Longitudinal Studies of Hantavirus in Deer Mice in Western and Central Montana[tws]

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The summer (1994) following the occurrence of the first two human Hantavirus cases In Montana which occurred in 1993, we initiated a longitudinal study of the ecology of deer mice *(Peromyscus maniculatus)* and Hantavirus. The objectives were to determine the geographic distribution of infection in rodents, describe the relationships between deer mouse population dynamics and infection, and to try to determine how the virus is maintained in the deer mouse population. As of November 1998, we had captured 6,342 rodents 10,992 times. Of 20 species of rodents, deer mice, meadow voles *(Microtus pennsylvanicus)*, red backed voles

(*Clethrionomys gapperi*), sagebrush voles (*Lagurus curtatus)* and yellow pine chipmunks (*Tamias amoenus)* were found to be seropositive for antibodies against Hanta type viruses. We found infected animals everywhere we trapped. Preliminary data comparing population density versus infection rates and numbers of infections are presented. Clues to the maintenance of the virus in deer mouse populations include differences in infection rates among animals of differing ages, sexes and breeding condition.