



## RDPG Student Member Spotlight: Dustin M Lee, MS, RDN

**Research interests:** Nutrition, Gut Microbiota, Cardiovascular Disease

### 1. Describe your path (education, work experience, etc.) that led you to pursue a degree in nutrition and/or nutrition research.

I completed my undergraduate degree in nutrition at the University of Hawaii at Manoa. Immediately following graduation, I completed a dietetic internship with a clinical emphasis in Lafayette, Louisiana. I then worked as an RD in acute care clinical nutrition in Denver, Colorado for two years before ultimately pursuing graduate school. While working, I was fortunate to obtain experience in various areas of clinical nutrition including the ICU, oncology, cardiac, stroke rehab, and outpatient renal transplant. During this time, I became interested in the numerous health- and nutrition- related questions we did not have answers to. I wanted to understand and be part of the process of conducting original research that could ultimately and potentially help drive nutrition related recommendations. These interests led me to Colorado State University where I am currently a doctoral student.

### 2. What is the focus of your graduate work, and can you describe one or two highlights of your research career thus far?

My graduate work is currently focused on the link between the gut microbiota and the early development of cardiovascular disease or “vascular dysfunction” (endothelial dysfunction and arterial stiffness). More specifically, our working hypothesis is that disturbances to the gut microbiota (dysbiosis) are critical to the development of vascular dysfunction.

At times, it can be hard to see the bigger picture through the day to day work.

Getting our research published has been rewarding and a humble reminder of the hard work on the back end of that publication. Additionally, I was very fortunate and honored to receive the RDPG Pilot Grant Award this past year to pursue my dissertation research linking the gut microbiota to vascular dysfunction.

### 3. What are your plans for the future (e.g. academia, government, industry, etc.)?

I plan to pursue post-doctoral training after my PhD. Our lab currently utilizes preclinical models, so I am hoping to get back to working in a clinical research environment and potentially a translational lab. I am still exploring the various and interesting opportunities for careers in academia, government, and industry.

### 4. Any advice or words of wisdom you would give to students interested in the nutrition field?

Enjoy your time in school. While we all feel the pressure and stress of academics at times, undergraduate and graduate education can be some of the most rewarding times of your life in terms of learning, building relationships, and personal development. Find a few *good* mentors. Question things and don't be discouraged by “negative data”. Stay humble but hungry!

### 5. List any published work if applicable.

• **Lee DM**, Battson ML, Jarrell DK, Hou S, Ecton KE, Phan AB, Gentile CL. SGLT2 Inhibition via dapagliflozin improves generalized vascular dysfunction and alters the gut microbiota in type 2 diabetic mice. *Cardiovascular Diabetology* (2018). doi: 10.1186/s12933-018-0708-x

- Battson ML, **Lee DM**, Jarrell DK, Hou SH, Ecton K, Weir TL, Gentile CL. Suppression of Gut Dysbiosis Reverses Western Diet-Induced Vascular Dysfunction. *Am J Physiol Endocrinol and Metab* (2018). doi: 10.1152/ajpendo.00187.2017. Selected for the American Physiology Society Select Award.
- Battson ML, **Lee DM**, Gentile CL. The Gut Microbiota as a Novel Regulator of Cardiovascular Function and Disease. *J Nutr Biochem* (2018). doi: 10.1016/j.nutbio.2017.12.010
- Battson ML, **Lee DM**, Jarrell DK, Hou SH, Ecton K, Phan AB, Gentile CL. Tauroursodexoycholic acid reduces arterial stiffness and improves endothelial dysfunction in type 2 diabetic mice. *J Vasc Res* (2017). doi: 10.1159/000479967
- Battson ML, **Lee DM**, Gentile CL. Endoplasmic Reticulum Stress and the Development of Endothelial Dysfunction. *Am J Physiol Heart Circ Physiol* (2017). doi: 10.1152/ajpheart.00437.2016
- **Lee DM**, Battson ML, Jarrell DK, Cox-York K, Foster MT, Weir TL, Gentile CL. Fuzhuan tea reverses arterial stiffening following modest weight gain in mice. *Nutrition* (2017). doi: 10.1016/j.nut.2016.07.010.

*Interested in being interviewed for the Student Spotlight? Email the Student Representative Chair, Katie Arlinghaus, [krarling@central.uh.edu](mailto:krarling@central.uh.edu).*