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## Murine Norovirus

As part of the RADIL's continuing effort to provide the highest level of diagnostic testing for research animals, the RADIL is offering MFI and PCR testing for a newly-recognized Murine norovirus.

**What is known about the virus??**

- **Murine norovirus (MNV) was first described by Karst et al. in 2003 (<http://www.sciencemag.org/cgi/content/abstract/299/5612/1575>)**
- **Experimental inoculation studies revealed that disease manifestations associated with MNV infection vary depending on the mouse strain:**
  - **Immunodeficient (RAG/STAT<sup>-/-</sup>) mice showed high mortality with concomitant encephalitis, meningitis, vasculitis, pneumonia and hepatitis.**
  - **RAG<sup>-/-</sup> mice exhibited low mortality but remained persistently infected.**
  - **Immunocompetent mice seroconverted but were only transiently infected with the virus.**
  - **Mice lacking interferon  $\alpha\beta$  and interferon  $\gamma$  receptors were 10,000-fold more susceptible than immunocompetent mice.**

## STAT1-Dependent Innate Immunity to a Norwalk-Like Virus

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Norwalk-like caliciviruses (Noroviruses) cause over 90% of nonbacterial epidemic gastroenteritis worldwide, but the pathogenesis of norovirus infection is poorly understood because these viruses do not grow in cultured cells and there is no small animal model. Here, we report a previously unknown murine norovirus. Analysis of Murine Norovirus 1 infection revealed that signal transducer and activator of transcription 1-dependent innate immunity, but not T and B cell-dependent adaptive immunity, is essential for norovirus resistance. The identification of host molecules essential for murine norovirus resistance may provide targets for prevention or control of an important human disease.