STEPHEN DECKER

PhD, ACSM-CEP

RESEARCH EXPERIENCE

2023

Project Manager

Institute for Applied Life Sciences — Amherst, Massachusetts

- Managed a team of 4 for an industry-sponsored research project to test and validate wearable hydration biosensors in ~30 human participants.
- Coordinated daily research efforts and facilitated good clinical research practices to ensure safety and reliability during data colleciton.

2022 | 2018

Research Assistant

University of Massachusetts Amherst — Amherst, Massachusetts

- Led NIH-sponsored projects investigating the physiological mechanisms underlying age- and cigarette smoke-related muscle dysfunction using high-resolution respirometry, ^{31}P-MR Spectroscopy, muscle performance (BIODEX, 1-RM, etc.), and measures of cardiovascular health (Doppler Ultrasound) in human subjects (IRB) and animal models (IACUC).
- Employed various methods of hypothesis testing – such as linear and nonlinear regression, parametric and nonparametric null-hypothesis significance testing, and Bayesian methods – to determine the efficacy of interventions and treatments (vs placebo) primarily using R, RStudio, RMarkdown, and RShiny for data reporting.
- Trained new graduate and undergraduate students on effective recruitment strategies and proper use of data collection tools (Doppler ultrasound, MRI, mitochondrial respiration, etc.).

2018 | 2017

Research Assistant

Utah Vascular Research Lab — University of Utah

- Recruited, coordinated and collected & analyzed data for clinical trials involving pharmacological interventions in aging and special populations.

2017 | 2016

Clinical Exercise Physiologist

Villareal Lab — Baylor College of Medicine

- Responsible for all clinical research exercise testing, prescription, and supervision over exercise sessions with high-risk clinical populations. All work was part of several clinical trials where I also coordinated subjects, and analyzed and prepared the data for reporting using Microsoft Office (Excel and Access).
- Mastered indirect calorimetry, V_{O_2max} tests, EKG, phlebotomy, muscle performance tests, and DXA scans by performing hundreds of successful tests on high-risk clinical populations, including elderly individuals with diagnosed heart diseases, PAD, hypertension, diabetes, arthritis, osteoporosis, and hypogonadism.

CONNECT WITH ME

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LINKS & RESOURCES

PubMed
LinkedIn
ResearchGate
Github
Medium

SELECTED SKILLS

- Project Management
- Professional Communication
- Data Analysis & Statistics
- R Software
- High-Resolution Respirometry
- Exercise Testing
- Phlebotomy
- Doppler Ultrasound
- *In Vivo* MR Spectroscopy

ONGOING PROJECTS

A Guide for the Analysis of High-Resolution Respirometry Data Using R. **Version 2 Available on GitHub**

*Last updated on 2023-01-07 using R version 4.2.2 and **pagedown**.*

EDUCATION

2022 | 2018

Ph.D. in Kinesiolgy (Physiology)

University of Massachusetts Amherst — Amherst, Massachusetts

- Dissertation: Mechanisms of Cigarette Smoke-Induced Mitochondrial Dysfunction in Striated Muscle and Aorta

2016 | 2014

M.S. in Kinesiology

Stephen F. Austin State University — Nacogdoches, Texas

- Thesis: Effects of High-Intensity Interval Training on Postprandial Lipemia and Glycemia.

2014 | 2010

B.S. in Kinesiology

Stephen F. Austin State University — Nacogdoches, Texas

- Graduated with honors, Cum Laude
- Undergraduate Research Project: Effects of Hot and Temperate Environments on Executive Function Tasks During Moderate and High Intensity Exercise.

SELECTED PUBLICATIONS

2023

Effects of Cigarette Smoke on *In Situ* Mitochondrial Substrate Oxidation of Slow- and Fast-Twitch Skeletal Muscles

Decker, ST, Matias, AA, Bannon, ST, Madden, JP, Alexandrou-Majaj, N, Layec, G

Life Sciences

2022

The Receptor for Advanced Glycation End Products (RAGE) is involved in Mitochondrial Function and Cigarette Smoke-Induced Oxidative Stress PubMed

Kwon, OS, **Decker, ST**, Zhao, J, Hoidal, JR, Hueckstadt, T, Sanders, KA, Richardson, RS, Layec, G

Free Radical Biology & Medicine

2021

Skeletal muscle Mitochondrial Adaptations Induced by Long-term Cigarette Smoke Exposure PubMed

Decker, ST, Kwon, OS, Zhao, J, Hoidal, JR, Hueckstadt, T, Sanders, KA, Richardson, RS, Layec, G

American Journal of Physiology - Endocrinology & Metabolism