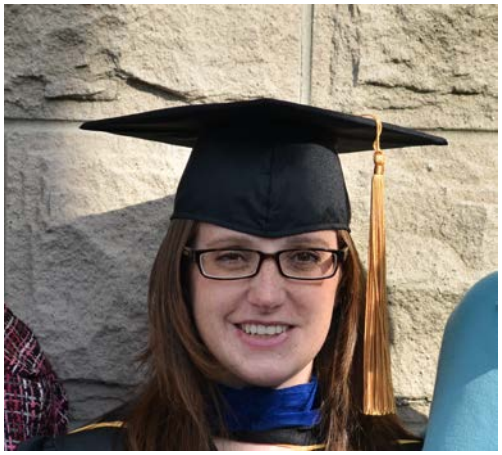
DR. JENNIFER D. SISLER



Dr. Jennifer D. Sisler, a former WV-INBRE summer intern, is currently a post-doctoral fellow at the National Institute for Occupational Safety and Health (NIOSH-CDC) in Morgantown, WV in the lab of Dr. Yong Qian. While a WV-INBRE summer intern, Jennifer worked under Dr. Michael Gunther in the Department of Biochemistry at West Virginia University. After graduating from Davis and Elkins College in 2007, she attended graduate school at Virginia Commonwealth University, School of Medicine in Richmond, VA. For her dissertation work, she joined the lab of Dr. Andrew Larner and focused on the non-concanonical signaling cascades of the JAK-STAT pathway. Her project focused on studying the role of Signal transducer and activator of transcription 1 (STAT1) in fat metabolism by using a global STAT1 knock-out mouse and it was determined that STAT1 plays a key role in lipolysis and mitochondrial biogenesis. While in graduate school, Jennifer attended several conferences and received multiple travel awards for her research. She completed her dissertation entitled: Non-Canonical Roles for STAT1 and STAT2 in Mitochondrial Biogenesis and Fasting Homeostasis in 2012 then she joined Dr. Qian's lab at NIOSH.

Her current work at NIOSH is directed to determining the toxicity of nanoparticles. The first project that she was involved in focused on the nanoparticles that are released from printers during printing due to the incorporation of nanoparticles in toner powder formulations. This project is novel because this is one of the first studies that focused on understanding the toxicity of "real world" emitted particles rather than the starting material. She also has been working on understanding the toxicity of micronized copper treated lumber in collaboration with the Consumer Product Safety Commission. This project is important because it will allow for a better understanding of the effects treated lumber has on individuals who work with it on a daily basis. One last project that she is currently working on is understanding the pulmonary toxicity of metal oxides through inhalation exposure of mice. This project will allow for the clearer pictures of the dangers of nanoparticles to individuals in a manufacturing facility. Through these projects, she hopes to further the understanding of the toxicity of nanoparticles and also the signaling pathways involved.