

SYDNEY OZERSKY & ZACHARY LOUGHMAN, Dept. of Biological Sciences, West Liberty University, West Liberty, WV, 26074, Transfer of *Cryptosporidium* oocysts from feeder rodents to neonate snakes and its impact on parasite identification methods used by zoological institutions

Parasites are found in a variety of species and can cause issues in animal health and welfare. One parasite in particular, *Cryptosporidium*, is a protozoan that impacts the gastrointestinal and respiratory tract of its hosts, which includes humans, rodents, cattle, birds, fish, and reptiles. In squamates, specifically snakes, *Cryptosporidium serpentis* has been reported to cause lethargy, weight loss, and mortality. Another species, *Cryptosporidium parvum*, causes infections in mice, humans, and cattle but is nonpathogenic in snakes. Common identification methods, such as ELISA antigen testing, Acid-fast (AF) staining, and Immunofluorescent antibody (IFA) testing, are frequently used because of their low cost and simplicity; however, these can appear positive for both *C. parvum* and *C. serpentis*. Polymerase chain reaction (PCR) is also used for *Cryptosporidium* identification and is one of the only methods that easily differentiates between *Cryptosporidium* species. Differentiating between these species is necessary as zoological protocols recommend euthanizing or permanently isolating squamates infected with *C. serpentis*. Rodents are a staple of snake diets in human care, so it is crucial to understand how their diet could impact infection identification. Additionally, immunocompetent mice infected by *C. parvum* are known to show no clinical signs of infection, so feeder rodent companies may be unaware that their rodents are infected. The purpose of this study is to show how consuming an infected prey item could cause a false positive using common *Cryptosporidium* identification methods, specifically IFA, and the importance of using species-specific identification methods such as PCR.