



## *Institutional Animal Care and Use Committee*

*Approved January 16, 2008*

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### **GUIDELINES FOR REQUIRED PATHOGEN TESTING PRIOR TO USING BIOLOGICAL MATERIALS IN RODENTS**

Rodent colonies in the Biological Resource Facility at Rosalind Franklin University are regularly screened for infectious diseases and are generally free of viruses and other microbial agents that are capable of interfering with research. The inadvertent introduction of untested biologicals carrying pathogens can endanger the health of entire rodent colonies and thus the integrity of many research projects. A variety of biological materials including cell lines, tumors, tissues, stem cells, and serum components can harbor murine pathogens capable of introducing disease into rodent colonies. Biological materials can also be contaminated with murine viruses with zoonotic potential such as LCMV that can infect people handling rodents treated with contaminated biological materials. For this reason, all biological materials of unknown and undocumented rodent pathogen status must be tested prior to inoculation into rodents.

#### **BIOLOGICALS THAT REQUIRE TESTING PRIOR TO IN VIVO USE:**

- 1) Any rodent-origin material that was not obtained via primary isolation from animals housed at Rosalind Franklin University.** This includes: *cell lines, transplantable tumors, serum, tissues, body fluids, and antibody preparations derived from rodents outside of BRF colonies.*
- 2) Non-rodent origin material (including human) that has been passaged through rodents or exposed to rodents outside of BRF colonies.** This includes *cell lines, transplantable tumors, serum, tissues, body fluids, and antibody preparations.* To avoid testing of non-rodent derived biologicals, documentation verifying that these materials have *not* been passaged through rodents or exposed to rodent products must be submitted to the BRF Director for review.

Commercially obtained biologicals for which the vendor can supply PCR testing results that meet this policy's test requirements are excluded from the testing requirement.

To ensure the safety of the colonies, previously tested materials may be required to be retested depending on how the materials have been handled and stored since testing (or if the original testing fails to meet current policy standards). The need to retest previously tested biologicals will be considered as part of the standard three year IACUC protocol renewal process and upon submission of significant modification applications.



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### BIOLOGICALS PROPOSED FOR USE IN ANIMALS MUST TEST NEGATIVE FOR THE PATHOGENS LISTED IN TABLE 1:

**Table 1. Required Testing Based On The Species To Be Used For In Vivo Studies.**

| MOUSE  | RAT   | HAMSTER                                  |
|--|---|--|
| Sendai virus (SEN)                                   | Sendai virus (SEN)                            | Sendai virus (SEN)                       |
| Pneumonia virus of mice (PVM)                        | Pneumonia virus of mice (PVM)                 | Pneumonia virus of mice (PVM)            |
| Mouse hepatitis virus (MHV)                          | Rat coronavirus (RCV)                         | Toolan's H1 virus (H-1)                  |
| Hantaan virus  | Hantaan virus                                 | Hantaan virus                            |
| Mouse Rotavirus (EDIM)                               | Toolan's H1 virus (H-1)                       | Kilham's rat virus (KRV)                 |
| Theiler's murine encephalomyelitis                   | Theiler's murine encephalomyelitis like virus | Theiler's murine encephalomyelitis virus |
| Mouse parvovirus (MPV1, MPV2, MPV3)                  | Rat parvovirus (RPV)                          | Lymphocytic choriomeningitis (LCMV)      |
| Mycoplasma spp.                                      | Mycoplasma spp.                               | Mycoplasma spp.                          |
| Reovirus (REO-3)                                     | Reovirus (REO-3)                              | Reovirus (REO-3)                         |
| Lymphocytic choriomeningitis (LCMV)                  | Lymphocytic choriomeningitis (LCMV)           | Minute virus of mice (MVM)               |
| Mouse adenovirus (MAD)                               | Mouse adenovirus (MAD)                        |  |
| Minute virus of mice (MVM)                           | Sialodacryoadenitis (SDAV)                    |  |
| K virus (K)  | Kilham's rat virus (KRV)                      |  |
| Polyoma (POLY)                                       |   |  |
| Lactate dehydrogenase & nbps; elevating virus (LDEV) |   |  |
| Mouse thymic virus (MTV)                             |   |  |
| Ectromelia (ECTRO)                                   |   |  |
| Mouse cytomegalovirus (mCMV)                         |   |  |

#### APPROVED TESTING METHODS:

PCR-based testing is preferred, as it complies with the PHS Policy and Animal Welfare Regulations that require alternatives to animal use is more economical than other types of tests (MAP or RAP). PCR testing is done at the University Of Missouri Research Animal Diagnostic & Investigative Laboratory (MU-RADIL). The following MU-RADIL PCR panels satisfy the testing requirements in Table 1: IMPACT Profile I for mice, the IMPACT Profile V for rats, and the IMPACT Profile VII for hamsters.

MU-RADIL contact information: Phone: (800) 669-0825

E-mail: [radil@missouri.edu](mailto:radil@missouri.edu) URL: [www.radil.missouri.edu](http://www.radil.missouri.edu)

***PIs must submit test results to the BRF/IACUC Office for review and approval prior to beginning in vivo studies using biological materials in animals.***