Institutional Animal Care and Use Committee
UNIVERSITY OF GEORGIA

Policy for Testing of Biological Materials to be Implanted or Injected into Live Laboratory Rodents

Use of Biological Materials in Laboratory Rodents

Animal cells, tissues, and serum can transmit pathogens and infect laboratory rodents. This is a well-documented, high-risk activity for animal colony biosecurity. In order to protect laboratory rodents, cells and tissues must be tested for rodent pathogens before they are injected or implanted into rodents. Some rodent pathogens can also infect humans.

This policy applies to mammalian cells and tissues from a rodent source*; mammalian cells and tissues (including human) that have been exposed to or passed through rodents or rodent cells or serum; and non-mammalian agents cultured in rodents or rodent cells or serum. Examples of biological specimens considered under this description include, but are not limited to, immortal cell lines; hybridoma cells intended for ascites production; tumor cells; viral, parasitic, or bacterial agents cultured in rodent cells or serum; and rodent blood products, including serum.

All cells lines can be an occupational health hazard, regardless of origin and despite testing. This is particularly true when cells are implanted in immunodeficient rodents. Universal precautions must be used when handling cell lines, whether in vivo or in vitro.

Testing Requirements for Biological Materials and PI Responsibilities

Biological specimens as defined above must be determined to be free of contamination with agents of concern before use in rodents. Failure to comply with the biological material testing requirements stated within this policy can result in the PI assuming the cost for managing outbreaks of disease due to the use of untested biologicals.

Testing Procedures and Resources

URAR requires polymerase chain reaction (PCR) testing of specimens, which must be performed by a laboratory that is accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD), or the American National Standards Institute (ANSI) National Accreditation Board. Options include IDEXX or Charles River Laboratories. Specific panels are required, to ensure that the tissues are tested for the specific rodent pathogens that URAR excludes via the URAR rodent health surveillance program. The acceptable testing level profiles at IDEXX Bioanalytics are IMPACT3 level for mouse tissues, IMPACT6 for rat tissues, and IMPACT7 for hamster tissues. The acceptable profiles at Charles River Labs are Mouse Essential Panel and Rat Essential Panel.

Any alternative testing laboratories or panels must be approved by URAR as appropriate. URAR also must approve any alternatives to testing. Previous testing may satisfy the policy requirements if appropriate documentation reveals the method, scope, and date of testing are adequate, and the

specimens have not been passed through rodents or rodent cells or serum since the latest testing. Previous use in a colony of rodents for which concurrent health surveillance revealed no infectious agents may also be adequate. The PI is responsible for providing URAR with suitable documentation of the specimen's source, history of use, and any previous testing.

*Exception: This does not apply to fresh cells and tissues harvested from animals in a UGA colony that are transplanted into other animals in the colony, without exposure to media containing rodent serum. For example, immune cell transfers. These cells and tissues do not require testing.