

***In vitro* Assessment of Cannabinoids on Immune Responses in Canine PBMCs**

Presented at the Society of Toxicology 2019 Annual Meeting & ToxExpo by Jaylan Sears

I had the opportunity to attend and present my research at the Society of Toxicology's 2019 Annual Meeting & ToxExpo from March 10-14 in Baltimore, MD this year. Working with the College of Veterinary Medicine, my project focuses on the effects of the cannabinoid compounds derived from the marijuana plant (*Cannabis spp.*) on the immune system in dogs. My research aimed to assess the effects of tetrahydrocannabinol (THC) and cannabidiol (CBD) in a subset of canine immune system cells known as Peripheral Blood Mononuclear Cells (PBMCs). With the use of cannabinoids becoming more common and legalization of them becoming an ever-pressing issue, the potential toxicity of these compounds is a relevant topic not just for us, but also our pets. Incidental exposure to dogs happens not only through ingestion of plant matter, but also through owners using cannabinoid compounds to treat their pets' ailments. It has also been shown in mice studies that these compounds are effective at suppressing immune responses, which means they have potential for treating autoimmune diseases such as rheumatoid arthritis and multiple sclerosis.

During my time at the conference, I was able to attend several sessions designed for educating undergraduate students about careers in toxicology and the graduate educations associated with many of them. In addition, there were multiple talks I was able to attend and be engaged in. Also, while presenting my research, I had many insightful conversations with other students and professionals that gave me more ideas for future work and career development. The fellow MSU faculty and students who attended were very welcoming and helpful considering this was my first conference. Thanks to funding support by my research mentor, the College of Veterinary Medicine, and the Shackouls Honors College, my trip afforded me with knowledge, experience, and connections that I will undoubtedly use moving forward in my education and career. I am very thankful for the Shackouls Honors College assisting me, and I am happy to represent it.