Biosensing of Biofilm: Detecting Volatile Organic Compounds Using a Dog’s Nose
Dara Hofmann (COL 2018)
Advisor: Cynthia Otto

The PURM program enabled me to have a very enriching summer experience researching in and exploring my field of interest—veterinary science. I participated in medical scent detection research at the PennVet Working Dog Center. The goal of my study was to determine if scent detection dogs could be imprinted on the scent of bacteria and successfully indicate on a positive sample when searching a scent wheel. The scent wheel is a device that can hold different samples, both positive and control, in such a way that the dogs can sniff each one. I played a hands-on role in the imprinting, training, and testing of three participating canines. I learned so much from my study regarding scent detection training, canine behavioral observation, veterinary clinical trials, and data entry.

Being in the Working Dog Center’s environment provided me with multiple additional opportunities. For example, I was able to observe and assist with other kinds of scent training, such as live human search, diabetic alert, narcotics and explosive detection, and cancer detection. I also had a chance to shadow vet students, externs, and veterinarians in their interactions with the working dogs. This experience has been extremely valuable to me, an aspiring pre-vet student. This research internship has provided me with reassurance that this is the field for me, and has made me so excited for my future in veterinary medicine.