

## Animal Care and Use Program Policy



### *Pathogen Screening of Biological Material to be Implanted in Rodents*

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### **Background**

Colonies of research rodents are susceptible to infection with a variety of microbial agents. In the vast majority of cases, these agents produce no clinical signs yet produce physiologic changes that may alter and invalidate research carried out on infected rodents. Many agents have the ability to spread through rodent colonies once they have been introduced. Routes of introduction of these agents include infected rodents from outside OHSU, contaminated biologic materials that are introduced into rodents and personnel who have become contaminated.

Biological materials, such as cell lines and their products, are frequently introduced into rodents for a variety of experimental purposes. Examples include introduction of biological materials for the purpose of producing monoclonal antibodies and implantation of tumor cell lines for cancer research. The sources of these biologic materials include tissues such as human tumors and cell lines, and samples from other species that have been passaged through rodents and which are maintained in tissue culture or frozen for long periods of time. The materials may originate from laboratories on campus, other research institutions, or from commercial suppliers, such as the American Tissue Culture Collection (ATCC). All of these materials are subject to contamination with murine pathogens that may be transmitted to the recipient rodent even if they did not originate from murine tissues. Once introduced into the recipient, that rodent may be a reservoir of infection for other rodents in the colony and contribute to the invalidation of research data.

### **Scope**

This policy applies to all tumors, tissues, immortal cell lines, embryonic stem cells, and hybridomas which have been passaged in rodents, and/or have been supplemented with cells or biological fluids from an untested rodent source, and will be inoculated into rodents. If biological materials (including cell lines) have not previously been passaged through rodents or have not been supplemented with cells or biological fluids from an untested source, biological materials may be used in rodents in research colonies without special restriction or containment beyond the usual husbandry program.

### **Policy**

Biologic specimens as described above must be free of contamination with rodent pathogens before use in rodents.

### **Procedures**

- I. The Principal Investigator (PI) is responsible for providing the Department of Comparative Medicine on the Central and Waterfront Campus (DCM-C) or Division of Comparative Medicine on the West Campus (DCM-W) with suitable documentation of:
  - A. the specimen's source,
  - B. history of use, and
  - C. any previous testing for determination as to whether the specimen is likely free of all microbial agents concern or requires further testing.
- II. Previous testing may satisfy the policy requirements if appropriate documentation reveals that the method, scope, and date of testing are adequate, and the specimens have not been passed through rodents or rodent cells since the latest testing.
- III. Previous use in a colony of rodents for which concurrent health surveillance revealed no infectious agents may also be adequate.

- IV. If testing is required, the PI is subsequently responsible for conferring with DCM-C or DCM-W to determine which agents to test for and which laboratory and testing methods are appropriate, providing DCM-C or DCM-W with documentation of testing results, and receiving notification from DCM-C or DCM-W that the test results indicate the specimen is likely free from all microbial agents of concern.
- V. The PI is responsible for maintaining records of testing, use, storage, and handling of cells and tissues.
- VI. Certification of testing is forwarded to the veterinary staff and to the IACUC as verification that the material is free of specific infectious zoonotic agents and rodent pathogens

### **Authority**

Guide for the Care and Use of Laboratory Animals, 8<sup>th</sup> ed. 2011 p.113  
Animal Welfare Act. 9 CFR (AWA)

### **References and Additional Resources:**

1. Nakai N, Kawaguchi C, Nawa K, et al. Detection and elimination of contaminating microorganisms in transplantable tumors and cell lines. *Experimental Animals* 2000;49(4):309-313.
2. National Research Council (US) Committee for the Update of the Guide for the Care and Use of Laboratory Animals. 2011;.
3. Nicklas W, Kraft V, Meyer B. Contamination of transplantable tumors, cell lines, and monoclonal antibodies with rodent viruses. *Lab Anim Sci* 1993;43(4):296-300.