

Pneumonia Virus of Mice

Prevalence

Common in rats. Rare in Australian mouse colonies, but more prevalent in other parts of the world. Common in hamsters

Diagnosis

Serology.

Screening

All colonies; Quarterly

Disease

Subclinical in immunocompetent animals. Can cause lower respiratory disease in experimentally infected animals. Wasting disease in nude and SCID mice due to progressive pneumonia. Lung lesions more common in rats than in mice.

Strains

Number of strains not known. Cross species infection may be possible.

Transmission

Direct contact and aerosol. Susceptibility increased by ether anaesthesia, urethane administration and pyridoxine deficiency

Duration

Short lived in immunocompetent animals, approx 9-10days.

Durability

Labile at 56°C for 30 minutes. Does not survive well outside the host.

Comment

Paramyxovirus. Antibody titres have been found in rabbits and guinea pigs but no reports of virus isolation

Significance

Low. No reported evidence of interference with research, but may contribute to higher than normal mortality rates under anaesthesia.

Control

Pathogen exclusion. Regular health monitoring of supplier sub-populations, transport in filter boxes, quarantine at receiving institution with serology testing 2 weeks post arrival. Maintenance under strict barrier protocol.

Post infection. Caesarean rederivation, embryo transfer or burn out selecting seronegative progeny as breeding stock post isolation of individual breeding pairs in micro-isolators. Strict husbandry protocols and efficient barrier conditions are essential for success.



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