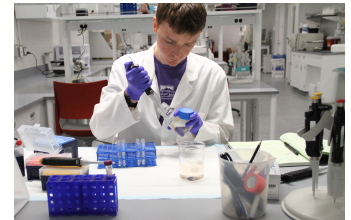


## CONDUCT YOUR GRADUATE TRAINING IN THE LABORATORY OF INTEGRATIVE PHYSIOLOGY

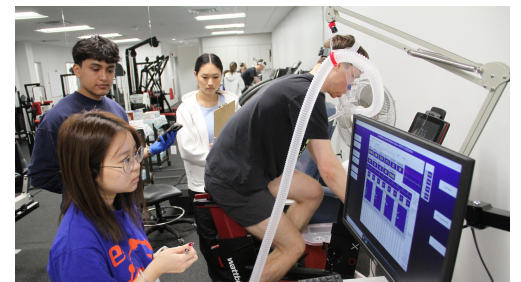
**OUR FACULTY** have expertise in exercise, inflammation, immunology, and vascular function. Using cutting-edge research techniques and both human and animal studies, we answer scientific questions relating to aging, cancer, and other chronic diseases like atherosclerosis, diabetes, and Alzheimer's disease.

Our faculty and students are members of the American College of Sports Medicine, American Physiological Society, International Society for Exercise Immunology, PsychoNeuroimmunology Research Society, and the American Association of Immunologists. Our students often attend scientific meetings and have won scholarships and recognition for their presentations.



## OUR FACILITIES

Our recently renovated laboratory includes nearly 7000 square feet of lab space. We have dedicated facilities and equipment for exercise testing and prescription, tissue culture, and biochemical analyses (including flow cytometry, qPCR, Western blotting, ELISA, and microscopy), and access to a murine exercise testing room and animal care facility. Additionally, we have access to core facilities and collaborations across UH and the greater Texas Medical Center.



## Contact Us

To learn more about our graduate program or to inquire about open positions with our faculty, please checkout our webpages and scan the QR code below.

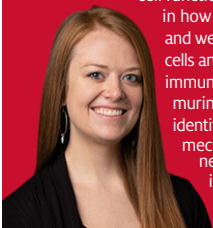
All applicants are considered for funding, and we encourage applicants of all backgrounds to apply.

Websites:  
[hhp.uh.edu](http://hhp.uh.edu)  
[grants.hhp.uh.edu/lip](http://grants.hhp.uh.edu/lip)  
Ph.D. Interest Form:  
[bit.ly/UHHHPPHD](http://bit.ly/UHHHPPHD)



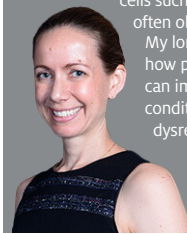
### DR. HEATHER CASLIN, PH.D.

My research intersects the fields of immunology, metabolism, and exercise physiology. Broadly, I am interested in how immune cells affect systemic metabolism and how cell bioenergetics affect immune cell function. Specifically, I am interested in how different forms of weight gain and weight loss affect innate immune cells and ultimately cardiovascular and immunological diseases. I primarily use murine and cell culture models to identify molecular immune mechanisms, and I am developing new collaborations to help identify the translational nature of these findings in humans.



### DR. EMILY LAVOY, PH.D.

My research investigates the effects of physical fitness and exercise on the immune system. I am especially interested in understanding the mechanisms underlying changes in immune cells such as lymphocytes that are often observed following exercise. My long-term goal is to understand how physical fitness and exercise can improve diseases and conditions associated with immune dysregulation, such as cancer.



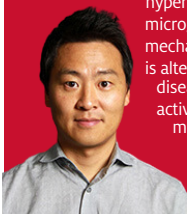
### DR. MELISSA MARKOFSKI, PH.D.

My research centers around the hypothesis that it is not aging itself that is detrimental to our health, but rather an age-associated decline in physical activity. By remaining physically active as we age, we keep our skeletal muscle and immune system operating optimally. My current projects are focused on the benefits of exercise and physical activity for the immune system and skeletal muscle, especially for cancer survivors.



### DR. YOONJUNG PARK, PH.D.

Research efforts focused on 1) Investigating the role of physical activity and exercise training in preventing or ameliorating vascular dysfunction in pathophysiologic conditions such as obesity, type 2 diabetes, ischemic heart disease, hypertension, aging (Alzheimer), microgravity, etc. and 2) Elucidating the mechanisms in which vascular function is altered by the sequelae of the diseases and physical activity/exercise training at the molecular, cellular, and intact tissue levels (isolated intact microvessels).



## RECENT STUDENT PUBLICATIONS

- Crane, J., Gordon, M., Basen-Engquist, K., Ferrajoli, A., Markofski, M.M., Young, C., Fares, S., Simpson, R., LaVoy, E.C. (2023) **Relationships between T-lymphocytes and physical function in adults with chronic lymphocytic leukemia: results from the HEALTH4CLL pilot study.** European Journal of Haematology
- Graff RM, Jennings K, LaVoy ECP, Warren VE, Macdonald BW, Park Y, Markofski MM. (2022). **T-cell counts in response to acute cardiorespiratory or resistance exercise in physically active or physically inactive older adults: a randomized crossover study.** J Appl Physiol (1985).
- Lee J, Hong J, Umetani M, Lavoy EC, Kim JH, Park Y. **Vascular Protection by Exercise in Obesity: Inflammasome-associated Mechanisms.** Med Sci Sports Exerc. 2020.