

Education:

2016-2017, Post-doc Fellow, Cardiovascular Research Institute, Dept. Cell Biology and Molecular Medicine, Rutgers Medical School

2012-2016, PhD, Applied Physiology, University of Delaware

2008-2009, MS, Exercise Science, East Stroudsburg University

2004-2008, BS, Exercise Science, East Stroudsburg University

Research Interests:

My research training is primarily in cardiovascular physiology. Broadly, I am interested in how exercise can be used as a therapy to mitigate diseases of the cardiovascular function. Cardiovascular disease is the leading cause of death in the world. Additionally, I am interested in the analgesic properties of exercise and how varying the intensity of exercises changes this property. Students in my lab have worked on projects related to both of these lines of research and have presented their data at both regional and national conferences and have been published in peer reviewed journals.

Courses Taught:

Principles of Biology I (BIO 115)

Anatomy and Physiology Lab, I and II (BIO221L and BIO222L)

Exercise Physiology and Lab (EXS 320 and EXS 321)

Foundations of Strength and Conditioning (EXS 360 and EXS 360L)

Research Funding and Awards:

Rider University Summer Research Fellowship “The Effect of Chronic Exercise Training on Alcohol Consumption in College Students”

ICUNJ Pfizer Undergraduate research endeavor (PURE) “Expanding Research and Career Exploration in the Field of Biophysics at Rider University”

Mid-Atlantic College of Sports Medicine Doctoral Student Research Award

Mid-Atlantic College of Sports Medicine President’s Cup Award Winner for Doctoral Research

American College of Sports Medicine Doctoral Student Research Grant “The Effect of Exercise on Sodium Induced Endothelial Dysfunction Independent of Blood Pressure Change “

Selected Student Presentations

- Chan, J., Homitz, J., Cashin, N. and Guers, J. (2022), Individuals with a Previous Symptomatic COVID-19 Infection Have Altered Blood Pressure and Heart Rate Variability During Acute Exercise. Experimental Biology, Philadelphia, PA
- Weinbeck E., Boucher P., Chan J., Cashin N., Homitz J., Guers J.J. (2021), Acute Cardiovascular Response to Cell Phone Use in College Students. Mid Atlantic Regional Conference of the American College of Sports Medicine. Harrisburg, PA
- Dopke, E; Kerner, L; Guers, J.J.; and Stapleton, D. (2021), Prevalence of Behavior Modification Curricular Requirements in CAAHEP/COAES Accredited Exercise Science Programs, Mid Atlantic Regional Conference of the American College of Sports Medicine. Harrisburg, PA
- Homitz J., Matthews E.L., Longoria C., Campbell S.C, Guers J.J. (2020), Opioid Receptor Blockade Alters Heart Rate Variability When Combined with Exercise. Mid Atlantic Regional Conference of the American College of Sports Medicine. Remote
- Doyle C, Qadiri Q, York H, Muth B.J., Longoria C., Campbell S.C., Guers J.J. (2019). The Addition of Naltrexone Alters Cerebral Glucose Uptake Following Acute Exercise Mid Atlantic Regional Conference of the American College of Sports Medicine. Harrisburg, PA
- Kerner L, Homitz J, Bornkamp C, Matthews E.L., Stapleton D, Guers J.J, (2019) Exercise Induced Analgesia But Not Mood State Varies With Exercise Intensity. American College of Sports Medicine National Conference. Remote
- Homitz J, Kerner L. Bornkamp C, Matthews E.L., Stapleton D, Guers, J.J. The Analgesic and Psychoactive Effects of Exercise are Related to Exercise Frequency but Not Exercise Capacity. American College of Sports Medicine National Conference. Remote
- Bornkamp C.L, Kerner L., Homitz J., Matthews E.L., Stapleton D.T., Guers, J.J. The Effect of Relative Intensity on the Magnitude and Duration of Analgesia Following Acute Exercise. American College of Sports Medicine National Conference. Remote
- Guers, J.J., Matthews E.L., Wrabley C.B. Kerner L.S., Acute Exercise Increases Pain Threshold

and Subjective Psychoactive Mood State (2020) . American College of Sports Medicine National Conference. Remote

Selected Publications:

- Chan J, Senior H, Homitz J, Cashin N, Guers JJ. Individuals with a previous symptomatic COVID-19 infection have altered heart rate and blood pressure variability during acute exercise. *Front Physiol.* 2023, 6(14):1052369. doi: 10.3389/fphys.2023.1052369. PMID: 36814473; PMCID: PMC9939691
- Longoria CR, Guers JJ, Campbell SC. The Interplay between Cardiovascular Disease, Exercise, and the Gut Microbiome. *Rev. Cardiovasc. Med.* 2022, 23(11), 365.
<https://doi.org/10.31083/j.rcm2311365>
- Longoria CR, Qadiri Q, Matthews EL, Campbell SC, Guers JJ. Naltrexone Alters Cardiovascular Function Following Acute Forced Swimming in Mice. *Cardiovasc. Endocrinol. Metab.* 2022, 11(2) e0263doi: 10.1097/XCE.0000000000000263
- Matthews, EL, Guers, JJ, Hosick, PA, Young Healthy Adults with a Family History of Hypertension Have Greater Microvascular Reactivity. *Microcirculation.* 2021, 28(4):e12676. doi: 10.1111/micc.12676.
- Qadiri Q, York H., Muth, B., Longoria C., Campbell, S.C., Guers, JJ. The Addition of Naltrexone Alters Cerebral Glucose Uptake Following Acute Exercise. *Physiol & Behav.* 2020, (7)228:113199<https://doi.org/10.1016/j.physbeh.2020.113199>
- Dowden RA, McGuinness LR, Wisniewski PJ, Campbell SC, Guers JJ, Oydanich M , Vatner SF, Häggblom MM, Kerkhof LJ. Host genotype and exercise exhibit species-level selection for members of the gut bacterial communities in the mouse digestive system. *Sci Rep.* 2020. (10)8984
- Guers JJ, Kasecky-Lardner L, Farquahr WB, Edwards DG, Lennon SL. Voluntary Wheel Running Attenuates Salt-Induced Vascular Stiffness Independent of Blood Pressure. *Am J Hypertens.* 2019.11. pii: hpz128. doi: 10.1093/ajh/hpz128

- Guers JJ, Kasecky-Larnder L, Farquhar WB, Edwards DG, Lennon, S, Voluntary Wheel Running Prevents Salt Induced Endothelial Dysfunction: Role for Oxidative Stress. *J Appl Physiol.* 2019 126(2):502-510 doi: 10.1152/jappphysiol.00421.201
- Vatner DE, Zhang J, Oydanich M, Guers JJ, Katsyuba E, Yan L, Sinclair D, Auwerx J, Vatner S.F. Enhanced Longevity and Metabolism by Brown Adipose Tissue with the Disruption of the Regulator of G Protein 14. *Aging Cell* 2018, 14T02:17:39Z
- Guers JJ, Zhang J, Campbell SC, Oydanich M, Vatner DE, Vatner SF. Disruption of adenylyl cyclase type 5 mimics exercise training. *Basic Res. Cardiol.* 2017, 112:59
- Guers JJ, Prisby RD, Edwards DG, Lennon-Edwards S. Intermittent PTH Administration Attenuates Endothelial Dysfunction in Old Rats. *J Appl Physiol.* 2017:76-81