Guidance for Use of Radioactive Materials in Animal Studies

Definitions

**Authorized Radiation User (ARU)** – an individual who has been approved for use of radioactive materials by the Radiological Safety Committee.

General requirements must be met before using radioactive material on or in animals.

1. Attaining approval as an ARU

   - A Principal Investigator (PI) wishing to use radioactive material on or in animals must be a current ARU, or be collaborating with an individual who is an ARU. A PI who is not a current ARU or collaborating with an ARU must apply and be approved as an ARU before the Institutional Animal Care and Use Committee (IACUC) will give final approval for animal use protocols.

   - **To apply to become an ARU**: Prospective ARUs must submit a Non-Human Use of Radionuclides Application to the Radiation Safety Department for review by the Radiation Safety Officer (RSO). If the application is approved by the RSO, it will be forwarded to the Non-Human Use of Radiation and Radionuclides Committee for review. If approved, the application will be recommended for review by the Radiological Safety Committee.

     *Note: See Radiation Safety Department website (www.hsc.wvu.edu/rsafety) for application forms, detailed instruction on application process, submission deadlines and committee meetings. Or phone the Radiation Safety Department at 304-293-3413 for assistance.*

   - If approved as an ARU, you will receive an approval letter from the Radiation Safety Department detailing the conditions of your approval, including isotopes allowed, maximum activity, and approved protocols. This letter will need to be attached to IACUC Protocol Appendix J-Use of Radioactive Materials in Animals to be considered for final approval from IACUC.

   - **If you are a current ARU**: If you are a current ARU and are wishing to add an animal use protocol to your authorization, you will follow the same process as described above. See Radiation Safety Department website for details.

   - **If you are collaborating with a current, active ARU**: If a PI is collaborating with a current ARU on an animal protocol, the ARU must be listed on the Protocol Appendix J as the ARU for the radioactive materials. The PI must receive from the ARU the letter of approval by the Radiological Safety Committee and attach the letter to Protocol Appendix J.
2. **Training**

Applicants must successfully complete all required training before using radioactive materials on or in animals:

- Training required by the Office of Laboratory Animal Research (OLAR).
- Radiation Safety Training for Authorized Radiation Users.
- Read and keep a copy of the Radiation Safety Manual.
- Be shown how to use a radiation survey meter, if applicable.
- Be shown appropriate labeling for cage/area/room.

3. **Inspection of laboratory space/vivarium by Radiation Safety Department**

Before animal studies begin, Radiation Safety Department will meet with the ARU and lab personnel to discuss or inspect the lab setup and procedures required. Radiation Safety Department personnel must sign off on the lab before work begins. Topics of discussion/inspection will include:

- Personnel monitoring
- Lab/vivarium setup and postings
- Transportation of animals
- Use of Personal Protective Equipment
- Laboratory security
- Animal housing setup
- Cage labeling
- Transport of animals
- Personnel surveys
- Storage of isotopes
- Handling radioactive specimens
- Waste disposal
- Carcass disposal
- Laboratory decommissioning

*Note: All specific requirements regarding radionuclide use on or in animals can be found on the Radiation Safety Department website ([www.hsc.wvu.edu/rsafety](http://www.hsc.wvu.edu/rsafety)).*

*Note: Laboratory space must also be inspected by the IACUC prior to animal use.*

4. **The vivarium supervisor must be directly notified of radioactive material use in animals before any use starts.**

- There may be additional requirements from the vivarium supervisor regarding vivarium use or carcass disposal depending on the type and quantity of radioactive materials used.

**Xstrahl XenX Irradiator**

- X-ray irradiator users must follow all instructions and radiation safety practices recommended by the manufacturer.

- All prospective users must contact the AMIF facility staff at 304-293-0518 for further information.

- All users must complete Radiation Safety Training for the X-ray irradiator unit before use of the unit.