., Ugale, C.B., **Salmon, O.F.,** Smith, C.M. (2024) Functional Changes and Neurophysiological Adaptations in Cerebral Palsy after a Three-Week Intensive: A Case Series. *American Physical Therapy Association (APTA) Combined Sections Meeting* (Abstract Presentation)

8. **Salmon, O.F.,** Segovia, M.D., Ugale, C.B., Smith, C.M. (2023). Does Intermittent Hypoxia Elicit Dose-Dependent Strength and Neuromuscular Responses in Healthy Adults? *National Strength and Conditioning Association National Conference* (Abstract Presentation)

9. Smith C.M., **Salmon, O.F**., Segovia, M.D., Ugale, C.B., Lee, K., Gallucci, A.R. (2023). Combined fNIRS and Psychomotor Testing for Quantifying Concussions in an Athlete: Case Study. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

10. Segovia, M.D., **Salmon, O.F.,** Ugale, C.B., Smith, C.M. (2023). Does Environmental Cold Exposure and Fatigue Affect Pistol Marksmanship and Decision Making? *National Strength and Conditioning Association National Conference* (Abstract Presentation)

11. Ugale, C.B., **Salmon, O.F.,** Segovia, M.D., Smith, C.M. (2023) Impact of Acute Hypoxic Exposure on Neuromuscular responses During Step Intensity Dynamic Constant External Resistance Leg Extension Exercise. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

12. **Salmon, O.F.,** Jenkins J.R., Segovia M.D., Jauregui J.H., Gonzales S.A., Smith, C.M., (2022). Influence of Acute Cold Exposure and Fatigue on Pistol Shooting Accuracy and Magazine Reload Performance: Insights into Tactical Motor Skills. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

13. **Salmon, O.F.,** Jenkins, J.R., Jauregui, J.H., Gonzales, S.A., Smith, C.M. (2022) Interaction Between Individual and Combined Cold and Hypoxic Stress on Sandbag Deadlift Performance. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

14. Jenkins J.R., **Salmon, O.F.,** Jauregui J.H., Gonzales S.A., Smith, C.M. (2022). Electromyographic and Hemodynamic Function of the U.S. Army MDL Not Affected by Two Levels of Hypoxia but Does Cause Variation in Hemodynamic Recovery. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

15. Jauregui J.H., **Salmon, O.F.,** Jenkins J.R., Gonzales S.A., Smith, C.M. (2022). Positive Pressure Treadmill Walking Alters Neuromuscular Performance and Gait to Maintain Efficiency. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

16. Gonzales S.A., **Salmon, O.F.,** Jenkins J.R., Jauregui J.H., Smith, C.M. (2022) Metabolic and Psychomotor Function During Lower-Body Positive Pressure Treadmill Walking. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

17. **Salmon, O.F.,** Jenkins, J.R., Smith, C.M. (2021). The independent and combined effects of environmental exposure and fatigue on pistol marksmanship: a pilot study. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

18. Jenkins J.R., **Salmon, O.F.,** Smith, C.M. (2021). Body mass index is not related to army combat fitness performance at baseline elevation or at acute hypoxic exposure simulated at 7,000 ft and 10,000 ft. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

19. Jenkins J.R., **Salmon, O.F.,** Smith, C.M. (2021). Acute hypoxic exposure does not affect performance on the Army combat fitness test of the 3-repetition deadlift, hand-release push-up, and leg tuck. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

20. **Salmon, O.F**., Smith, C.M. (2020). Velocity-specific neuromuscular adaptations following 4 weeks of dynamic constant external resistance leg press training. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

21. Jenkins, J.R., **Salmon, O.F**., Smith, C.M. (2020). The effect of acute altitude exposure on electromyographic amplitude and frequency responses during fatiguing single leg extension exercise. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

22. Sanchez, H., **Salmon, O.F**., Jenkins, J.R., Smith, C.M. (2020). Time course changes of neuromuscular patterns during repetitions to failure following 4-weeks of leg press training using two different modes. *National Strength and Conditioning Association National Conference* (Abstract Presentation)

23. Mendoza, J., **Salmon, O.F**., Jenkins, J. R., Smith, C.M. (2020). Does 4-weeks of leg press training influence electromechanical delay measurements and improve performance? *National Strength and Conditioning Association National Conference* (Abstract Presentation)

Academic & Professional Service

Professional Service:

Managed equipment ordering and maintenance for exercise physiology laboratories (2025)
Baylor University
Outstanding Graduate Instructor Judge (2024)
Baylor University
Designed and operated Marksmanship Testing/Training Sessions (2021-2022)
University of Texas at El Paso ROTC program

List of Journals Having Served as a Reviewer:

2025 – Present	Frontiers in Neuroscience (1)
2025 – Present	Physiology & Behavior (1)
2025 – Present	Frontiers In Behavioral Neuroscience (1)
2025 – Present	Annals of Medicine (1)
2024 – Present	Journal of Sports Science (1)
2024 – Present	Acta Astronautica (2)
2020 – Present	Perceptual and Motor Skills (5)

Professional Memberships

2021 – Present	Human Factors and Ergonomics Society (HFES)
2021 – Present	American Physiological Society (APS)
2021 – Present	Wilderness Medical Society (WMS)
2021 – Present	Association of Military Surgeons of the United States (AMSUS)
2021 – Present	The Physiological Society
2021 – Present	Aerospace Physiology Society
2021 – Present	Aerospace Medical Association (AsMA)
2020 – 2024	NASA Solicitation and Proposal Integrated Review and Evaluation Systems (NSPIRES)
2019 – Present	National Strength and Conditioning Association (NSCA)
2017 – Present	American College of Sports Medicine (ACSM)

Laboratory Skills

Near Infrared Spectroscopy (NIRS) and functional Near Infrared Spectroscopy (fNIRS)
Surface Electromyography (EMG)
Mechanomyography (MMG)
Point of Care Testing Procedures (e.g., Hemoglobin, Hematocrit, Lactate, Cholesterol, Glucose)
Dual Energy X-ray Absorptiometry: Body Composition and Bone Density Analysis (GE Lunar iDXA)
Ultrasonography: Arterial blood flow, skeletal muscle anatomy, and skeletal muscle architecture analysis
Isokinetic Dynamometry Testing
Force Plate Analysis
Skinfolds for Body Composition
Phlebotomy and IVs
Manual Blood Pressure
Pulse Oximetry
Metabolic Testing Rate (Indirect Calorimetry)
Strength Testing
Graded Exercise and Respiratory Gas Exchange Testing (Parvo Medics Metabolic Cart)
Submaximal and Maximal Treadmill Testing
Pulmonary Spirometry Testing
Twelve-Lead Resting and Exercise Electrocardiography
Cardiac Rehabilitation Exercise Prescription and Patient Monitoring)

LabVIEW data processing
R programming language
Python
IBM SPSS Statistics
GraphPad Prism Statistics Software

Professional Development

2021 – Present	CPR/AED for Professional Rescuers (American Red Cross)
2020 – Present	Self-paced LabVIEW course training
2022 – Present	Self-paced RStudio course training
2019 – Present	Assisted in the development and establishment of the Human and Environmental Physiology Laboratory (HEPL)
2019 – Present	National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialist (CSCS)
2017 – Present	American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACSM-EP)
2017 – 2019	Phlebotomist Certification

Awards/Career Achievements

2023 – 2024	Recognition for Excellence in teaching in the field of STEM, Baylor University
2022 – 2023	Outstanding Graduate Instructor Award in the field of STEM, Baylor University
2013	Boy Scouts of America – Eagle Scout Award

Community and Faith Service:

2023 – 2024	Volunteer at Caritas Food Pantry, Waco, TX
2021 – 2022	Volunteer Instructor for Rite of Christian Initiation of Adults (RCIA) Queen of Peace Catholic Church, El Paso, TX
2017 – 2019	Volunteer Medical Assistant at People's City Mission, Lincoln, NE