

Graduate Women in Science 2014 Spring Travel Award Report

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I am grateful for the Graduate Women in Science (GWIS) Travel Award that supported my attendance at the American Thoracic Society (ATS) International Conference in San Diego, California, from May 17-21, 2014. This conference involved a large number of participants with expertise in various aspects of pulmonary health. As my first international conference, it exposed me to research ranging from basic science to clinical outcomes and provided opportunities to learn from and connect with scientists in each of these areas.

The conference offered platform talks along with poster sessions and discussions. I enjoyed attending sessions both directly relevant as well as unrelated to my research. A discussion dedicated to hyperoxia-induced lung injury gave me a deeper appreciation for the complexity of neonatal lung disease. The presentation by Dr. Victor Thannickal (University of Alabama) on Nrf2 signaling in bleomycin-induced fibrosis in aging mice, and work done by Dr. Kelvin Davies (University of Southern California) on mitochondrial proteases during oxidative stress, were also particularly interesting to me. During one of the lunch sessions, I learned about the role of the FDA in drug development, with specific examples of breakthrough designations for the treatment of Chronic Obstructive Pulmonary Disease. In addition to the science, I also took note of platform presentation techniques that will help me prepare a platform talk of my research for the upcoming University of Rochester Toxicology Retreat.

During the poster session, I presented my research on the role of mitochondrial damage during hyperoxia. I was excited to share that hyperoxia activates the ATM-p53 pathway independent from mitochondrial DNA damage, dysfunction, and reactive oxygen species. Interactions with researchers who also study the effects of hyperoxia on the lung, as well as with clinicians who use hyperoxia to treat their patients, provided ideas for my research.

Overall, attending the ATS conference was a valuable experience. The breadth of research presented during those few days provided me with insight into many aspects of lung disease. I came away excited and inspired to continue pursuing my interest in how lung epithelial cells respond to hyperoxia. I greatly appreciate the generous GWIS award that supported this opportunity.