

## NATALIE BOHMKE

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### EDUCATION

- Fall 2020-Present Virginia Commonwealth University, Richmond, VA  
Ph.D. in Rehabilitation and Movement Science  
Concentration: Exercise Physiology
- Fall 2018-Spring 2020 Virginia Commonwealth University, Richmond, VA  
M.S. in Health and Movement Science
- Fall 2014-Spring 2018 Virginia Commonwealth University, Richmond, VA  
B.S. in Exercise Science  
Varsity Field Hockey Team (Co-captain 2015-2017)

### RESEARCH

#### Peer-Reviewed Articles

Domenico A Chavez and **Natalie J Bohmke**. Preventing Age-Related Vascular Dysfunction: The Gut of the Matter. *The Journal of Physiology*. 2022; In Press.

Domenico A Chavez, Marie-Claire Evans, **Natalie J Bohmke**, Hiba Kamal, Loan Quynh Tran, Chandra Bhati MD, Susan Wolver MD, Mohammad S Siddiqui MD, Danielle L Kirkman. Post-Operative Association Between Impaired Renal Function and Vascular Dysfunction in Liver Transplant Recipients. *Liver Transplantation*. 2022; In press.

**Bohmke N**<sup>#</sup>, Billingsley HE<sup>#</sup>, Kirkman DL, Carbone S. Non-pharmacological Strategies in Heart Failure with Preserved Ejection Fraction. *Cardiology Clinics*. 2022; In press.

Blanks N, Pedersen LN, **Bohmke N**, Mihalick VL, Franco RL. Sex differences in monocyte CCR2 expression and macrophage polarization following acute exercise. *Life Sciences*. 2022; 299:120557.

Billingsley HE, Canada JM, Dixon DL, Kirkman DL, **Bohmke N**, Rotelli BA, Kadariya D, Markley R, W Van Tassell B, Celi F, Abbate A, Carbone S. Midpoint of Energy Intake, Non-fasting Time and Cardiorespiratory Fitness in Heart Failure with Preserved Ejection Fraction and Obesity. *International Journal of Cardiology*. 2022; 355: 23-27.

Billingsley HE, Dixon DL, Canada JM, Kirkman DL, Rotelli B, Kadariya D, **Bohmke N**, Markley R, W Van Tassell B, Celi F, Abbate A, Carbone S. Time of Eating and Cardiorespiratory Fitness in Patients with Heart Failure with Preserved Ejection Fraction and Obesity. *Nutrition, Metabolism, and Cardiovascular Diseases*. 2021;31(8):2471-2473.

Kirkman DL, **Bohmke N**, Carbone S, Garten R, Rodriguez-Miguel P, Franco RL, Kidd J, Abbate A. Exercise Intolerance in Kidney Diseases: Physiological Contributors and Therapeutic Strategies. *American Journal of Physiology Renal Physiology*. 2021; 320(2):F161-F173.

Kirkman DL, **Bohmke N**, Billingsley HE, Carbone S. Sarcopenic Obesity in Heart Failure with Preserved Ejection Fraction. *Frontiers in Endocrinology*. 2020; 30:558271

Blanks A, Wagamon TT, Lafratta L, Sisk M, Senter MB, Pedersen LN, **Bohmke N**, Shah A, Mihalick V, Franco RL. Impact of physical activity on monocyte subset CCR2 expression and macrophage polarization following moderate intensity exercise. *Brain, Behavior, & Immunity – Health*. 2020. 2; 100033

### Abstracts

**Bohmke NJ**, Chavez DA, Billingsley HE, Damonte J, Del Buono M, Robinson AT, Markley R, Carbone S, Abbate A, Kirkman DL. Differences in Immune Cell Mitochondrial Function in Black and White Patients with Heart Failure with Preserved Ejection Fraction. *The FASEB Journal*. 2022. 36 (S1).

Chavez DA, **Bohmke NJ**, Martin L, Miller A, Bhati C, Wolver S, Siddiqui MS, Danielle L Kirkman. Sex Differences in Vascular Endothelial Function After Liver Transplant. *The FASEB Journal*. 2022. 36 (S1).

Martin L, Chavez DA, **Bohmke NJ**, Miller A, Bhati C, Wolver S, Siddiqui MS, Kirkman DL. Weight Gain, Fibroblast Growth Factor-23 and Vascular Function in Liver Transplant Recipients. *The FASEB Journal*. 2022. 36 (S1).

**Bohmke NJ**, Chavez DA, Carper MC, Billingsley HE, Del Buono MG, Markley R, Carbone S, Abbate A, Kirkman DL. Immune Cell Mitochondrial Function and Diastolic Function in Patients with Heart Failure. *Circulation*. 2021; 144 (Suppl\_1): A13136.

Chavez DA, Carper MC, **Bohmke NJ**, Martin L, Bhati C, Wolver S, Siddiqui MS, Kirkman DL. Elevated Creatinine Levels Are Associated with Vascular Dysfunction in Liver Transplant Recipients. *Circulation*. 2021; 144 (Suppl\_1): A14367.

Chavez DA, Beaumont J, **Bohmke NJ**, Carper MC, Martin L, Bhati C, Wolver S, Siddiqui MS, Kirkman DL. Chronic Inflammation is Associated with Altered Immune Cell Bioenergetics in Liver Transplant Recipients. *Hepatology*. 2021. 790A-791A.

Carper M, Chavez D, **Bohmke N**, Martin L, Bhati C, Wolver S, Siddiqui M, Kirkman DL. Vascular Function and the Gut Microbiome in Liver Transplant Recipients. *Circulation*. 2021; 144 (Suppl\_1): A13153.

Billingsley HE, Canada JM, Kirkman DL, **Bohmke NJ**, Rotelli B, Vecchie A, Markley R, Trankle CR, W. Van Tassell B, Abbate A, Carbone S. Cardiorespiratory Fitness in Patients with Heart Failure with Preserved Ejection Fraction and Obstructive Sleep Apnea. *Heart Failure Society of America*, September 2021.

Billingsley HE, Canada JM, Kirkman DL, **Bohmke NJ**, Rotelli B, Vecchie A, Markley R, Abbate A, Carbone S. Extended Non-Fasting Period and Delayed Last Meal are Associated with Peak Oxygen Consumption in Patients with Heart Failure with Preserved Ejection Fraction. *Heart Failure Society of America*, September 2021.

Beaumont J, **Bohmke NJ**, Chavez D, Carper M, Martin L, Bhati C, Siddiqui M, Kirkman DL. Immune Cell Mitochondrial Function and Cardiovascular Risk in Liver Transplant Patients.

*Virginia Commonwealth University Undergraduate Research Symposium*, virtual program, April 2021.

Kenyon J, Billingsley H, **Bohmke NJ**, Kirkman DL, Salvatore Carbone S, Kim Y. Validity of the Actigraph GT9X Accelerometer Step-Count Function in Adults with Heart Failure with Preserved Ejection Fraction. *Virginia Commonwealth University Graduate Research Symposium*, virtual program, April 2021.

**Bohmke NJ**, Ramick MG, Edwards DG, Kirkman DL. *Oxygen Kinetics and Microvascular Function in Chronic Kidney Disease*. *Journal of the American Society of Nephrology*. 2020; 31: 199.

Merritt DJ, **Bohmke NJ**, Via J, Franco RL. Exercise in Cancer Survivors. *Annual Biomedical Research Conference for Minority Students*, Anaheim, CA, November 2019.

Thompson M, **Bohmke NJ**, Via J, Franco RL. The Impact of Stress and Socioeconomic Status on Cardiovascular Disease Risk in Overweight/Obese Black Female Breast Cancer Survivors. *Annual Biomedical Research Conference for Minority Students*, Anaheim, CA, November 2019.

LaFratta L, Pedersen LV, \ **Bohmke NJ**, Blanks AM, Mihalick VL, Senter MB, Franco RL. Impact of Fitness on Receptor Expression of Monocytes Cultured with Palmitate Following Acute Exercise. *American College of Sports Medicine National Conference*, Orlando, FL, May 2019.

Blanks AM, Wagamon T, LaFratta L, Pedersen LN, **Bohmke NJ**, Franco RL. Impact of Fitness on Macrophage Polarization Following Acute Aerobic Exercise. *Southeast American College of Sports Medicine Conference*, Greenville, SC, February 2019.

**Bohmke NJ**, LaFratta L, Pedersen LN, Blanks AM, Mihalick VL, Senter MB, Franco RL. Monocyte Adhesion Molecule Expression Following an Acute Bout of Moderate Intensity Cycling. *Southeast American College of Sports Medicine Conference*, Greenville, SC, February 2019.

LaFratta LM, Blanks AM, Pedersen LN, Mihalick V, **Bohmke NJ**, Franco RL. The Effect of an Acute Bout of Cycling on Monocyte Adhesion Molecules: A Pilot Study. *American College of Sports Medicine Conference on Integrative Physiology of Exercise*, San Diego, CA, September 2018.

## ORAL PRESENTATIONS

March 2022 *Immune Cell Mitochondrial Function and Diastolic Function in Patients with Heart Failure*  
American Physiological Society: Greater Washington DC Area Chapter Annual Meeting

September 2021 *Healthy Aging and Physical Activity*  
Cedarfield Retirement Community

## **HONORS AND AWARDS**

November 2022	Kidney Stars Participant, ASN Kidney Week
October 2022	Phi Kappa Phi Honors Society Inductee
June 2022	ASN Kidney Treks MDIBL Program Participant
May 2022	KHS Graduate Student Excellence in Research Presentation Award
March 2022	Abstract Award Winner Greater Washington DC Area Physiological Society Annual Meeting
Fall 2017	Atlantic-10 Conference All-Academic Team Virginia Commonwealth University
2015-2018	Dean's List Virginia Commonwealth University
Fall 2015	NFHCA Division I National Academic Squad Virginia Commonwealth University
2014-2018	Athletic Honor Roll Virginia Commonwealth University

## **TEACHING**

Fall 2022	HPEX 380, Resistance Training for Health and Human Performance
Summer 2022	HPEX 350, Nutrition, Instructor
Fall 2021-Spring 2022	HPEX 250, Medical Terminology, Instructor
Summer 2021	HPEX 391, Special Topics: Health and Fitness, Instructor
Fall 2020-Spring 2021	HPEX 250, Medical Terminology, Instructor
Summer 2019	HPEX 441, Exercise Testing & Prescription, Lab Teaching Assistant
Fall 2018-Fall 2019	HPEX 310, Fitness and Health, Lab Teaching Assistant

## **POSITIONS AND EMPLOYMENT**

Fall 2020-Present	Department of Kinesiology and Health Sciences Virginia Commonwealth University, Richmond, VA
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	Positon: Graduate Research Assistant; Dr. Danielle Kirkman
Summer 2020	Cardio-Renal Physiology Lab, VCU, Richmond, VA Position: Research Assistant; Dr. Danielle Kirkman
Fall 2018- Spring 2020	Department of Kinesiology and Health Sciences Virginia Commonwealth University, Richmond, VA Positon: Graduate Teaching Assistant; Dr. R. Lee Franco
Summer 2018	Exercise Physiology Research Lab, VCU, Richmond, VA Position: Volunteer; Dr. R. Lee Franco
Spring 2018	Bon Secours Cardiopulmonary Rehabilitation, Henrico, VA Position: Student Intern; Ross Barber
Spring 2017	Children's Hospital of Richmond, Healthy Lifestyles Center, Henrico, VA Position: Exercise Physiology Intern; Sarah Farthing
Spring 2016-Spring 2017	Children's Hospital of Richmond, Healthy Lifestyles Center, Henrico, VA Position: Research Assistant; Dr. Melanie Bean

## **SERVICE**

### Academic Service

September 2022	Graduate Student Research Panel Graduate Students in KHS Event for Undergraduates
March 2022	Poster Award Judge American Physiology Society Greater Washington DC Area Chapter Annual Meeting
September 2021-present	Diversity, Equity, and Inclusion Committee Member VCU Kinesiology and Health Sciences
July 2021	Abstract Feedback Volunteer APS Summer Undergraduate Research Fellowship (SURF) Seminar

### Community Service

January 2021-present	Renal Rehab VCU Kinesiology and Health Sciences
September 2021	Healthy Aging and Physical Activity Presentation Cedarfield Retirement Community
August 2021	Soulful Saturdays Event

February 2020 Cardiovascular Health and Physical Activity Booth  
National Kidney Foundation Volunteering  
Virginia Women's Health Expo

### **MENTORSHIP**

Fall 2022 Brittany Barton, Undergraduate Student Intern  
Spring 2022 Litiana Field, Undergraduate Student Intern  
Spring 2021 Emily Ghaussy, Undergraduate Student Intern  
Spring 2020 Michael Thompson, Undergraduate Student Intern  
Fall 2019-Spring 2020 Johnathan Davis, Undergraduate Student Intern  
Fall 2019-Spring 2020 Joanna Parker, Undergraduate Student Intern

### **CERTIFICATIONS**

2022-Present ACSM, Certified Clinical Exercise Physiologist  
2021-Present Advanced Cardiac Life Support  
2018-Present ACSM Certified Exercise Physiologist  
2016-Present Adult and Pediatric First Aid/CPR/AED

### **MEMBERSHIPS**

March 2022-Present President, Graduate Students in Kinesiology & Health Sciences Student Organization  
Virginia Commonwealth University  
December 2020-Present Member, Women in Science Student Organization  
Virginia Commonwealth University  
August 2020-Present Member, American Physiological Society, ID# 00291185  
May 2020-Present Member, American Society of Nephrology, ID# 664602  
April 2020-Present Member, Global Renal Exercise Group  
2018-Present Member, American College of Sports Medicine, ID# 815447

### **LAB SAFETY TRAINING**

May 2018-Present	CITI Biomedical
December 2016-Present	CITI GCP
May 2019-Present	BioRAFT Bloodborne Pathogens Safety Training
June 2019-Present	BioRAFT Fundamentals of Lab Safety
May 2019-Present	BioRAFT Hazardous Waste Management in Labs
August 2019-Present	BioRAFT Biosafety
August 2019-Present	Dangerous Goods Shipping Training