TESTING CELL LINES FOR RODENT INFECTIOUS AGENTS

Research rodents are readily infected by a number of viruses and bacteria which may produce disease and/or significantly alter experimental data. To successfully prevent spread of such agents, it is important that the microbiologic status of rodents housed within research facilities be periodically evaluated.

Many infectious agents of rodents can be carried in cell lines and tissues which, when implanted into naive host animals, may serve as a source of infection. To minimize the likelihood of inadvertent infection of specific pathogen-free rodents with these agents, tumors, tissues, cell lines, and ascites fluid should be evaluated for contamination prior to experimental use in vivo.

The diagnostic laboratory IDEXX-RADiL currently offers IMPACT PCR-based testing and offer a turn-around time of approximately 5 business days.

IMPACT testing of materials to be implanted into mice often includes assays for the following viruses and bacteria depending on the specific panel chosen:

- Mouse parvovirus
- Mouse hepatitis virus
- Murine Norovirus
- Reovirus type 3
- Lymphocytic chorio meningitis virus
- Mouse cytomegalovirus
- Mycoplasma pulmonis
- Lactate dehydrogenase elevating virus
- Mouse thymic virus
- Theiler's mouse encephalomyelitis virus (GDVII)

- Pneumonia virus of mice
- Minute virus of mice
- Sendai virus
- Ectromelia virus
- K virus
- Hantaan virus
- Mouse adenovirus
- Polyoma virus
- Rotavirus

The Laboratory Animal Program can offer investigators advice in testing of samples. Additional panels are available for rat pathogens. IMPACT testing results of individual samples obtained should be forwarded to the Laboratory Animal Program for disease surveillance purposes.

Additional Information:
Baker D, Natural Pathogens of Laboratory Mice, Rats, and Rabbits and Their Effects on Research. CMR, 11(2) p. 231-266, 1998.