# Jacob Bowie, Ph.D. M.S., B.S.

221 Pine Lake Drive
Coventry, CT 06238

860.710.2949
Jacob.Bowie2@Gmail.com
Jacob.Bowie@UConn.edu

2095 Hillside Road, U-1110
Department of Kinesiology
Human Performance Laboratory
University of Connecticut
Storrs, CT 06269-1110
www.hpl.uconn.edu
www.ecleelab.com

## CURRENT POSITION

**Postdoctoral Researcher, Human Performance Laboratory/Korey Stringer Institute** 2025-present
Department of Kinesiology, University of Connecticut, Storrs, CT

**Adjunct Assistant Professor, Department of Health Sciences,** 2025-present
University of Hartford, Hartford, CT

**Graduate Research/Teaching Assistant, Human Performance Laboratory** 2018-2024
Department of Kinesiology, University of Connecticut, Storrs, CT

## EDUCATION and TRAINING

Postdoctoral Fellowship, Department of Kinesiology, University of Connecticut, Storrs, CT 2025-2026

Ph.D., Kinesiology, University of Connecticut, Storrs, CT 2020-2024
Dissertation: *Physiological Modeling and Machine Learning in Exercise-Heat Acclimation of Men and Women*
Advisor: Dr. Elaine Lee
**Graduate Travel Award, NASA CT Space Grant Consortium, 2024**
**NEACSM President's Cup Competition, Doctoral Student Investigator, Finalist, 2024**
**NEACSM Student Investigator Competition, Doctoral, Winner, 2023**
**Graduate Research Fellowship, NASA CT Space Grant Consortium, 2021**

M.S., Kinesiology, University of Connecticut, Storrs, CT 2018-2020
Thesis: Bowie J. *Genome-wide RNAi Screen of Kinase Pathways Regulating rrt-1 Constitutive Cytoprotective Gene Expression*
Advisor: Dr. Elaine Lee
**Linda S. Pescatello Scholarship, 2019**

B.S., Exercise Science, University of North Carolina Wilmington, Wilmington, NC 2015-2017
Thesis: *Differences in Muscle sEMG Activity During Dynamic Knee Extensions to Fatigue with High and Low Loads*
Advisor: Dr. Wayland Tseh
**University and Departmental Honors, 2017**
**Undergraduate Research Scholar**
**Magna Cum Laude**
**Celebration of Achievement Student Speaker**

## SCHOLARLY WORK/PUBLICATIONS

## PUBLICATIONS

### PUBLISHED/IN PRESS/REVIEW

5 **Bowie JS,** Lee EC**.** One-hour weekly exercise protocol improves strength and aerobic fitness. (2025). Journal of Strength and Conditioning Research, *In Review*

4 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC, (2025). Heat tolerance classification criteria require population-specific thresholds for accurate assessment of acclimation state. *Physiological Reports*. doi:10.14814/phy2.70745

3 **Bowie, JS**, Sterczala AJ, Kraemer WJ, Maresh CM, Comstock BA, Flanagan SD, Szivak TK, Hooper DR, Lee EC. Acute heavy resistance exercise protocol increases extracellular heat shock protein without changes in associated cytokines. (2025) Journal of Strength and Conditioning Research, *in press.*

2 Mahoney, KJ, **Bowie, JS**, Ford, AE, Perera, N, Sekiguchi, Y, Fothergill, DM, Lee, EC (2023). Plasma proteomics-based discovery of mechanistic biomarkers of hyperbaric stress and pulmonary oxygen toxicity. Metabolites, 13(9), 970.

1 Lee EC, **Bowie JS**, Fiol A, Huggins RA. Molecular aspects of thermal tolerance and exertional heat illness susceptibility. In Adams WM, Jardine JF, eds. *Exertional Heat Illness: A Clinical and Evidence-Based Guide.* Cham: Springer International Publishing; 2020:149-168.

IN PREPARATION

12 Szymanski, MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, **Bowie JS**, Casa DJ, Lee EC. Responder/non-responder classifications in heat acclimation research

11 Szymanski, MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, **Bowie JS**, Casa DJ, Lee EC. Seasonal acclimatization effects may persist and impact adaptations to heat acclimation in winter months.

10 Snell A, Pescatello LM, Chun O, Brewer GJ, Edwards KM, Earp J, **Bowie JS**, Lee EC. Oral contraceptive use and grip strength in females: an NHANES cross-sectional analysis.

9 Oh, S, Szymanski MR, Kwon OS, Casa, DJ, Morrissey-Basler, MC, Filer EM, Struder JF, Brewer GJ, Thornton, SN, Ky AT, Mahoney KJ, **Bowie JS**. Heart rate variability and sleep architecture response to repeated bouts of heat exposure.

8 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Beyond group-level comparisons: machine learning-based clustering identifies sex-specific heat acclimation phenotypes and response patterns

7 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Similar heat acclimation outcomes despite sex-specific response patterns: Evidence for equivalent adaptation potential in males and females during uncompensable heat stress

6 **Bowie JS**, Casa DJ, Lee EC. Measurement of heat acclimation

5 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Sex specific responses to a 5-day heat acclimation protocol with heat tolerance testing in compensable and uncompensable conditions

4 **Bowie JS**, Oh S, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Thornton SN, Mahoney KJ, Sekiguchi Y, Casa DJ, Lee EC. Sex-specific transcriptome responses in circulating immune cells during exercise-heat stress and acclimation.

3 Mahoney KJ, **Bowie JS**, Sekiguchi Y, Struder JF, MacDonald Z, O'Brien B, Lee EC. Nutritional recommendations for blood biomarkers in exercise and sport.

2 **Bowie J.** Genome-wide RNAi screen of kinase pathways regulating *rrt-1* constitutive cytoprotective gene expression. Master's thesis, University of Connecticut. 2020. (Thesis**)**

1 **Bowie, J.S.,** T. Barreira, M. Heinjen, T. Ballard, W. Tseh. Assessing muscular fatigue via surface electromyography during dynamic knee extensions. University of North Carolina Wilmington, 2017 (Thesis)

## RESEARCH EXPERIENCE

**Optimizing customized, precision heat acclimation protocols to enhance performance and readiness of female warfighters, DoD, PI: Douglas Casa, co-PI: Elaine C. Lee, University of Connecticut, Storrs, CT** 2022-2025

*Role: Key Personnel*

Description: I led efforts to characterize and analyze sex differences in heat tolerance before and after heat acclimation through data science and machine learning techniques.

**Enhancing lethality by targeting cognitive and physiological mechanisms of female warfighter resiliency to consecutive days of intense exercise in the heat, DoD, PI: Douglas Casa, co-PI: Elaine C. Lee, University of Connecticut, Storrs, CT** 2021-2024
*Role: Key Personnel*
Description: As part of a multi-year study with various protocols, we conducted comprehensive sample collection, including blood, saliva, sweat, and fecal matter. Multi-omic analyses were conducted, including transcriptome profiling of PBMCs, microbiome analysis of fecal samples, and metabolomic and proteomic analyses of sweat and saliva samples. Biological samples were analyzed with ELISA and flow cytometry as well. I led efforts to comprehensively analyze the data through data science and machine learning techniques.

**Blackcurrant modifies gut microbiota and reduces the risk of postmenopausal osteoporosis: a pilot randomized clinical trial, USDA, PI: Ock Chun, co-PI: Elaine C. Lee, University of Connecticut, Storrs, CT** 2021-2023
Role: *Key Personnel*
Description: I conducted human subjects testing visits, including the collection of biological samples. I isolated PBMCs and assisted with flow cytometry and ELISA analysis of candidate biomarkers. PBMC transcriptomes were sequenced and analyzed to provide a comprehensive analysis of biological pathway activation.

**Proteomic and transcriptomic-based discovery of mechanistic biomarkers in hyperbaric oxidative stress and pulmonary oxygen toxicity susceptibility, Department of Defense, PI: Elaine C. Lee, University of Connecticut, Storrs, CT, co-PI David Fothergill Naval Submarine Medical Research Laboratory, Groton, CT** 2019-2021
*Role: Data analysis*
Description: Conducted preliminary data analysis with Scaffold before interpretation of mechanistic pathways with the STRING platform.

**Aerobic Compared to Resistance Exercise Training to Promote Metabolic Health in Obesity: A Metabolomics Approach, PI: Jeanne McCaffrey, University of Connecticut, Storrs, CT** 2019-2020
*Role: Exercise training lead*
Description: Served as subject matter expert for exercise intervention operations and supervised a team of undergraduate research assistants conducting exercise training sessions for a 12-week intervention. Assisted with participant recruitment, screening, data collection, administration, and troubleshooting as well as data entry with the REDCAP platform.

**Genome-wide RNA Interference screen of stress-responsive genes in C. Elegans. PI: Dr. Elaine Lee, University of Connecticut, Storrs, CT** 2018-2021
*Role: Study Lead*
Description: Genome-wide screen of stress-responsive genes in a novel mutant strain of *C. elegans* with follow-on physiological and functional assays to characterize novel pathways in the integrated stress response. RNA isolation and sequencing

**Characterizing the effects of a 16-week suspension training system intervention. PI: Dr. Wayland Tseh, University of North Carolina Wilmington, Wilmington, NC** 2017
Description: I assisted with assembling the training environment, anthropomorphic testing, and physical performance testing.

**Injury prevalence in Special Operations forces. PI: Dr. Joshua Winters, University of Kentucky. Research conducted at Camp Lejeune, NC** 2017
Description: I administered comprehensive strength testing (Biodex isokinetic dynamometer) in a high throughput (eight participants per day) testing environment. I assisted with the collection of body composition data (BODPOD), $VO_2$max testing, Wingate anaerobic power testing, motion capture biomechanical analyses, functional flexibility assessments, and injury history questionnaires.

**Comparison of fall risk prevention interventions in older adults with comorbidities. Supervisor: Dr. Lisa Sprod, University of North Carolina Wilmington, Wilmington, NC** 2015

Description: I conducted fall risk assessments with the Balancemaster in collaboration with gerontology and nursing to determine the effects of Yoga or Tai Chi interventions on fall risk in older adults.

**Kids in parks: Examining the utilization of local parks. PI: Dr. Tamlyn Shield, University of North Carolina Wilmington, Wilmington, NC** 2015

Description: I served as a field observer collecting data on park utilization.

**Effects of the utilization of walking poles in mastectomy survivors on shoulder range of motion. PI: Dr. Lisa Sprod, University of North Carolina Wilmington, Wilmington, NC** 2015

Description: I assisted with the planning of study recruitment efforts and initial pilot testing.

## GRANTS and FELLOWSHIPS

**Funded or Pending**

| | | |
|---|---|---|
| Intelligence Community Postdoctoral fellowship: Using AI to support translational -omics approach to defining precision heat tolerance and acclimation. ORISE Intelligence Community Postdoctoral Research Fellowship Program. *In review* | $180,000 | 2025-2027 |
| **Student Travel Award, NASA Connecticut Space Grant Consortium, Funded** | $1,500 | 2024 |
| Dr. Radenka Maric Fellowship, University of Connecticut, Not funded | $3,000 | 2021-2022 |
| **Student Investigator: Effectiveness of a minimal exercise training program on athlete detraining as a model for countermeasures to microgravity effects on skeletal muscle, 2020 Graduate Fellowship, NASA Connecticut Space Grant Consortium. Funded** | $8,000 | 2021-2022 |
| Graduate assistant: Testing improvements in cognitive function and physical health associated with resistance-training based minimal training implemented in sedentary desk-workers, Harvard T. H. Chan School of Public Health ERC Grant, NIOSH. Not funded | $5,000 | 2020-2020 |
| **National Science Foundation Graduate Research Fellowship, Honorable Mention (top 10%)** | $138,000 | 2019-2022 |
| University of North Carolina Wilmington Center for the Support of Undergraduate Research and Fellowships: Research/Creative Scholarship Supplies Award. Funded | $400 | 2017 |
| Cameron Business School Entrepreneurship Pitch Competition, University of North Carolina Wilmington. 2nd place | $150 | 2015 |

## SELECTED ABSTRACTS

16 Edwards, KE, Lee, EC, Bowie, JS, Szymanski, MR, Addario, A, Ky, A, Webb, C, Mahoney, KM, Sopena, B, Wimmer, M, Murray, D, Ertel, C, Sumner, J. Can Shoe Foam Impact Biomarkers of Damage and Inflammation? Annual Brooks Run Symposium (corporate internal), October 29, 2025, Seattle, WA, Brooks Running

15 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Similar heat acclimation outcomes despite sex-specific response patterns: Evidence for equivalent adaptation potential in males and females during uncompensable heat stress. Military Health System Research Symposium 2025.

14 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Sex-specific heat tolerance criteria are necessary for accurate return-to-activity assessments. Military Health System Research Symposium 2025.

13 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Sex-specific heat tolerance criteria are necessary for accurate return-to-activity assessments. Free Communication, Presented at the American Physiological Society Summit, April 2025.

12 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Similar heat acclimation outcomes despite sex-specific response patterns: Evidence for equivalent adaptation potential in males and females during uncompensable heat stress. Free Communication, Presented at the American Physiological Society Summit, April 2025.

11 **Bowie JS**, Szymanski MR, Struder JF, Filep EM, Morrissey-Basler MC, Brewer, GJ, Thornton, SN, Mahoney, KJ, Sekiguchi, Y, Kwon OS, Chon K, Casa DJ, Lee EC. Similar heat acclimation outcomes despite sex-specific response patterns: Evidence for equivalent adaptation potential in males and females during uncompensable heat stress. Presented as a speaker for the "Thriving in the elements: emerging concepts in environmental physiology" session and as a Free Communication, Presented at the American Physiological Society Summit, April 2025.

10 **Bowie JS.** A minimal training protocol improves strength and aerobic fitness in trained and untrained populations. Free communication, American College of Sports Medicine National Conference, May 2024

9 **Bowie JS**, Oh S, Szymanski M, Struder JF, Filep EM, Morrissey-Basler M, Thornton SN, Mahoney KJ, Sekiguchi Y, Casa DJ, Lee EC. Sex-specific transcriptome responses in circulating immune cells during exercise-heat stress and acclimation. Free Communication, Presented at the American Physiological Society Summit, April 2024.

8 **Bowie JS,** Studer JF. A minimal training protocol improves strength and aerobic fitness in trained and untrained populations. Free communication, Presented at the American College of Sports Medicine New England Chapter Annual Meeting, November 2023.

7 Gordon TJ, Reynoso ST, Gonzalez D, **Bowie JS**, Ford A, Lee EC. Transcriptomic differences between mutants and wild-type C. elegans that differ in osmotic stress resiliency. McNair Scholar Symposium, University of Connecticut, Storrs, CT, July 2019.

6 **Bowie JS,** Sterczala AJ, Kraemer WJ, Maresh CM, Comstock BA, Flanagan SD, Szivak TK, Hooper DR, Lee EC. Acute heavy resistance exercise protocol induces significant physiological stress elevating extracellular heat shock protein. Free Communication, Presented at the American College of Sports Medicine Annual Meeting, May 2019.

5 **Bowie JS**, Sterczala AJ, Kraemer WJ, Maresh CM, Comstock BA, Flanagan SD, Szivak TK, Hooper DR, Lee EC. Acute heavy resistance exercise protocol induces significant physiological stress elevating extracellular heat shock protein. Presented at the American College of Sports Medicine New England Chapter Annual Meeting, November 2018.

4 **Bowie JS**, Sterczala AJ, Kraemer WJ, Maresh CM, Comstock BA, Flanagan SD, Szivak TK, Hooper DR, Lee EC. Acute heavy resistance exercise protocol induces significant physiological stress elevating extracellular heat shock protein. Presented at the Annual College of Agriculture, Natural Resources, and Health Graduate Student Research Symposium at the University of Connecticut.

3 **Bowie, JS**, Barreira T, Heinjen M, Ballard T, Tseh W. Assessing muscular fatigue via surface electromyography during dynamic knee extensions. Presented at the American College of Sports Medicine Annual Meeting. (Abstract)

2 **Bowie, JS**, Barreira T, Heinjen M, Ballard T, Tseh W. Assessing muscular fatigue via surface electromyography during dynamic knee extensions. Presented at the State of North Carolina Undergraduate Research Symposium.

1 **Bowie, JS**, Barreira T, Heinjen M, Ballard T, Tseh W. Assessing muscular fatigue via surface electromyography during dynamic knee extensions. Presented at the 5th Annual University of North Carolina Wilmington Fall Student Research and Creativity Showcase.

## DEPARTMENTAL/UNIVERSITY SERVICE

Departmental Representative, Graduate Research Council, College of Agriculture, Health, and Natural Resources, University of Connecticut, Storrs, CT — 2018-2024

Undergraduate Capstone Student Mentor (5), Department of Kinesiology, University of Connecticut, Storrs, CT — 2023-2024

## COMMUNITY INVOLVEMENT/OUTREACH

Participant, Science Straight Up, "Gene Pool" — October 26, 2018
Connecticut Science Convention Center, Hartford, CT

Skype a Scientist, University of Connecticut, Storrs, CT — 2018-current

## TEACHING AREAS

Teaching expertise encompasses genetics/genomics, exercise physiology, cell and molecular biology, bioinformatics, statistics, and strength and conditioning applications in both general and tactical populations.

EXS 240, Statistics for Kinesiology — 2025

| | |
|---|---|
| KINS 3545, Guest Lecturer, Strength and Conditioning | 2022 |
| KINS 3545, Strength and Conditioning | 2021 |
| KINS 3545W, Strength and Conditioning, W (writing) section | 2021 |
| SAT preparation, University of Connecticut College Access Program (ConnCAP) | 2019 |
| KINS 3099, Independent Study, Research | 2019 |
| GRE preparation, Louis Stokes Alliance for Minority Participation (LSAMP), NSF | 2019 |
| KINS 4510, Guest Lecturer, Mechanisms and adaptations in sport and exercise | 2023, 2024 |
| KINS 4510, Mechanisms and adaptations in sport and exercise | 2018 |
| KINS 4510W, Mechanisms and adaptations in sport and exercise, W section | 2018 |
| UNIV 1810, Freshman Year Experience for Kinesiology students | 2018 |
| KINS 4500, Physiological systems of human performance | 2018 |
| EXS 410, Guest lecturer, Strength and conditioning laboratory experience | 2016 |
| EXS 321, Guest lecturer, Biomechanics | 2015 |

## CERTIFICATIONS

| | |
|---|---|
| Master Trainer, International Sports Sciences Association | Phoenix, AZ |
| Specialist in Senior Fitness, International Sports Sciences Association | Phoenix, AZ |
| Specialist in Exercise Therapy, International Sports Sciences Association | Phoenix, AZ |
| Specialist in Fitness Nutrition, International Sports Sciences Association | Phoenix, AZ |
| Youth Fitness Trainer, International Sports Sciences Association | Phoenix, AZ |
| Specialist in Strength and Conditioning, International Sports Sciences Association | Phoenix, AZ |
| Certified Fitness Trainer, International Sports Sciences Association | Phoenix, AZ |
| USMC Black Belt Instructor, Marine Corps Martial Arts Program | Quantico, VA |
| Apprenticeship Fuel Systems Maintenance Worker, any industry, Department of the Navy | US Military Apprenticeship Program |
| Ground Safety Officer, United States Marine Corps | Camp Pendleton, CA |
| Hazardous Material/ Hazardous Waste Officer, United States Marine Corps | Camp Pendleton, CA |
| Certified Performance and Sports Scientist | National Strength and Conditioning Association |
| Certified Strength and Conditioning Specialist | National Strength and Conditioning Association |

## MILITARY SERVICE

Sergeant of Marines, United States Marine Corps — 2008-2015

Military Occupational Specialty (MOS): 1391, Bulk Fuel Specialist, 1392, Petroleum Laboratory Specialist, 0916, Martial Arts Instructor, 0917, Martial Arts Instructor Trainer, 8012, Ground Safety Officer, 8056, Hazardous Material/ Hazardous Waste Officer — Camp Pendleton, CA / Camp Lejeune, NC

Deployments: Operation Moshtarak, Enduring Freedom II/III, Afghanistan, Operation West 1-2, USS Makin Island.

Sergeant of Marines with combat deployment experience in Afghanistan, specializing in tactical fitness program development, hazardous materials management, and environmental compliance operations. Advanced through multiple leadership positions to serve as senior advisor for physical readiness and safety protocols across units of up to 1,500 personnel. Designed and implemented comprehensive pre-deployment conditioning programs for austere operational environments while establishing standardized martial arts and fitness curricula for special operations support units. Led over 70 instructional sessions in tactical fitness methodology and train-the-trainer programs, developing the next generation of military fitness leaders through hands-on mentoring and systematic curriculum development. Certified in multiple specialized areas, including ground safety operations, hazardous waste management, and advanced martial arts instruction, demonstrating analytical problem-solving abilities and regulatory compliance expertise. This military experience provides a unique foundation in high-stress decision-making, systematic training program implementation, team leadership under pressure, and human performance optimization—skills directly transferable to research leadership, graduate student mentoring, and academic program development in physiological and performance sciences.

### Military Awards

| | |
|---|---|
| Navy and Marine Corps Achievement Medal | 2012 |
| Certificate of Commendation | 2012 |
| Letter of Appreciation (2) | 2010, 2012 |
| Good Conduct Medal (twice awarded) | 2011, 2014 |
| National Defense Service Medal | 2012 |
| Afghanistan Campaign medal (with star) | 2010 |
| Global War on Terrorism Service Medal | 2010 |
| Global War on Terrorism Expeditionary Medal (USS Makin Island) | 2012 |
| Sea Service Deployment Ribbon (twice awarded) | 2010, 2014 |
| North Atlantic Treaty Organization Medal International Security Assistance Force Afghanistan | 2010 |
| Presidential Unit Citation | 2012 |
| Navy Meritorious Unit Commendation | 2012 |

### Military Education

Corporal's course (Small unit leadership and team management) (120 h) *Squad leader

Sergeant's course (Advanced leadership and personnel management) (160 h) *with distinction and director's list

Mental Health Crisis Intervention and Peer Support Training (train the trainer) (40 h)

SERE (Survival Psychology and Applied Leadership Under Stress) (120 h)

Martial arts instructor trainer course (Leadership, mentoring, character development, and ethics) (7 weeks, 370 h)

Martial arts instructor course (Leadership, public speaking, effective classroom instruction) (3 weeks, 128 h)

Agility and Strength Trainer Course (16 h)

Physical Training Coordinator's Course (40 h)

High-intensity Tactical Training Trainers' Course (40 h)

## SKILLS

| | |
|---|---|
| Public speaking | Molecular biology laboratory techniques |
| Flow cytometry | ELISA |
| Automated liquid handling | Laboratory management |
| Bioinformatics | Proteomics |
| Transcriptomics | Metabolomics |
| Research design | Phlebotomy |
| Exercise training, testing, and program design | Creative/Analytical writing |
| Mentoring | Training/Teaching |
| Data science and machine learning with R | Statistics |
| Research compliance | Database management |
| Python | High-performance computing |

## PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

| | |
|---|---|
| American College of Sports Medicine | 2016-present |
| **New England Chapter of the American College of Sports Medicine,** | 2018-present |
| **Executive Committee, Free Communications Chair** | 2025-present |
| National Strength and Conditioning Association | 2018-present |
| American Heart Association | 2018-present |
| Systems Dynamics Society | 2021-present |
| American Physiological Society | 2018-present |

## REFERENCES

Elaine C. Lee, Ph.D.
elaine.c.lee@uconn.edu

Douglas J. Casa, Ph.D.
Douglas.casa@uconn.edu

Robert Huggins, Ph.D.
Robert.huggins@uconn.edu

## SERVICE TO PROFESSION

| | |
|---|---|
| Ad hoc reviewer, Physiological Genomics | 2024-current |
| Ad hoc reviewer, Journal of Strength and Conditioning Research | 2025-current |
| Ad hoc reviewer, Frontiers in Immunology | 2026-current |