Recommendations for Testing of Biological Specimens Intended for Use in Live Laboratory Rodents

IUB Policy on Testing of Biological Specimens to be Implanted into Live Laboratory Animals requires that cells and tissues intended for injection or implantation into live laboratory rodents be tested for rodent pathogens.

Specific scenarios, which may or may not require testing:

- Cells, which have never been tested, either commercially obtained, or from another investigator.  
  - YES

- Cells, which were tested and used previously, but frozen and stored, to be thawed for use again.  
  - Maybe, testing documentation must be reviewed.

- Cells obtained commercially or from another investigator, which have been tested before.  
  - Maybe, testing documentation must be reviewed.

- Cells, which have been used at IUB before, but were never tested.  
  - No, if sentinel health records are available and no outbreaks occurred.  
  - Yes, if sentinels were not used to survey injected mice.

- Cells have been tested or used safely before, but have been passaged through rodents or rodent cells or serum since the testing or previous use.  
  - Yes

If you are unsure about the requirements for any specific situation, please contact LAR.

Specimens to be implanted into mice should be tested for the following agents of concern:

- Mycoplasma spp.
- Sendai virus
- Mouse hepatitis virus
- Pneumonia virus of mice
- Minute virus of mice
- Mouse parvovirus (MPV1, MPV2, MPV3)
- Theiler's murine encephalomyelitis virus
- Murine norovirus
- Reovirus 3
- Mouse rotavirus
- Ectromelia virus
- Lymphocytic choriomeningitis virus
- Polyoma virus
- Lactate dehydrogenase-elevating virus

Specimens to be implanted into rats should be tested for the following agents of concern:

- Mycoplasma spp.
- Pneumonia virus of mice
- Kilham's rat virus
LAR recommends polymerase chain reaction (PCR) testing of specimens. This service is available at different laboratories, including the University of Missouri’s Research Animal Diagnostic & Investigative Laboratory (RADIL), which refers to it as Infectious Microbe PCR Amplification Test (IMPACT). Information about testing, prices, and shipment of specimens may be located at the website: http://www.radil.missouri.edu/info/index.asp. In general these PCR tests are less expensive, turnaround time is days instead of weeks (6-8), and are preferred due to less animal welfare concerns.

Other testing options are Mouse Antibody Production (MAP) or Rat Antibody Production (RAP) Testing. These services are available at different laboratories, including Harlan Sera-Lab (http://www.harlanseralab.co.uk/enter.htm) and Charles River Laboratories (http://www.criver.com/SRM/diagnostics/index.html). The profiles of agents tested should be verified with DAR as appropriate before testing is performed.

If there are questions concerning this required testing, please contact LAR at 855-2356