

C. Scott Schwartz, MS, ACSM EP-C
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EDUCATION

Master of Science: Health, Exercise and Movement Sciences
Virginia Commonwealth University, Richmond, VA

Concentration: Exercise Science

Faculty Advisor: Edmund O. Acevedo, Ph.D., FACSM, FAPA, FNAK

Thesis: *The Role of Physical Activity in the Regulation of Free Fatty Acid Induced Cellular Inflammation by Liver X Receptor Alpha*

Graduated, December 2019

Bachelor of Science: Health, Physical Education, and Exercise Science
Virginia Commonwealth University, Richmond, VA

Concentration: Exercise Science

Graduated, August 2015

PROFESSIONAL EXPERIENCE

Laboratory Manager and Project Coordinator, Foundations of Lipids and Exercise Laboratory, University of South Carolina Department of Exercise Science, Columbia, SC, October 2019 – Present

- Project coordinator for R01HL146462

Research Assistant and Phlebotomist, Aging Brain Cohort Study at the University of South Carolina, Columbia, SC, October 2019 - Present

Graduate Teaching Assistant, Virginia Commonwealth University, Department of Kinesiology and Health Sciences, Richmond, VA, 2016 - 2019

Laboratory Assistant in Exercise Physiology Research Lab, Virginia Commonwealth University, Department of Kinesiology and Health Sciences, Richmond, VA, 2015 - 2017

Intern in Exercise Physiology Research Laboratory, Virginia Commonwealth University, Department of Kinesiology and Health Sciences, Richmond, VA, 2014 - 2015

Men's Basketball Sports Science & Performance Intern, Virginia Commonwealth University, Department of Kinesiology and Health Sciences, Richmond, VA, 2014 - 2015

PROFESSIONAL MEMBERSHIP

- American College of Sports Medicine Member (2015 - 2023)
- American College of Sports Medicine Member; Southeast Chapter (2014 - Present)

DEPARTMENT OR CAMPUS ACTIVITIES (All at Virginia Commonwealth University or VCU)

- VCU Men's Basketball Liaison for Performance Testing, July 2017 - July 2018

- VCU Women's Basketball Liaison for Performance Testing, July 2017 - July 2018
- VCU Exercise Physiology Research Laboratory Journal Club, Spring 2015
- VCU Exercise Science Club, Vice President, Fall 2014 - Spring 2015
- VCU Exercise Science Club, Secretary, Spring 2014 - Fall 2014

RESEARCH EXPERIENCE

Accepted Peer Reviewed Publications

1. Slusher, A.L., Patterson, V.T., **Schwartz, C.S.**, & Acevedo, E.O. (2018). Impact of high intensity interval exercise on executive function and brain derived neurotrophic factor in healthy college aged males. *Physiology & behavior*, 191, 116-122.

Manuscripts in Review

- William G. Hoffmann, Yan Q. Chen, **Charles S. Schwartz**, Jacob L. Barber, Prasun K. Dev, William A. Clarkson, Riley J. Reasons, Robert E. Gerszten, Günther Silbernagel, Robert J. Konrad, Claude Bouchard, Mark A. Sarzynski. Effects of Exercise Training on ANGPTL3/8 and ANGPTL4/8 and their Associations with Lipases, Lipids, and Body Composition.
- Hota M, Barber JL, Ruiz-Ramie JJ, **Schwartz CS**, Lam H, Rao P, Mi M, Katz DH, Falciani F, Robbins JM, Clish C, Gerszten RE, Sarzynski MA, Ghosh S, Bouchard C. Omics-driven investigation of the biology of intrinsic submaximal working capacity and its trainability.
- Morgan J.A., Franco R.L., Blanks A.M., Caslin H.L., Patterson V.T., **Schwartz C.S.**, Williams III D.S.B. Effects of a 16-week training program on the relationship between leg stiffness and energy expenditure in middle-aged half-marathon runners.
- Patterson V.T., Slusher A.L., **Schwartz C.S.**, Acevedo E.O. Perceptual Responses and Physiological Activation with Acute High Intensity Interval Ergometry in Sedentary Males.

Manuscripts in Preparation

- Miranda Maravi JS, **Schwartz CS**, Dev PK, Barber JL, Reasons RJ, Pearce RW, McPhaul MJ, Gerszten RE, Rohatgi A, Bouchard C, Collier TS, Sarzynski MA. HDL Apolipoproteomic Score, Cardiometabolic Risk, and Exercise Training.
- **Schwartz CS**, Slusher AL, Acevedo EO. LXR α mRNA Expression following Exercise and Palmitate Induced Cellular Inflammation in Fit Middle-Aged Males.

Conference Presentations

19. Miranda Maravi JS, **Schwartz CS**, Dev PK, Barber JL, Reasons RJ, Pearce RW, McPhaul MJ, Gerszten RE, Rohatgi A, Bouchard C, Collier TS, Sarzynski MA. HDL Apolipoproteomic Score, Cardiometabolic Risk, and Exercise Training.

- Poster at *American Heart Association Vascular Discovery: From Genes to Medicine Scientific Sessions*, Boston, MA (May 2023)
18. Dev PK, Miranda-Maravi S, Hoffman WG, Barber JL, **Schwartz CS**, Clarkson WA, Robbins JM, Rao P, Mi M, Ghosh S, Clish C, Silbernagel G, Chen YQ, Konrad RJ, Bouchard C, Gerszten RE, Sarzynski MA. Association of ANGPTL3/8 and 4/8 with Plasma Metabolites Before and After Exercise Training.
Poster at *American Heart Association Epi/Lifestyle Scientific Sessions*, Boston, MA (March 2023)
 17. Miranda-Maravi S, Hoffman WG, Dev PK, Barber JL, **Schwartz CS**, Clarkson WA, Robbins JM, Rao P, Mi M, Ghosh S, Clish C, Silbernagel G, Chen YQ, Konrad RJ, Bouchard C, Gerszten RE, Sarzynski MA. Plasma Proteomic Signatures of ANGPTL3/8 and 4/8 Before and After Exercise Training.
Poster at *American Heart Association Epi/Lifestyle Scientific Sessions*, Boston, MA (March 2023)
 16. **C. Scott Schwartz**, Jacob L. Barber, Sujoy Ghosh, Anand Rohatgi, Theodoros Kelesidis, Claude Bouchard, Mark A. Sarzynski. Endurance Exercise Training Improves the Anti-Oxidative Properties of High-Density Lipoproteins (HDL)
Poster at *Southeast Chapter ACSM Conference*. Greenville, SC (February 2023)
 15. Clarkson WA, Barber JL, Reasons RJ, Hamid Z, Dev PK, **Schwartz CS**, Wallis K, Robbins JM, Bouchard C, Gerszten RE, Olivier M, Rohatgi A, Sarzynski MA. Association between cholesterol efflux capacity and HDL-sized and whole plasma proteins in the HERITAGE Family Study.
Oral Presentation at *Don Fredrickson Lipid Research Conference*, Durham, NC (September 2022)
 14. Hoffman WG, Chen YQ, **Schwartz CS**, Barber JL, Clarkson WA, Dev PK, Reasons RJ, Silbernagel G, Konrad RJ, Bouchard C, Sarzynski MA. Effects of Exercise Training on ANGPTL3/8 and 4/8 and their Associations with Lipid and Cardiometabolic Traits.
Poster at *Don Fredrickson Lipid Research Conference*, Durham, NC (September 2022)
 13. Maravi SM, Clarkson WA, Barber JL, **Schwartz CS**, Dev PK, Robbins JK, Gerszten RE, Clish C, Bouchard C, Sarzynski MA. Association of lipid species measured in HDL-sized and whole plasma.
Poster at *Annual Biomedical Research Conference For Minoritized Scientists*, Anaheim, CA (November 2022)
 12. Reasons RJ, Hamid Z, Barber JL, Kass AI, Clarkson WA, Dev PK, **Schwartz CS**, Wallis K, Bouchard C, Robbins JM, Gerszten RE, Olivier M, Sarzynski MA. Association between the HDL-sized and circulating plasma proteomes.
Poster at *American Heart Association Vascular Discovery: From Genes to Medicine Scientific Sessions*, Seattle, WA (May 2022)
Poster at Discover USC (April 2023) Awarded first place for undergraduate poster session
 11. **C. Scott Schwartz**, Fadi J. Charchar, Jacob L. Barber, Jeremy M. Robbins, Prashant Rao, Michael Mi, Sujoy Ghosh, Robert E. Gerszten, Claude Bouchard, Mark A. Sarzynski. Genetically-Increased Telomere-Length Weakly Associates With Body Composition And Metabolic Profiles But Not Their Training Responses.
Poster at *Southeast Chapter ACSM Conference*. Greenville, SC (February 2022)
Thematic Poster Presentation at *ACSM Annual Meeting*. San Diego, CA (May 2022)
 10. Emanuel J. Ayala, Jacob L. Barber, **Charles S. Schwartz**, Jeremy M. Robbins, Robert E. Gerszten, Xuewen Wang, James S. Skinner, Claude Bouchard, Mark A. Sarzynski.

- Clinical Predictors of VO₂max Response to Endurance Training: HERITAGE Family Study.
Poster at *Southeast Chapter ACSM Conference*. Virtual Meeting (February 2021)
Poster at *ACSM Annual Meeting* Virtual Meeting (May 2021)
9. Alexis Jones, Jacob L. Barber, Emanuel J. Ayala, **Charles S. Schwartz**, William A. Clarkson, James S. Skinner, Claude Bouchard, Mark A. Sarzynski Cardiorespiratory Fitness at Baseline and In Response to Training Across Metabolic Health and Weight Phenotypes.
Poster at *Southeast Chapter ACSM Conference*. Virtual Meeting (February 2021)
Poster at *ACSM Annual Meeting* Virtual Meeting (May 2021)
 8. **Schwartz C.S.**, Slusher A.L., Zúñiga T.M., Shah K.K., Acevedo E.O. *Inflamm-aging* is Associated with Impairing the Process of Maintaining Telomere Length in LPS Stimulated PBMCS.
Poster at *Southeast Chapter ACSM Conference*. Greenville, SC (February 2019)
Poster at *ACSM Annual Meeting*. Orlando, FL (May 2019)
 7. Shah K.K., Slusher A.L., Zúñiga T.M., **Schwartz C.S.**, Acevedo E.O. Excessive Weight Gain Throughout Adulthood is Associated with Shorter Telomere Lengths, Pro-inflammation, and Psychological Stress.
Poster at *Southeast Chapter ACSM Conference*. Greenville, SC (February 2019)
 6. **Schwartz C.S.**, Slusher A.L., Patterson V.T., Acevedo E.O. Impact of High-Intensity Interval Exercise on Executive Function and Brain Derived Neurotrophic Factor.
Poster at *Southeast Chapter ACSM Conference*. Chattanooga, TN (February 2018)
Poster at *ACSM Annual Meeting*. Minneapolis, MN (May 2018)
 5. Blanks A.M., **Schwartz C.S.**, Pedersen L.N., Buckley L.F., Acevedo E.O., Abbate A., & Franco R.L. Post-stemi Age-related Non-classical Monocyte Ccr2 Expression Differences In Response To Stress Hormones.
Poster at *ACSM Annual Meeting*. Denver, CO (May 2017)
 4. Patterson V.T., Slusher A.L., Caslin H.L., **Schwartz C.S.**, & Acevedo E.O.. High Intensity Interval Ergometry: Power Output, Catecholamines, Substance P, and Perceived Pain.
Poster at *ACSM Annual Meeting*. Boston, MA (May 2016)
 3. A.M. Blanks, M.K. Bowen, H.L. Caslin, **C.S. Schwartz**, E.O. Acevedo, R.L. Franco. Exercise Recovery Index as an Assessment of Sympathetic Activity in Obese and Non-Obese Males.
Poster at *Southeast Chapter ACSM Conference*. Greenville, SC (February 2016)
Poster at *ACSM Annual Meeting*. Boston, MA (May 2016)
 2. Patterson V.T., Franco R.L., Morgan J., Caslin H.L., Crabb E.B., **Schwartz C.S.**, Williams D.S. Relationship of Adiposity and Running Kinematic Variables in Females.
Poster at *Southeast Chapter ACSM Conference*. Jacksonville, FL (February 2015)
 1. J.A. Morgan, **C.S. Schwartz**, V.T. Patterson, R.L. Franco, D.S. Williams. Lower Extremity Stiffness Influences Running Performance in Recreational Runners.
Poster at *Southeast Chapter ACSM Conference*. Jacksonville, FL (February 2015)

TEACHING EXPERIENCE

Graduate teaching assistant, Virginia Commonwealth University, Department of Kinesiology and Health Sciences, Richmond, VA 2016-2019

- *†HPEX 353 Disease Trends, Prevention, and Control, Spring 2016 - Fall 2016
- HPEX 435 Health Disparities in the United States, Spring 2016 - Fall 2016
- HPEX 391 Exercise Psychology, Spring 2017
- HPEX 358 Intro to Epidemiology, Spring 2017
- HPEX 345 Nutrition for Health and Disease, Spring 2017
- HPEX 375 Exercise Physiology, Spring 2017
- HPEX 441 Assessment and Exercise Intervention, Fall 2017
- HPEX 470 Exercise Programming and Leadership, Fall 2017
- *HPEX 310 Fitness and Health, Fall 2017 - Spring 2019
- *HPEX 375 Physiology of Exercise Lab, Spring 2018

* Indicates independent co-instructor position; † indicates online format

MENTORING

Graduate:

Master's

Alex Clarkson (UofSC), 2020 - 2022

Emanuel Ayala (UofSC), 2019 - 2021

Ryan Flynn (UofSC), 2019 - 2020

Post Baccalaureate

J. Sebastián Miranda (NIH PREP at UofSC), 2022 - 2023

Undergraduate:

Matt Valakos, 2022 -

Alexis Daugird, 2022 -

Riley Reasons (UofSC), 2020 - 2023

Katherine Kerwin (UofSC), 2020 - 2022

Julianna Tyndall (UofSC), 2020

Andrew Hendrix (UofSC), 2019 - 2020

Brice Smoker (UofSC, Honors College), 2019 - 2020

Keisha Shah (VCU), 2018 - 2019

Sirak Tewolde (VCU), 2018 - 2019

Blake Cooper (VCU), 2018

Nathaniel Jones (VCU), 2018

Brianna Hackley (VCU), 2018

PROFESSIONAL SERVICE

Ad hoc Reviewer for Professional Journals

- Journal of Sports Medicine
- Journal of Applied Physiology

CERTIFICATIONS

- ACSM Certified Exercise Physiologist (ACSM EP-C)
- CITI Training
 - Biomedical Investigators
 - Biomedical Responsible Conduct of Research
- Laboratory Safety Trainings (All at UofSC)
 - Bloodborne Pathogens
 - Hazardous Waste
 - Chemical and Lab Safety
 - Biosafety Level 2 (BSL-2) for Labs

LABORATORY SKILLS

- Exercise Testing
 - Maximal & Submaximal
- Body composition measurement
- Heart rate monitoring using Polar TEAM 2 system
- Blood lactate measurement
- Phlebotomy
- Fast Protein Liquid Chromatography (FPLC)
- RNA/DNA isolation
- qPCR
- Peripheral Blood Mononuclear Cell (PBMC) Isolation
- Cell Culture
 - HUVEC
 - Primary PBMCs
- Enzyme Linked Immunosorbent Assay (ELISA)
- Maintaining bio-specimen bank

COMPUTER SKILLS

- Microsoft Office Suite
 - Microsoft Word
 - Microsoft Excel
 - Microsoft Powerpoint
- SAS Statistical Software (basic statistical analysis)
- SPSS Statistical Software
- Website Development via Wix
 - <https://www.flexlabsc.com/>
 - <https://www.heritagefamilystudy.com/>