



INSTITUTIONAL ANIMAL CARE
AND USE COMMITTEE

IACUC POLICY # 15 Policy of Use of Cell Lines in Live Animals

The confounding effects of viral infections (often without signs of clinical disease) of experimental animals, e.g. mouse hepatitis and ectromelia are well documented in the literature.¹ These infections can have devastating effects on experimental results as well as on production of animals from breeding colonies.² Of equal concern is the potential for infections among laboratory workers. Infections with zoonotic agents such as hantavirus³ and lymphocytic choriomeningitis⁴ have been traced to contaminated biological material transplanted into animals.

Biological material and animal products such as cell lines, tissues, and tumors have been repeatedly incriminated as vehicles for the introduction of animal pathogens into animal colonies.

The prevention of accidental introduction of viral infections into research animals is essential to maintenance of the animal colonies at the university. To maintain the integrity of the animal colonies the Institutional Animal Care and Use Committee has established the following guidelines regarding the introduction of cells, tumors, and other biologic products into experimental animals:

1. Investigators are responsible for ensuring that the biologic materials used in their study will not endanger the health of study animals or other animals housed in the facility. Investigators planning to introduce tumors, tissues, or cells into experimental animals must complete the relevant section of the Animal Use Proposal (Section IX).
2. Cell lines, tumors, or other biologic materials originating from rodents or passaged through rodents must be certified free of murine pathogens prior to their introduction into USC animal facilities. This includes cell lines purchased from ATCC or other commercial sources.
3. Investigators must provide the IACUC with documentation that the material has been tested and verified free of pathogens before introducing these materials into animals. Cell lines, tumors or other materials for which no documentation is provided must be tested. The preferred method for testing material is by polymerase chain reaction (PCR) procedures.
4. Any material found to be positive for murine pathogens must not be used. Once the material is shown to be cleared of the agent(s) and the proper documentation is on file in the ARF office, the material may be used for experiments.

5. Human cell lines that have not been passaged through rodents do not require testing for murine viruses.

6. Cell lines passaged through rodents and frozen for storage and later use must be retested when thawed. More frequent testing of cells lines may be required if: 1) rodent pathogens are detected in the room where the cell lines are being used; 2) the material will be transferred to animals in a campus facility other than that in which it was originally used; 3) cell lines have been passaged through animals housed in an off-campus facility and returned to USC; or 4) as otherwise determined by the Attending Veterinarian and/or IACUC.

1. Committee on Infectious Diseases of Mice and Rats, Institute of Laboratory Animal Resources. *Infectious Diseases of Mice and Rats* Pub 397 (National Academy Press, Washington, DC, 1991).

2. Baker, D.G. Natural pathogens of laboratory mice, rats, and rabbits and their effects of research. *Clin. Microbiol. Rev.* 11, 231-266 (1998).

3. Lloyd, G. & Jones, N. Infection of laboratory workers with hantavirus acquired from immunocytomas propagated in laboratory rats. *J. Infect.* 12, 117-125 (1986).

4. Hinman, A.R. *et al.* Outbreak of lymphocytic choriomeningitis infections in medical center personnel. *Am. J. Epidemiol.* 101, 103-110 (1975).