

## Pneumonia Virus of Mice (PVM)

RNA virus, enveloped.

### Prevalence

- Rare in laboratory mice and rats. Uncommon in wild mice

### Diagnosis

- Serology or PCR

### Disease

- No clinical signs in immunocompetent mice. A progressive interstitial pneumonia with wasting is seen in immunodeficient mice. Immunodeficient mice are persistently infected, develop progressive pneumonia, can lose weight and develop dyspnoea. In rats no clinical signs are seen, however microscopic lesions include interstitial pneumonitis and an acute, multifocal, nonsuppurative vasculitis

### Screening

- Regular serological testing of resident animals and quarantine of suspect incoming animals

### Transmission

- Transmission is by aerosol and direct contact with respiratory secretions

### Durability

- PVM is not stable in the environment, losing 99% infectivity at room temperature in an hour

### Significance

- In immunocompetent animals PVM unlikely to interfere with research. In immunodeficient animals, the progressive wasting disease associated with pulmonary dysfunction shortens lifespan and renders these animals unsuitable for research

### Control

- Caesarian derivation and barrier maintenance have proven successful. The transmission of PVM can be limited by the use of cages with filter covers

### Reading

- Infectious Diseases of Mice and Rats. National Research Council 1991
- Charles River Laboratories website, [www.criver.com](http://www.criver.com)
- University of Missouri, Research Animal Diagnostic Laboratory website, [www.radil.missouri.edu](http://www.radil.missouri.edu)