
SEASONAL DIFFERENCES IN HANTAVIRUS PREVALENCE IN DEER MICE CAPTURED IN RANCH BUILDINGS IN SOUTHWESTERN MONTANA

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Hantaviruses are widespread emergent zoonotic agents that cause unapparent or limited disease in their rodent hosts, yet cause acute, often fatal pulmonary or renal infections in humans (Bagamian et al., 2013). In the United States one rodent species, the deer mice (*Peromyscus maniculatus*) are the principal host of Sin Nombre virus (SNV), which causes Hantavirus Pulmonary Syndrome (Childs et al. 1994, Nichol et al. 1993). Mice spread the virus to each other when they come in direct contact. Males spread the disease more because they are more aggressive and bite each other when they fight (Bagamian et al. 2013). A previous study (Kuenzi et al. 2001) has shown that mice that live inside of ranch buildings in western Montana have a higher prevalence of antibodies to SNV than outside populations. This study also found that male mice were more likely to be infected than female mice.

A similar study was conducted in southwestern Montana testing seasonal effects instead of location. Knowing that indoor mice have higher antibody prevalence to SNV, mice were trapped in two ranch buildings during the summer and fall to examine seasonal differences in SNV prevalence in these populations.