

Heather Caslin, Ph.D.

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Postdoctoral Fellow in the Alyssa Hasty Lab
Molecular Physiology and Biophysics
Vanderbilt University
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EDUCATION AND TRAINING

2018- present **Postdoctoral Fellowship, Vanderbilt University**, Molecular Physiology and Biophysics
Projects: Trained Innate Immunity in Obesity and Weight Cycling, Th2 Immunity in Adipose Tissue, and Intrinsic Immunometabolism of Iron Handling in Adipose Tissue Macrophages
Research Mentor: Alyssa Hasty, PhD

2014-2018 **Ph.D., Virginia Commonwealth University**, Integrative Life Sciences
Dissertation: Glycolytic ATP production is required for innate mast cell activation and is limited by lactic acid, which effectively reduces LPS-induced cytokine production in mast cells and in vivo. Research Mentor: John J. Ryan, PhD

2012-2014 **M.S., Virginia Commonwealth University**, Health and Movement Science
Thesis: The Effect of Obesity on IL-1 β , IL-1Ra, and leptin following acute mental stress
Research Mentor: R. Lee Franco Ph.D.

2008-2012 **B.S. Virginia Commonwealth University**, Health, Physical Education, and Exercise Science
Magna Cum Laude, University Honors, Minor: Psychology

Academic Experience

2018-present	Postdoctoral Fellow, Vanderbilt University
2014-2018	Research Assistant, Life Sciences and Biology, VCU
2013-2014	Teaching Assistant, Kinesiology and Health Sciences, VCU
2012-2013	Research Assistant, Physical Medicine and Rehabilitation, VCU
2012	Research Assistant, Exercise Physiology Research Lab, VCU

RESEARCH

Grants Funded

2. AHA Postdoctoral Fellowship (20POST35120547) (2020-2022) PI: Caslin
"The Influence of Trained Innate Immunity on Macrophages in Metabolic Disease"

1. NIH T32 Training Grant (T32DK007563) (2018- present). PI: Richard O'Brien

Competitive Travel Awards

2. Vanderbilt Center for Immunobiology (VCI) Travel Award for AAI Immunology (2020) \$500

1. AAI Trainee Award Abstract (2018) \$750

Published Manuscripts

14. **Caslin H.L.** and Hasty A.H. Extrinsic and Intrinsic Immunometabolism Converge: Perspectives on Future Research and Therapeutic Development for Obesity. *Current Obesity Reports*. 2019 Sep;8(3):210-219. doi: 10.1007/s13679-019-00344-2. Review.

13. **Caslin H.L.**, Ababayehu D., Abdul Qayum A., Paez P.A., Hoeflerlin L.A., Chalfant C.E., Ryan J.J. Lactic acid limits glycolysis and ATP availability effectively reducing LPS-induced cytokine production in mast cells and in vivo. *Journal of Immunology*. 2019 Jul 15;203(2):453-464. doi: 10.4049/jimmunol.1801005.

12. Ababayehu D., Spence A.J., **Caslin H.L.**, Taruselli M.T., Kolawole E.M., Chumanevich A.P., Sell S., Oskeritzian C.A., Ryan J.J. Lactic acid suppresses IgE-mediated mast cell function in vitro and in vivo. *Cell Immunology*. 2019 Jul;341:103918. doi: 10.1016/j.cellimm.2019.04.006. Epub 2019 Apr 12.

11. **Caslin H.L.**, Taruselli M.T., Haque T.T., Pondicherry N., Baldwin E.A., Barnstein B.O., Ryan J.J. Inhibiting glycolysis and ATP production attenuates IL-33-mediated cytokine production in mast cells and IL-33-induced peritonitis. *Frontiers in Immunology*. 2018; 9. doi:10.3389/fimmu.2018.03026

10. **Caslin H.L.**, Taruselli M.T., Paranjape A., Kiwanuka K., Haque T., Oskeritzian C.A., Ryan J.J. The Use of Human and Mouse Mast Cell and Basophil Cultures to Assess Type 2 Inflammation. *Methods in Molecular Biology*. 2018;1799:81-92. doi: 10.1007/978-1-4939-7896-0_8.

9. **Caslin H.L.**, Kiwanuka K.N., Haque T.T., Taruselli M.T., MacKnight H.P., Paranjape A., Ryan J.J. Controlling Mast Cell Activation and Homeostasis: Work Influenced by Bill Paul that Continues Today. *Frontiers in Immunology*. 2018 Apr; 9: 868. doi:10.3389/fimmu.2018.00868

8. McCleod J.,¹ **Caslin H.L.**¹, Spence A.J., Elford H., Ryan J.J. Didox (3,4-dihydroxybenzohydroxamic acid) suppresses IgE-mediated mast cell activation through attenuation of NFκB and AP-1 transcription in primary mouse cells. *Cellular Immunology*. 2017 Dec; 322:41-48. doi: 10.1016/j.cellimm.2017.09.008
¹co-first authorship

7. **Caslin H.L.**,¹ McCleod J.,¹ Spence A.J., Abdul Qayum A., Kolawole E.M., Taruselli M., Paranjape A., Elford H., Ryan J.J. Didox (3,4-dihydroxybenzohydroxamic acid) suppresses IL-33-induced cytokine production in primary mouse mast cells. *Cellular Immunology*. 2017 Sep; 319:10-16. doi: 10.1016/j.cellimm.2017.04.013
¹co-first authorship

6. Ndaw V., Ababayehu D., Spence A.J., Paez P.A., Kolawole E.M., Taruselli M., **Caslin H.L.**, Chumanevich A.P., Paranjape A., Baker B., Barnstein B.O., Haque T.T., Kiwanuka K.N., Oskertizian C.A., Ryan J.J. TGFβ1 Suppresses IL-33-induced Mast Cell Activation. *Journal of Immunology*. 2017 Aug 1;199(3):866-873. doi: 10.4049/jimmunol.1601983.

5. Abebayehu D., Spence A.J., Abdul Qayum A. Taruselli M., McLeod J., **Caslin H.L.**, Kolawole E., Ndaw V., Barnstein B.O., Oskertizian C.A., Ryan J.J. Lactic acid suppresses IL-33-mediated mast cell inflammatory responses via HIF-1 dependent miR-155 suppression. *Journal of Immunology*. 2016; 197(7):2909-17. doi: 10.4049/jimmunol.1600651
4. Crabb E.B., Franco R.L., **Caslin H.L.**, Blanks A.M., Bowen M.K, Acevedo E.O. The effect of physical and mental stress on soluble adhesion molecule concentrations. *Life Sciences*. 2016 May 31. pii: S0024-3205(16)30341-1. doi: 10.1016/j.lfs.2016.05.042.
3. Abdul Qayum A., Paranjape A., Abebayehu D., Kolawole E.M., Haque T.T., McLeod J.J.A., Spence J.A., **Caslin H.L.**, Baker B., Taruselli M.T., Oskertizian C.A., Ryan J.J. IL-10-induced miR-155 targets SOCS1 to enhance IgE-mediated mast cell activation and passive systemic anaphylaxis in mice. *Journal of Immunology*. 2016; 196(11):4457-67. doi: 10.4049/jimmunol.1502240
2. **Caslin H.L.**, Crabb E.B, Huang C.J., Bowen M.K, Acevedo E.O., Franco R.L. The effect of obesity on inflammatory cytokine and leptin production following acute mental stress. *Psychophysiology*. 2016; 53(2):151-8. doi: 10.1111/psyp.12568
1. Crabb E.B., Bowen M.K, Huang C.J., **Caslin H.L.**, Acevedo E.O., Franco R.L. G protein-coupled receptor kinase-2 in peripheral blood mononuclear cells following acute mental stress. *Life Sciences*. 2016; 145:184-9. doi: 10.1016/j.lfs.2015.12.035

Manuscripts in Submission

Caslin H.L.*, Bhanot M.*, Bolus W.R., and Hasty A.H. Adipose tissue macrophages: unique polarization and bioenergetics in obesity. *Immunological Reviews*. Invited Review, Submitted January 18, 2019.

*co-first author

Blanks A.M., Pedersen L.N., Sisk M.G., **Caslin H.L.**, Mihalick V.L., LaFratta L., Canada J.M., Van Tassell B., Carbone S., Abbate A., Franco R.L. LPS Differentially Affects Expression of CD14 and CCR2 in Monocyte Subsets of Post-STEMI Patients with Impaired Glucose.

Submitted- *Clinical and Experimental Immunology* 10/31/19

Patrick Paez, Elizabeth Kolawole, Marcela Taruselli, Siddarth Ajith, Jordan Dailey, Sydney Kee, Tamara Haque, Brian Barnstein, Jamie McLeod, **Heather Caslin**, Kasalina Kiwanuka, David Straus, David Gewirtz, Rebecca Martin, and John Ryan. Fluvastatin Induces Apoptosis in Primary and Transformed Mast Cells.

Submitted- *Journal of Pharmacology and Experimental Therapeutics* 12/2/19

Professional Conference Presentations

23. Caslin H.L., Cottam M.A., Hasty A.H. Weight loss restores glucose tolerance but does not reverse macrophage inflammatory potential following obesity.

Tissue Immunity. Boulder, CO (January 2020)

22. **Caslin H.L.**, Bolus W.R, Cottam M.A., Hasty A.H. Intraperitoneal bovine serum albumin (BSA) injections suggest a novel link between adipose tissue eosinophils and allergic immunity.

Immunometabolism, Metaflammation and Metabolic Disorders. Vancouver, CA (April 2019)

21. **Caslin H.L.**, Abebayehu D., Abdul Qayum A., Hoeflerlin L.A., Chalfant C.E., Ryan JJ. Lactic acid suppresses LPS-induced cytokine production in mast cells by limiting glycolysis and ATP availability.
Annual American Association of Immunologists Conference. Austin, TX (May 2018)
Oral presentation
20. **Caslin H.L.**, Abebayehu D., Abdul Qayum A., Hoeflerlin L.A., Chalfant C.E., Ryan JJ. Lactic acid suppresses LPS- induced mast cell activation and septic shock.
National American College of Sports Medicine Conference. Denver, CO (May 2017)
19. **Caslin H.L.**, Abebayehu D., Abdul Qayum A., Hoeflerlin L.A., Chalfant C.E., Ryan JJ. Lactic acid suppresses LPS-induced cytokine production in vitro and in vivo.
Annual American Association of Immunologists Conference. Washington, DC (May 2017)
18. Morgan J., Franco R.L., Harrison K., Blanks A.M., **Caslin H.L.**, Williams III D.S. The relationship between transverse plane hip rotation and injury in recreational runners training for a half-marathon.
APTA NEXT Conference and Exposition. Nashville, TN (June 2016)
17. **Caslin H.L.**, Abebayehu D., Abdul Qayum A., Spence A.J., Ryan JJ. Lactic acid suppresses cytokine production and expression of miR-155 and 146a following LPS activation in mast cells.
Annual American Association of Immunologists Conference. Seattle, WA (May 2016)
16. Abebayehu D., Spence A.J., Abdul Qayum A. Taruselli M., McLeod J., **Caslin H.L.**, Kolawole E., Ndaw V., Barnstein B.O., Oskertizian C.A., Ryan J.J. Lactic acid suppresses IL-33-mediated mast cell inflammatory responses via HIF-1 dependent miR-155 suppression.
Annual American Association of Immunologists Conference. Seattle, WA (May 2016)
15. Abdul Qayum A., Paranjape A., Abebayehu D., Kolawole E.M., Haque T.T., McLeod J.J.A., Spence J.A., **Caslin H.L.**, Baker B., Taruselli M.T., Oskertizian C.A., Ryan J.J. IL-10-induced miR-155 targets SOCS1 to enhance IgE-mediated mast cell function. **Oral Presentation**
Annual American Association of Immunologists Conference. Seattle, WA (May 2016)
14. Blanks A.M., Bowen M.K., **Caslin H.L.**, Schwartz C.S., Acevedo E.O., Franco R.L. Exercise recovery index as an assessment of sympathetic activity in obese and non-obese males.
National American College of Sports Medicine Conference. Boston, MA (May 2016)
Southeast Chapter ACSM Conference. Greenville, SC (February 2016)
13. 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.
National American College of Sports Medicine Conference. Boston, MA (May 2016)
12. Morgan J., Franco R.L., Harrison K., Blanks A.M., **Caslin H.L.**, Williams III D.S. Stride frequency and injury rates in recreational runners training for a half-marathon.
National American College of Sports Medicine Conference. Boston, MA (May 2016)
11. **Caslin H.L.**, Abebayehu D., Spence A.J., Abdul Qayum A., Ryan JJ. Lactic acid attenuates LPS-induced cytokine production in mast cells
VCU Integrative Life Sciences Student Symposium. Richmond, VA (November 2015).
Annual American Association of Immunologists Conference. New Orleans, LA (May 2015).

VCU Graduate Student Research Symposium. Richmond, VA (April 2015) *Award Finalist

10. Crabb E.B., **Caslin H.L.**, Bowen M.K, Blanks A.M., Teasley S.G., Acevedo E.O., Franco R.L. Cell adhesion molecules in response to physical and mental stress.

National American College of Sports Medicine Conference. San Diego, CA (May 2015)

Southeast American College of Sports Medicine Conference. Jacksonville, FL(February 2015)

9. Verghis R.N., Franco R.L., Browning M.G., **Caslin H.L.**, Crabb E.B., Williams D.S. Oxygen on-kinetics during progressive exercise in men and women: influence of fitness and fatness.

National American College of Sports Medicine Conference. San Diego, CA (May 2015)

VCU Graduate Student Research Symposium. Richmond, VA (April 2015)

Southeast American College of Sports Medicine Conference. Jacksonville, FL(February 2015)

8. 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.

Southeast American College of Sports Medicine Conference. Jacksonville, FL(February 2015)

VCU Graduate Student Research Symposium. Richmond, VA (April 2015).

7. Caslin H.L, Kolawole E.M., Falanga Y.T., Ryan J.J. The effects of Fluvastatin on IgG- mediated mast cell activation.

VCU Integrated Life Sciences Student Symposium. Richmond, VA (November 2014)

6. **Caslin H.L.**, Crabb E.B, Huang C.J., Bowen M.K, Acevedo E.O., Franco R.L. Impact of obesity on norepinephrine and TNF- α following mental stress.

National American College of Sports Medicine Conference. Orlando, FL (May 2014)

VCU Graduate Student Research Symposium. Richmond, VA (April 2014)

Southeast American College of Sports Medicine Conference. Greenville, SC (February 2014)

5. Crabb E.B., **Caslin H.L.**, Huang C.J., Bowen M.K, Acevedo E.O., Franco R.L. The relationship between BARK-1 and TNF- α in obese males following acute mental stress.

National American College of Sports Medicine Conference. Orlando, FL (May 2014)

Southeast American College of Sports Medicine Conference. Greenville, SC (February 2014)

4. **Caslin H.L.**, Bowen M.L., An K., Acevedo E.O., Franco R.L. Fitness and heart rate reactivity to mental stress: Impact of obesity.

National American College of Sports Medicine Conference. Indianapolis, IN (May 2013)

VCU Graduate Research Symposium and Exhibit. Richmond, VA (April 2013)

Southeast American College of Sports Medicine Conference. Greenville, SC (February 2013)

3. Bowen M.K., Franco R.L., Arena R., **Caslin H.L.**, Evans R.K., Wickham E.P. Pulmonary oxygen uptake kinetics and fitness in obese adolescents.

National American College of Sports Medicine Conference. Indianapolis, IN (May 2013)

VCU Graduate Research Symposium and Exhibit. Richmond, VA (April 2013)

Southeast American College of Sports Medicine Conference. Greenville, SC (February 2013)

2. Gonzalez M., Bowen M.K, **Caslin H.L.**, Acevedo E.O., Franco R.L. Effect of physical fitness on cardiovascular reactivity to acute psychological stress.

Annual Biomedical Research Conference for Minority Students. San Jose, CA (2012)

1. **Caslin, H.L.** Psychological therapies for injury rehabilitation: the next step. Advisor: Bonnie Orzolek
National Conference for Undergraduate Research. La Crosse, WI (2009) **Oral Presentation**

Certifications and Awards

2012- present Certified Exercise Physiologist (EP-C, ACSM)
2010- present CPR and First Aid Certification (9/11/18)

2018 VCU Biology Outstanding Graduate Student, Cell and Molecular Biology
2013 Phi Kappa Phi Graduate Scholarship, School of Education
2011 Professional and Academic Excellence in Exercise Science Award
2008-2012 VCU Dean's Scholarship

TEACHING

University Courses Taught

2016 Department of Biology, VCU

Capstone Laboratory (2 cr)

Teaching assistant for two sections of this laboratory course (2016). Responsible for teaching laboratory safety, protocols, and techniques, developing assessments, and providing feedback on assessments, manuscripts, and presentations. Enrollment 5-12.

2015-2016 VCU Life Sciences, VCU

Integrative Life Science Research (3 cr)

Teaching assistant for one section of this lecture and recitation course (2015). Course objectives aimed to inform students about the scientific process and the responsible conduct of research. Responsible for leading discussions in recitation sections and grading weekly assignments. Enrollment: 12.

2013- 2014 Department of Health and Human Performance, VCU

Assessment and Exercise Intervention in Health and Disease (3 cr)

Primary course instructor for 2 sections of this mixed lecture and laboratory course (2013, 2014). Course objectives were to prepare students for the ACSM Health Fitness Specialist Exam. Responsible for developing lectures, hands- on lab activities, grading laboratory reports, and final practical and written exams. Additionally assisted with other course sections. Enrollment: 23-26.

Clinical Experience I (3 cr)

Primary clinical coordinator for 2 sections of the introductory internship for exercise science and community health education students (2014). Responsible for site approval, collecting affiliate agreements for each site, grading log reports and evaluations, and upholding course policies. Enrollment: 25-50.

Exercise Physiology Lab (1 cr)

Primary course instructor for 6 sections of this lab course over two summers (2013, 2014). Responsible for updating lectures, introducing lab activities and techniques, and grading laboratory reports and exams. Enrollment: 5-15.

Medical Terminology (1 cr)

Primary course instructor for 6 sections of this online course (2013). Responsible for setting up, oversight, and maintenance of the Blackboard course through Elsevier. Enrollment 20-25.

K-12 Courses Taught

2019 Metro Nashville Public Schools

Eight grade science at McKissak Middle School (1 yr)

“Scientist in the Classroom” via Vanderbilt Center for Science Outreach. Co-taught 4 8th grade science classes once per week with the primary instructor. Responsible for designing and implementing problem-based and phenomenon-based learning experiences and labs to improve engagement, interest, and overall understanding of the state science standards.

University Guest Lectures

Sport Nutrition (3 cr)

Digestion and Absorption (2015)

Exercise Physiology (3 cr)

Factors Impacting Performance, Homeostasis (2013)

Circulatory Adaptation (2013)

Respiration and Temperature Regulation (2013)

Factors Affecting Performance, Training for Performance (2013)

Tutoring Experience

For freshman student in AP Biology through the School for Science and Math at Vanderbilt (2018-2019)

Courses Taken: VCU Preparing Future Faculty Program

The Academic Profession

Teaching and Learning in Higher Ed

Teaching, Learning, Technology and the Future of Higher Ed

Courses Taken: Vanderbilt Center for Teaching (Online MOOC)

An Introduction to Evidence-Based Undergraduate STEM Teaching

Seminars Attended:

The active learning teaching revolution: Teaching STEM so that your students actually learn

Rebecca Martin, Ph.D., and Bianca Baker, Ph.D.

VCU "How-to Talks by Postdocs" Seminar Series, 2015

The Art of the Engaged Lecture: Practical Methods for Scientists to Engage Students

Drs. Lisa Phipps and Enoch Hale

VCU Libraries Research and Education Events, 2016

The active learning teaching revolution (2): Teaching STEM so that your students actually learn

Rebecca Martin, Ph.D.

VCU "How-to Talks by Postdocs" Seminar Series, 2016

Mentorship, Inclusion, and Diversity Training

2019 “Fair Play” Stereotype and Bias training at Vanderbilt University

2019 VSSA Mentorship training at Vanderbilt University

MENTORING

Students

Darian Thomas	Graduate Rotation Student 2019 Vanderbilt University (~30 hrs/ wk, 8 wks)
Likem Boney	Undergraduate Student Volunteer and Intern 2018- 2020 Vanderbilt University (~2-8 hrs/ wk, 32 wks)
Kylie Fletcher	Undergraduate Clinical Research Internship Program Student 2019 Vanderbilt University, University of South Carolina (30 hrs/ wk, 8 wks)
Verda Agan	Graduate Research Assistant 2019 Vanderbilt University (~9 hrs/wk, 16 wks)
Arya Nakhe	Graduate Rotation Student 2018 Vanderbilt University (~30 hrs/ wk, 8 wks)
Katie Volk	Graduate Rotation Student 2018 Vanderbilt University (~30 hrs/ wk, 7 wks)
Jordan Rasure	Graduate School Mentorship Program 2017-2018 Virginia Commonwealth University (~1 hr/ wk, 20 wks)
Melissa Bills	HERO-T Fellow 2016- 2017 Virginia Commonwealth University (~8 wks at 40 hrs/ wk)
Nicole Shelton	Undergraduate Research Assistant 2017 Virginia Commonwealth University (~10 hrs/ wk, 16 wks)
Stephanie Demasi	Clinical Internship II Intern 2014 Virginia Commonwealth University (~40 hrs/ wk, 16 wks)

SERVICE

2019-present	Society for Leukocyte Biology (SLB)
2019-present	American Heart Association (AHA)
2015- present	American Association of Immunology Member (AAI)
2011- present	American College of Sports Medicine Member (ACSM)
2015- 2018	Sigma Xi Associate Member
2009- 2018	Phi Kappa Phi Honor Society Member
2011- 2015	Southeast Chapter of the American Conference of Sports Medicine Member (SEACSM)

Invited Manuscript Review

2020	<i>Life Sciences</i>
2018	<i>International Journal of Obesity</i>
2015, 2016	<i>Psychophysiology</i>

Manuscript Co-reviewer under Alyssa Hasty

2018	<i>Diabetes, Cell Reports</i>
2019	<i>Immunology</i>

University Service, Outreach, and Leadership

2019-2020	Outreach Advisor and Mentorship Chair, Vanderbilt University- Women In Science and Engineering: Coordinated Expanding Your Horizons volunteer experience with MTSU, coordinated and taught SSMV lessons: Proteins and Immune/ Viral Interactions,
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coordinated two peer mentorship lunches, coordinated the VU-Wise Near Peer Mentorship program

2018-2020 VU Provost's WAVE Subcommittee Member for Parental Leave, Childcare, and Family Friendly Policies

2019 CSO High School Research Symposium Judge (for SSMV and RHSS students)

2018-2019 Vanderbilt Tiered Mentoring Program Participant

2018-2019 Outreach Committee, Vanderbilt University- Women In Science and Engineering: Coordinated and taught Lab and Lessons for SSMV: Microtubules and the Cytoskeleton and Cell Metabolism

2018 "Making the Most of Conferences" Panelist for Fisk-Vanderbilt Bridge students

2018 Vanderbilt Undergraduate Research Fair Judge

2018 "Time and Task Management in Graduate School" Panelist for incoming Fisk-Vanderbilt Bridge students

2018 "My Research Journey" Panelist for Life Sciences Careers course

2017-2018 VCU Graduate School Mentorship Program Mentor

2017-2018 Search Committee Student Member (x2)- CSBC Director position

2017-2018 Integrative Life Sciences Student Organization- President
ILS Student Research Symposium Coordinator (2018)

2017 "New Graduate Teaching Assistants Welcome" Panelist for incoming VCU GTAs

2016-2017 Integrative Life Sciences Student Organization- Board Member at Large
ILS Student Research Symposium Coordinator (2017)

2016 VCU Honors Summer Undergraduate Research Dinner Panelist

2013 Career Options Panelist for the VCU Exercise Science Club

Community Outreach

2019 STEM Goes Red Mentor, Middle Tennessee Event, American Heart Association

2018 MEGAMicrobe Volunteer, Vanderbilt Institute for Infection, Immunology and Inflammation

2016, 2017 Lab tour/ activity for high school students invited by VCU HERO-T Fellows

2016, 2017 Lab activity with high school students from the Summer Residential Governor's School Medicine and Health Sciences program

2016 Immunology class/ game with Holman Middle School students

2016 VCU Women in Science Girl Scout Day Guide

2016 Richmond Public Schools STEM Fair Judge

2011- 2013 Cosby High School Tour of the Exercise Physiology Lab

OTHER WORK EXPERIENCE

Clinical Experience

2012-2013 **Rehabilitation Technician**, Bon Secours Physical Therapy, Richmond, VA

2011-2013 **Rehabilitation Technician**, Physiotherapy Associates, Richmond, VA

2010 **Intern**, Olympic Training Center Sports Medicine Clinic, Colorado Springs, CO

2010 **Intern**, TEENS program, VCU Health and Human Performance Lab, Richmond, VA

2009 **PT Aide & Office Assistant**, Berryville Physical Therapy and Wellness, Berryville, VA

2008 **PT Aide & Office Assistant**, Purcellville Orthopedic PT, Purcellville, VA

Volunteer Work

2018-2019	Girls on the Run Assistant Coach, Haywood Elementary and Haynes Middle School
2018	Hands on Nashville Volunteer Day: Serve in Schools
2018	Lab Volunteer Project with Grow Production Gardens and The Nashville Food Project
2017	Girls on the Run 5k Committee and Race Day Volunteer (Richmond)
2016	Ragnar Relays Richmond Volunteer
2014, 2015	Richmond Road Runners Volunteer