

Student researches at NSU College of Pharmacy

By Danae Jarrett

With a passion for Science, Technology, Engineering, and Math (STEM) along with biomedical technology, Senior Sarah Branse is determined to make a difference through the use of STEM research and application.

Sarah is passionate about scientific research. At NSU, Sarah worked with Dr. Castejon of the NSU College of Pharmacy. Through her mentorship with Dr. Castejon, Sarah assisted with studying cell death in Lymphoblastoid cell lines, with results finding a strong correlation between oxidative stress and cell death in autistic children, with glutathione levels as the underlying mechanism. This research provided a better understanding of the pathogenesis of autism, which aids in the development of more personalized treatments for the disorder. Sarah's bi-weekly mentorship experience was collaborative and hands on, allowing her to collect cell samples and complete graduate level work.

Sarah is currently Co-President of the Upper School STEM Club, where she works with her peers to organize activities for STEM week and competes in numerous local and national science competitions. She is also President of Mu Alpha Theta and is actively involved with the high school Math Team, competing both locally and nationally.

Sarah is most proud of the Math Circles program she started. Seeing a dearth of girls competing in math competitions, Sarah researched gender biases and math anxiety with girls and decided that she needed to spark interest for STEM in girls by starting at a much younger age. In her junior year, Sarah founded and implemented an extracurricular "Math Circles" program for 4th and 5th grade girls.



This new LS program was resoundingly successful and a new program will continue next semester. In

fact, she hopes to open up the program to even younger girls. "Moving forward, my goal is very basic – to be a role model who gets young girls excited about math at an early age, increases their confidence about math and inspires girls to consider a future in math or science," said Sarah.

In addition to her passion for STEM, Sarah is actively involved in both the arts and athletics. She has been a member of the Varsity Basketball team for four years. As the Co-Captain of the team, Sarah is proud to be a part of the highest ranked academic team in the state of Florida.

Sarah is also involved in Public Forum Debate. She is on the debate Executive Leadership Board and has traveled extensively for competitions, participating in tournaments at Harvard, Yale, and in New York. During her sophomore year, Sarah became a champion at the Crestian National Speech and Debate Tournament and Round Robin, and also qualified to the Tournament of Champions, which is the most prestigious tournament of the year.

Sarah has earned numerous academic and other awards, including the Harvard Book Award, Junior Scholar Athlete Award and Citizen's Scholar Award for best exemplifying citizenship and scholarship. In addition, she is a current nominee for the Broward County Silver Knight Awards.

As a lifer, attending NSU University School since Junior Kindergarten, Sarah credits her love of STEM and scientific inquiry to her teachers.