

# DANIELLE A. STERNER, PhD, CSCS

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[Google Scholar](#) | [LinkedIn](#)

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## EDUCATION:

2022- 2026

**UNIVERSITY OF CENTRAL FLORIDA, ORLANDO, FL**

PhD in Kinesiology

Advanced Quantitative Methodologies in Educational and Human Sciences Certificate

*Dissertation Topic: The Reliability, Validity, and Sensitivity of Physical Working Capacity at Pain Intensity Threshold ( $PWC_{PIT}$ )*

2020- 2022

**UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE, CHARLOTTE, NC**

Master of Science (M.S.) in Exercise Physiology

*Thesis Topic: The Effects of Resistance Exercise on Emotional Regulation and Hemodynamic Parameters in Response to Stress*

2016- 2019

**WEST CHESTER UNIVERSITY OF PENNSYLVANIA, WEST CHESTER, PA**

Bachelor of Science (BS) in Exercise Science

*Minors: Nutrition and Coaching*

## RESEARCH EXPERIENCE:

05/2026- Present

**POST-DOCTORAL SCHOLAR, College of Nursing, University of Central Florida, Orlando, FL**

- Coordinated research activities, managed wearable device data, analyzed physical activity and health outcomes, and contributed to manuscript preparation, presentations, and grant development.

07/2022- 05/2026

**GRADUATE RESEARCH AND TEACHING ASSISTANT, School of Kinesiology and Rehabilitation Sciences, University of Central Florida, Orlando, FL**

- Conducted research in the POWER lab on exercise and nutrition interventions to delay fatigue onset during anaerobic and aerobic exercise, using noninvasive assessments of cardiovascular, metabolic, and perceptual responses to resistance, sprint, and endurance training
- Collected and analyzed data from 100+ participants across multiple studies; prepared manuscripts for publication, resulting in 7 peer-reviewed articles (3 first-author)
- Mentored 15+ graduate and undergraduate students, leading to 5 co-authored presentations and publications

07/2020- 05/2022

**GRADUATE RESEARCH AND TEACHING ASSISTANT, Department of Applied Physiology, Health, and Clinical Sciences, University of North Carolina at Charlotte, Charlotte, NC**

- Investigated lower extremity injury consequences in the Biodynamics Research Laboratory, including structural, sensorimotor, neurophysiological, and behavioral changes to enhance therapeutic interventions and recovery outcomes
- Coordinated research visits, aided in data collection for 50+ participants, and mentored undergraduate students
- Contributed to study design and IRB protocol development

- 07/2020- 05/2021     **RESEARCH ASSISTANT, Department of Biology, App State North Carolina Research Campus, Kannapolis, NC**
- Conduct research in the Human Performance Laboratory regarding exercise and nutrition immunology in the community.
  - Supplement labeling and distribution for a clinical trial
  - Database organization and quality control
- 07/2017- 12/2019     **RESEARCH ASSISTANT, Department of Kinesiology, West Chester University of Pennsylvania, West Chester, PA**
- Examined sprinting biomechanics in the Human Performance Laboratory
  - Collected data from 30+ athletes using force plates and motion capture systems

## **PUBLICATIONS:**

### **Peer-Reviewed Publications (8 total; 3 first-author)**

1. Lafontant, K., Robinson, M., **Sterner, D. A.**, Lebron, M. A., Antonio, B., Livingston, J., ... Fukuda, D. H. (2026). Cell Membrane Capacitance and Characteristic Frequency Among Youth and Adults: Reference Data From NHANES 1999–2000. *Journal of the American Nutrition Association*, 1–10. <https://doi.org/10.1080/27697061.2026.2665157>
2. **Sterner, D. A.**, Stout, J. R., Antonio, B. B., Fukuda, D. H., Anderson, A. T. (2025). Physical Working Capacity at Pain Intensity Threshold (PWCPIT) in Females. *The Journal of Strength & Conditioning Research*. [DOI: [10.1007/s00421-024-05583-3](https://doi.org/10.1007/s00421-024-05583-3)]
3. Vasenina, E., **Sterner, D. A.**, Mangum, L. C., Stout, J. R., Fukuda, D. H. (2025). Effects of Vegan and Omnivore Diet on Post-Downhill Running Economy and Muscle Function. *Journal of the American Nutrition Association*. [DOI: [10.1080/27697061.2024.2421535](https://doi.org/10.1080/27697061.2024.2421535)]
4. **Sterner, D. A.**, Stout, J. R., Lafontant, K., Park, J., Fukuda, D. H., & Thiamwong, L. (2024). Phase Angle and Impedance Ratio as Indicators of Physical Function and Fear of Falling in Older Adult Women: A Cross-Sectional Analysis. *JMIR Aging*. [DOI: [10.2196/53975](https://doi.org/10.2196/53975)]
5. Lafontant, K., **Sterner, D. A.**, Stout, J. R., Fukuda, D. H. (2024). A Non-Invasive Window into Cellular Health: Phase Angle and Impedance Ratio Explained. *ACSM's Health & Fitness Journal*. [DOI: [10.1249/FIT.0000000000001030](https://doi.org/10.1249/FIT.0000000000001030)]
6. **Sterner, D. A.**, Stout, J. R., Antonio, B. B., Anderson, A. T., & Fukuda, D. H. (2024). A Proposed Test to Determine Physical Working Capacity at Pain Intensity Threshold (PWCPIT). *European Journal of Applied Physiology*. [DOI: [10.1007/s00421-024-05583-3](https://doi.org/10.1007/s00421-024-05583-3)]
7. Antonio, B. B., Stout, J. R., **Sterner, D. A.**, Anderson, A. T., & Fukuda, D. H. (2024). Examining Changes in Pain Sensitivity Following 8 Minutes of Cycling at Varying Exercise Intensities. *International Journal of Exercise Science*. [DOI: [10.70252/NIZK5519](https://doi.org/10.70252/NIZK5519)]
8. Lafontant, K., **Sterner, D. A.**, Fukuda, D. H., Stout, J. R., Park, J., & Thiamwong, L. (2024). Comparing Device-Generated and Calculated Bioimpedance Variables in Community-Dwelling Older Adults. *Sensors*. [DOI: [10.3390/s24175626](https://doi.org/10.3390/s24175626)]

### **Manuscripts in Preparation (6 total; 4 first-author)**

1. Antonio B.B., Stout, J. R., **Sterner, D. A.**, Anderson, A. T., Fukuda, D. H., (2025). Intensity-Dependent Exercise-Induced Hypoalgesia Following an Eight-Minute Cycling Intervention in Healthy Young Women. [Status: Under Review; *BMC Sports Science, Medicine, and Rehabilitation*]

2. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2025). The Reliability and Validity of Physical Working Capacity at Pain Intensity Threshold (PWCPIT). [Status: In Preparation/Under Review; Target Journal: Journal of Applied Physiology]
3. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2025). Effects of Sprint Interval Training on Physical Working Capacity at Pain Intensity Threshold (PWCPIT). [Status: In Preparation]
4. Lebron, M. A., Fukuda, D. H., **Sterner, D. A.**, Lafontant, K., Wells, A. J., Stout, J. R. (2025). Effects of Oral Rehydration Solution on Dehydration Recovery in Adults. [Status: In Preparation]
5. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Lubiak, S. M., Housh, T. J. (2025). Physical Working Capacity Thresholds: Best-Practice Recommendations to Assess Fatigue Mechanisms. [Status: In Preparation]
6. **Sterner, D. A.**, Arthur, S. T., McDermott, M. J., Stout, J. R., Bellar, D. M. (2022). The Effects of Resistance Training on Emotion Regulation and Hemodynamic Parameters in Response to a Stressful Task. [Status: In Preparation]

### **RESEARCH PRESENTATIONS: (18 total; 10 first-author)**

1. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2026). Two-Week Sprint Interval Training Increases Physical Working Capacity at The Pain Intensity Threshold. Poster Presentation at the Annual American College of Sports Medicine Annual Conference, Salt Lake City, UT.
2. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2026). Physical Working Capacity at The Pain Intensity Threshold: A new reliable Tool. Poster Presentation at the Southeast American College of Sports Medicine Annual Conference, Greenville, SC.
3. Summers R.P., **Sterner, D. A.**, Hartman I.A., Stout, J. R., Fukuda, D. H., (2026) Associations of Self-Reported Exercise-Intensity Preference and Tolerance with Pain-Anchored Endurance Performance Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
4. Hartman I.A., **Sterner, D. A.**, Summers R.P., Stout, J. R., Fukuda, D. H., (2026) Does a Sprint Interval Training Intervention Affect Perceived Exercise Tolerance? Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
5. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2025). The Impact of Exercise Tolerance on Physical Working Capacity at the Pain Intensity Threshold. Podium Presentation at the National Strength and Conditioning Association Annual Meeting, Kansas City, MO.
6. **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Bergstrom, H., Hill, E. C., Anderson, A. T. (2025). Breaking the Pain Barrier: Evaluating the Reliability and Validity of Physical Working Capacity at Pain Intensity Threshold (PWCPIT). Podium Presentation at the International Society of Sports Nutrition Conference, Delray Beach, FL.
7. **Sterner, D. A.**, Stout, J. R., Antonio, B. B., Anderson, A. T., Fukuda, D. H. (2025). Physical Working Capacity at Pain Intensity Threshold: The Influence of Individual Exercise Tolerance. Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
8. **Sterner, D. A.**, Stout, J. R., Antonio, B. B., Anderson, A. T., Fukuda, D. H. (2024). A Proposed Test for Determining Physical Working Capacity at Pain Intensity Threshold (PWCPIT). Poster Presentation at the American College of Sports Medicine Annual Conference, Boston, MA.

9. Lafontant, K., **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., Park, J. H., Thiamwong, L. (2024). Examining Device-Generated and Calculated Bioelectrical Impedance Analysis (BIA) Variables in Community-Dwelling Older Adults. Poster Presentation at the American College of Sports Medicine Annual Conference, Boston, MA.
10. Judge, L. W., **Sterner, D. A.**, Marcus, L., Kern, B., Bellar, D. (2024). Impact of COVID-19 on Strength Coaches' Empowerment and Coaching Practice. Poster Presentation at the National Strength and Conditioning Association Annual Meeting, Baltimore, MD.
11. Antonio, B. B., Stout, J. R., **Sterner, D. A.**, Wilson, A. T., Fukuda, D. H. (2024). Pain Perception Responses to Maximal Aerobic Exercise in Males and Females: A Detailed Examination. Poster Presentation at the International Society of Sports Nutrition Conference, Bonita Springs, FL.
12. Antonio, B. B., **Sterner, D. A.**, Stout, J. R., Fukuda, D. H., & Anderson, A. T. (2024). Pain Perception Responses to Maximal Aerobic Exercise in Males and Females: A Multi-Modal Assessment. Podium Data Blitz Presentation at the Annual International Society of Sports Nutrition, Medellín, Colombia.
13. **Sterner, D. A.**, Stout, J. R., Antonio, B. B., Fukuda, D. H. (2024). Development of Perceived Pain-Based Tests for Assessing Physical Working Capacity. Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
14. Vasenina, E., **Sterner, D. A.**, Stout, J. R., Fukuda, D. H. (2024). Effects of Habitual Vegan vs. Omnivore Diet on Energy Utilization and Muscle Function Recovery Following Downhill Running in Recreationally Trained Participants. Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
15. Lafontant, K., **Sterner, D. A.**, Fukuda, D. H., Stout, J. R., Park, J. H., Thiamwong, L. (2024). Relationship Between Segmental and Whole-Body Bioelectrical Impedance Variables in Community-Dwelling Older Adults. Oral Presentation at the Southeast American College of Sports Medicine Annual Meeting, Greensboro, NC.
16. **Sterner, D. A.**, Stout, J. R., Thiamwong, L., Park, J. H., Fukuda, D. H. (2023). Low Phase Angle and Physical Functioning in Aging: A Cross-Sectional Analysis. Poster Presentation at the National Strength and Conditioning Association Annual Meeting, Las Vegas, NV.
17. **Sterner, D. A.**, Stout, J. R., McDermott, M. J., Arthur, S. T., Bellar, D. M. (2023). Effects of Individualized Daily Adjusted Progressive Resistance Exercise (DAPRE) Protocol on Muscular Strength. Poster Presentation at the University of Central Florida Student Scholar Symposium, Orlando, FL.
18. **Sterner, D. A.**, McDermott, M. J., Arthur, S. T., Bellar, D. M. (2022). The Effects of Resistance Exercise on Emotion Regulation and Hemodynamic Parameters in Response to Stress. Poster Presentation at the National Strength and Conditioning Association Annual Meeting, New Orleans, LA.

## FUNDING AND GRANTS:

### External Grants:

- 2026 Co-Lead Investigator: "Effectiveness of Interventions to promote Physical Activity During Pregnancy." **Funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development & National Institutes of Health. \$152,000**
- 2024 Co-Lead Investigator: "Effects of Oral Rehydration Solution on Dehydration Recovery in Adults" **Funded by Abbot Nutrition. \$186,000**

- 2023 Co-Investigator: "Evaluation of the protective effects of a novel dietary microalgae supplement (PeLiv) following exercise-induced muscle damage and influence on endurance capacity after prolonged consumption. **Funded by Microphyt. \$262,000**
- 2022- 2026 Graduate Research Assistant: "Physio-feedback Exercise program (PEER) to improve balance and prevent falls in older adults. **Funded by the National Institute on Aging & National Institutes of Health. \$2,300,000 total**
- 2020 Sub-Investigator: "Influence of 8-Weeks Cranberry Supplementation on the Antibody Response to Influenza Vaccination and Ex-Vivo Viral Defense." **Funded by Ocean Spray Inc. \$262,000**

## **SCHOLARSHIP AND AWARDS:**

- 2025 College of Health Professions and Sciences Conference Funding Recipient. **Awarded \$2,500**
- 2025 NSCA Foundation Challenge Scholarship. **Awarded \$2,000**
- 2024 Alpha Eta Society for Health Professions Student Research Award 2024. **Awarded \$500**
- 2023 NSCA Foundation Women's Scholarship. **Awarded \$2,000**
- 2023 NSCA Foundation Jerry Martin Scholarship. **Awarded \$2,000**
- 2023- 2025 UCF Graduate Student Travel Grant. **Awarded \$1,500 total**
- 2020 NSCA Assistantship Grant Recipient. **Awarded \$10,000**
- 2019 Ready to Succeed Scholarship. **Awarded \$1,000**
- 2018 Department of Kinesiology Scholarship. **Awarded \$1,000**
- 2017- 2019 Board of Governors Scholarship. **Awarded \$14,000 total**
- 2016- 2019 Clarks Foundation Scholarship Recipient. **Awarded \$20,000 total**
- 2016- 2019 Clarence Shock Foundation Scholarship. **Awarded \$20,000 total**
- 2016- 2019 Athletics Scholarship, West Chester University. **Awarded \$6,000 total**
- 2016 Conewago Valley Dollars for Scholars Recipient. **Awarded \$1,000**

## **TEACHING EXPERIENCE:**

### **Courses as Primary Instructor**

#### **APK3200: Motor Development and Learning, *University of Central Florida***

- Mixed-Mode; Enrollment: ~70-100 students per semester; Fall 2023, 2024, 2025; Spring 2024, 2025; Summer 2024, 2025
- Incorporated active learning modules on motor skill acquisition
- Average student evaluation: 4.7

#### **APK4550: Assessment and Evaluation in Kinesiology, *University of Central Florida***

- Face-to-Face; Enrollment: ~30 students per semester; Fall 2022, Spring 2023, Summer 2023
- Focused on practical data analysis; Integrated real-world kinesiology assessments
- Average student evaluation: 4.6

#### **KNES1202: Weight Training, *University of North Carolina at Charlotte***

- Face-to-Face; Enrollment: ~20 students; Spring 2022

#### **KNES2168L: Anatomy and Physiology I Laboratory, *University of North Carolina at Charlotte***

- Face-to-Face; Enrollment: ~40 students; Fall 2021, Spring 2022

#### **KNES3281L: Exercise Physiology Principles and Application Laboratory, *University of North Carolina at Charlotte***

- Face-to-Face; Enrollment: ~15 students; Spring 2021, Fall 2022

#### **KNES3281L: Exercise Testing Principles and Application Laboratory, *University of North Carolina at Charlotte***

- Face-to-Face; Enrollment: ~15 students; Fall 2020, Spring 2021

### **Courses as a Teaching Assistant**

SPM3504:	Administration Responsibilities in Kinesiology, <i>University of Central Florida</i>
ATR4132:	Human Injuries: Mechanism and Prevention, <i>University of Central Florida</i>
APK4203:	Essentials of Sport Science, <i>University of Central Florida</i>
APK4132:	Weight Management and Behavior Change, <i>University of Central Florida</i>
APK4119:	Exercise Prescription for Special Populations, <i>University of Central Florida</i>
APK4113:	Strength and Conditioning I, <i>University of Central Florida</i>
KNES4286:	Exercise Prescription, <i>University of North Carolina at Charlotte</i>
KNES2169L:	Anatomy and Physiology II Laboratory, <i>University of North Carolina at Charlotte</i>
KNES2150:	Introduction to Kinesiology, <i>University of North Carolina at Charlotte</i>

### **STUDENT MENTORSHIP:**

#### **Bachelor's Level (BS)**

2025- Present	Mr. Jack Noble, <b>BS</b> Kinesiology UCF
2025- Present	Mr. Aden Bush, <b>BS</b> Kinesiology UCF
2025- Present	Ms. Maia Montecalvo, <b>BS</b> Kinesiology UCF
2025- Present	Ms. Talia Katz, <b>BS</b> Kinesiology UCF
2025- Present	Ms. Isabella Hartmann, <b>BS</b> Kinesiology UCF
2024- 2025	Mr. Tommy Clark, <b>BS</b> Kinesiology UCF
2024- 2025	Ms. Dali Orozco, <b>BS</b> Kinesiology UCF
2023- 2025	Ms. Aryanna Smith, <b>BS</b> Kinesiology, UCF
2023- 2025	Mr. Benjamin Veradi, <b>BS</b> Kinesiology UCF
2023- 2024	Ms. Mariana Rivera-Maldonado, <b>BS</b> Kinesiology UCF
2022- 2024	Mr. Jack Livingston, <b>BS</b> Kinesiology, UCF
2022- 2024	Mr. Jack Cregan, <b>BS</b> Kinesiology, UCF
2022- 2024	Ms. Elayna Andrews, <b>BS</b> Kinesiology, UCF
2021- 2022	Ms. Kathy Bui, <b>BS CSCS</b> Exercise Physiology UNCC
2021- 2022	Ms. Alexis Lang, <b>BS CSCS</b> Exercise Physiology UNCC

#### **Master's Level (MS)**

2022- 2024	Ms. Brandi Antonio <b>MS</b> CISSN Kinesiology UCF
2024- Present	Mr. Jack Livingston, <b>MS</b> Kinesiology UCF
2021- 2022	Mr. Adam Schneeberger, <b>MS CSCS</b> Exercise Physiology UNCC

### **PROFESSIONAL EXPERIENCE:**

05/2020– 08/2020	<b>STRENGTH AND CONDITIONING COACH, Harlem Lacrosse Non-Profit Organization, Philadelphia, PA (10 hrs/week)</b> <ul style="list-style-type: none"> <li>• Virtually programmed and coached 20+ youth lacrosse athletes, adapting exercises for home training to improve performance metrics by ~15%</li> </ul>
07/2019– 05/2020	<b>ASSISTANT STRENGTH AND CONDITIONING COACH, University of Pennsylvania, Philadelphia, PA (20-40 hrs/week)</b> <ul style="list-style-type: none"> <li>• Led team training sessions in the weight room and on-field for 50+ student-athletes; Collaborated with the sports performance team</li> </ul>

- Served as liaison with national companies for equipment maintenance; Analyzed and presented data to coaches

05/2018– 07/2018

**PERFORMANCE COACH, Elite Sports Performance, New Oxford, PA**  
(40 hrs/week)

- Resistance-trained 10–18-year-old youth athletes; Created individualized programs based on sports needs analysis and testing for 30+ clients

**SERVICE:**

2025- Present	<i>International Society of Sport Nutrition</i> – Reviewer
2025- Present	<i>Frontiers in Physiology</i> – Reviewer
2025- Present	<i>International Journal of Exercise Science</i> – Reviewer
2024- 2025	Harbor Chase Assisted Living Memory Care, Putt Putt Competition Volunteer, Orlando, FL
2023- Present	Kinesiology Graduate Student Association, President, Orlando, FL
2023- Present	Lead Coordinator for Exhibition at Orlando Science Center SPARK STEM Fest, Orlando, FL
2023- 2025	Student Ambassador for the International Society of Sports Nutrition Annual Conference, FL
2022- 2025	Student Ambassador for the Institute of Exercise Physiology and Rehabilitation Conference, Orlando, FL
2022- 2025	High School Lab Crawl Tour, Orlando, FL
2022	Reindeer Half Marathon Run Volunteer, Orlando, FL
2022- 2023	Kinesiology Graduate Student Association, Member, Orlando, FL
2022	UNCC Department of Applied Physiology, Health, and Clinical Sciences Dean Search Committee
2017- 2019	Track & Field Captain, West Chester, PA
2016- 2018	Horrocks Emerging Leaders Institute Council, West Chester, PA
2017- 2019	Student Athlete Advisory Committee, Make-A-Wish Fundraising Chair, West Chester, PA
2017- 2019	Exercise Science Club Member, West Chester, PA
2012- 2016	Institute of Athletic Leadership and Development-Training, Hanover, PA

**AWARDS AND HONORS:**

2025	NSCA National Conference Podium Presentation Doctoral Award Consideration
2025	ISSN Annual Conference Podium Presentation Doctoral Award Consideration
2025	College of Health Professions and Science Outstanding Graduate Creative Work Award, UCF
2025	College of Graduate Studies Creative Work Award Consideration, UCF
2025	NSCA Challenge Scholarship
2024	Alpha Eta Society for Health Professions Student Research Award
2022- Present	Graduate Research Assistantship, UCF
2022- Present	Graduate Teaching Assistantship, UCF
2022	Outstanding Graduate Teaching Assistant Award
2020- 2022	Dean's List, UNCC
2020- 2022	Merit Award Graduate Fellowship, UNCC
2020	NSCA Assistantship Grant Recipient

2019	Ready to Succeed Scholarship Recipient, WCU
2018	Department of Kinesiology Scholarship Recipient, WCU
2017- 2019	Board of Governors Scholarship Recipient, WCU
2016- 2019	Dean's List, WCU
2016- 2019	Clarks Foundation Scholarship Recipient
2016- 2019	Clarence Shock Foundation Scholarship Recipient, WCU
2016	NSCA Athlete of the Year Award
2016	Conewago Valley Dollars for Scholars Recipient

## **PROFESSIONAL MEMBERSHIPS AND CERTIFICATIONS:**

### **Memberships**

2024– Present	Alpha Eta Society for Health Professions
2023– Present	President, Exercise is Medicine on Campus
2023– Present	International Society of Sports Nutrition (ISSN)
2023– Present	NSCA Exercise Psychology & Educators SIG
2022– Present	Kinesiology Graduate Student Association (President, 2023–Present)
2022– Present	American College of Sports Medicine (ACSM)
2017– Present	National Strength and Conditioning Association (NSCA)

### **Certifications**

2020–Present	CPR/AED and First Aid, American Red Cross
2019–Present	Certified Strength and Conditioning Specialist (CSCS)
2018–Present	Safe Sport Certification
2017–Present	Advanced Olympic Lifting Certification (AOLC), Leo Totten Training Systems

## **RESEARCH TRAINING AND CERTIFICATIONS:**

- Good Clinical Practice
- Conflict of Interest
- Biomedical Responsible Conduct of Research
- Biomedical Research Investigators and Key Personnel
- OSHA Bloodborne Pathogens
- Basic Biosafety

## **LABORATORY AND RESEARCH SKILLS:**

### **Physiological Assessments**

- Health Screenings (CVD Risk Identification, Health History)
- Flexibility/ROM Assessments (Goniometer, Sit-and-Reach)
- Balance Assessments (BerTec Portable Essentials, CDP/IVR, Tinetti, TUG, Berg Balance Scale, BTrackS)
- Heart Rate and Blood Pressure Assessments (Acoustic Equipment, Sphygmomanometer, Palpation)
- Body Composition Assessments (Circumference, Skinfold, BodPod, Bioelectrical Impedance, A-Mode Ultrasound)
- Strength Assessments (BioDex, Hand Grip Dynamometer, 1RM Testing, Isometric Mid-Thigh Pull)
- Maximal Anaerobic Performance Testing (Wingate, Vertical Jump)
- Resting and Exercising Indirect Calorimetry (ParvoMedics, CosMed K5)
- Maximal and Submaximal VO2Max Testing (Rower, Treadmill, Cycle Ergometer)
- VO2Max Field Tests (1.5-Mile Run, Forrester Step Test, Rockport Walk Test)
- 3, 6, and 12 Lead EKGs

- Force Plate Analysis (VALD, Hawkin Dynamics)
- Passive Dehydration (Sauna)
- Muscle Damage Protocols (Downhill Treadmill Running)

### **Data Management and Analysis**

- Data Collection Techniques (Qualtrics, REDCap)
- Data Acquisition and Analysis Software (Advanced: MATLAB, SPSS, JASP, Excel; Intermediate: R)
- Human Subject Testing Protocol Design and IRB Documentation

### **Athlete Monitoring and Testing**

- Wearable Technology for Physiological and Biomechanical Monitoring (Heart Rate, GPS, Accelerometry)
- Strength and Power Testing (Isokinetic Dynamometry, Force Plates, Jump Analysis)
- Functional Movement Assessments (TPI, FMS, Gait Analysis)
- Recovery and Readiness Tracking (HRV, Subjective Scales, Sleep Monitoring)
- Sport-Specific Performance Evaluations (Spartan Training Systems, TeamBuildr)

### **Biochemical Laboratory Skills**

- Finger Stick Testing (Lactate, Glucose)
- Passive and Active Saliva Collection
- Osmolarity Analysis (Osmotech XT Osmometer)
- Centrifuging and Pipetting Samples (Urine, Saliva, Blood)
- Electrolyte Analysis (Sodium, Potassium, Chloride; Medica Easylyte)
- Hydration Analysis (Refractometer)

## REFERENCES:

### **Jeffrey R. Stout, PhD, FACSM, FNSCA, FISSN**

*Pegasus Professor, Founding Director of the School of Kinesiology and Rehabilitation Sciences in the College of Health Professions and Sciences.*

- Relationship: Doctoral Lead Mentor, Head Chair of Dissertation Committee
- Email: [Jeffrey.Stout@ucf.edu](mailto:Jeffrey.Stout@ucf.edu)
- Phone number: 407-683-6013

### **David H. Fukuda, PhD, FACSM, FNSCA**

*Division Chair, Professor of the School of Kinesiology and Rehabilitation Sciences in the College of Health Professions and Sciences.*

- Relationship: Doctoral Co-Mentor, Member of Dissertation Committee
- Email: [David.Fukuda@ucf.edu](mailto:David.Fukuda@ucf.edu)
- Phone number: 405-651-3084

### **David M. Bellar, PhD, FACSM, FNSCA**

*President of Franciscan Missionaries of our Lady University.*

- Relationship: Master's Thesis Mentor, Head Chair of Committee
- Email: [David.Bellar@franu.edu](mailto:David.Bellar@franu.edu)
- Phone number: 216-374-2590

### **Abigail T. Anderson, PT, DPT, PhD**

*Assistant Professor of School of Kinesiology and Rehabilitation Sciences at the University of Central Florida and Director of the Rehabilitation and Modulation of Pain (RAMP) Research Laboratory.*

- Relationship: Member of Dissertation Committee
- Email: [Abigail.Wilson@ucf.edu](mailto:Abigail.Wilson@ucf.edu)
- Phone number: 404-275-0481