Excerpt from 6-6-03 NCSU LAR health surveillance report to investigators.

Information on murine parvoviruses

Minute Virus of Mice (MVM or MMV) and Mouse Parvovirus (MPV) are both mouse parvoviruses and can complicate immunology research.

Excerpts from Laboratory Animal Medicine, 2nd edition, 2002. Biology and diseases of mice, pages 61-63.

" MVM is perceived as a common virus of mice. True prevalence is unclear. Transmission occurs by oronasal exposure, but viral contamination of biologicals used for experimental inoculation, such as transplantable tumors, also can be a source of infection. Natural infections are asymptomatic. Young mice in enzootically infected colonies are protected by maternal antibody, but actively acquired immunity develops from infection sustained after the decay of maternal immunity. MVM, in contrast to MPV, is not thought to cause persistent infection; infection in immunocompetent adult mice usually last less than 3 weeks."

"Serologic evidence strongly suggests that MPV causes natural infection only in mice. MPV is thought to be transmitted primarily by fecal excretion and ingestion of contaminated material. MPV is clinically silent in infant mice and adult immunocompetent or immunodeficient mice, but causes persistent infection in infant and adult mice. MPV appears to enter through the intestinal mucosa, which is a site of early virus replication. Acute infection is widespread but mild, involving lung, kidney, liver, and lymphoid organs. Histological lesions are not discernable. Lymphocytotropism is a characteristic of acute and persistent MPV infection in infant and adult mice. Murine parvoviruses can distort biological responses that depend on cell proliferation. For MPV, such effects are seen on immune function and include augmentation or suppression of humoral and cellular immune responses."

And from sources at diagnostic laboratories:

Parvoviruses do not spread as readily as other common pathogens, such as coronavirus (Mouse Hepatitis Virus).

MPV does not last indefinitely.

Parvoviruses tend to smoulder. Shedding may occur for long periods of time. Genetically modified animals may shed and harbor the organisms for longer periods of time.

Many facilities around the country are finding that their sentinels are testing positive for these agents.

Gross lesions and clinical signs are not typically observed.

Pathology of Laboratory Rodents and Rabbits, 1993:

MVM transmission requires close contact between mice.