Pictured left to right: Dr. Indu Ambudkar (Chair for the Poster Sessions, Employee of NIH/NIDCR in Bethesda, MD), Molly Butts, Ph.D. (recent graduate of the Biomedical Research Program at Marshall University and current Post Doc)

"Post Doc, Molly Butts, Ph.D., receives first place at International Conference"

Molly Butts, PhD, a recent graduate of the Biomedical Research Program at Marshall University and current Post Doc attended the 11th International Biomedical Transporters Conference in early August located in Lucerne, Switzerland. The 11th annual conference was held at the Swiss Museum of Transport that displayed many types of transport modes, from road, rail, water, and air-born as this year's conference was entitled "Membrane transporters and channels: From basic research to drug development and clinical application." During the 2017-2018 Academic year Butts was awarded the "Best Overall Performance as a Graduate Student" from the Biomedical Research graduate program, which allowed her the opportunity to travel to an international conference.

While at the conference, Butts presented her most recent research entitled "Sodium-dependent glutamine absorption is significantly inhibited by moderate alcohol consumption in the villus cell brush border membrane of Sprague Dawley rats." Although there were many outstanding research posters presented at the conference, Butts' exceptional research offered her the opportunity to receive first place while in attendance.

Butts proposed explanation for this research was to determine the effects and regulations Ethanol possessed on B0AT1 in intestinal villus cells. With the assistance from Dr. Raja Singh Paulraj, Dr. Soudamani Singh, and Dr. Uma Sundaram, the research methods were carried out to determine the results. In conclusion, the research team discovered that a moderate dosage of ethanol inhibited the activity of a vital sodium-dependent glutamine cotransporter (B0AT1) in the small intestinal villus cells of

Sprague Dawley rats. The mechanism of inhibition was due to a decrease in the protein expression of the B0AT1 co-transporters at the brush border membrane of the small intestine.

When asked if Butts would further this study, she stated “This research is novel because no one has investigated the effect of alcohol on B0AT1 and few investigators research moderate alcohol consumption,” with continuing to include “this work is important because it describes the onset of alcohol-based malnutrition.” While it may not be a definite answer of whether this specific research study will continue, Butts is currently working on other projects with similar content.