

Canine specialists have long been training working dogs to employ their substantial olfactory senses in the detection of anything from drugs to cancerous cells. Their impressive skills save lives – both human and animal. Service dogs can detect and alert oncoming seizures, high blood sugar, hormone fluctuations and indicate a myriad of other health issues. These skills are vital to the health and independence of their handlers.

More recently, researchers have become increasingly interested in the canine capacity to detect infectious wildlife diseases. From chronic wasting disease to bighorn sheep pneumonia, these canines have the potential to protect the prey animals central to our Wyoming culture. In fact, they are the only real-time feedback we have while scouting for disease in the field.

Working dogs are trained to alert to scent using an operant conditioning system. Every interaction with a “hot” or positive scent is rewarded, while every interaction with a negative or distractor scent is ignored. Yuki, my scent detection dog, has been conditioned to alert to cortisol, gluten, and vanillin. We will be demonstrating her ability to isolate and alert to these scents today! While watching her work, keep in mind the real-life implications of these skills.