



IACUC Policy 1100: Use of Radioactive material in Animal Study Policy

Institutional Animal Care and Use Committee (IACUC)

1. Definition of Key Terms Specific to this Policy

- A. **Radioactive material** refer to any element or compound whose a component of its atomic structure is unstable and decays by releasing radiation, either existing in nature or created from a production or use nuclear material, from a production by a radiation generator, or from any other processes. This definition is based on NUCLEAR ENERGY FOR PEACE ACT, B.E. 2559 (2016) of Thailand.
- B. **Laboratory Animal for Radiation Facility, Laboratory Animal Center** refer to facility that use for radioactive material in animal study. This facility is use radioactive material only in Group 3: Moderate toxicity and Group 4: Low toxicity and classified as a medium volume laboratory (Type B) that can support research moderately radiotoxicity of radionuclides.

2. Guideline to Conduct Research

- A. All proposed use of radioactive material must be included in the animal protocol and approved by IACUC. Radioactive material need to be evaluated by the IACUC and Radiation Safety Officer (RSO), Laboratory Animal Center according to Nuclear Energy for Peace Act of Thailand, B.E. 2559 (2016).
- B. Radioactive material only in Group 3: Moderate toxicity and Group 4: Low toxicity are allowed to conduct in Laboratory Animal for Radiation Facility, Laboratory Animal Center, Thammasat University (LAC-TU).
- C. In vivo Imaging LAB at Drug Discovery and Development Center has PET/SPECT for radioactive material use in laboratory animal. Maximum animal housing period in this room depends on the decision made by IACUC on each approved protocol. During housing period, daily care is provided by the assigned animal care staff.

- D. Requirements of primary barrier and safety equipment of approved study include:
- a. Individually ventilated cage (IVC) for housing animals
  - b. BSCs for manipulative procedures (inoculation, necropsy)
  - c. Shield for protect radioactive material
  - d. PPE: Laboratory coats, gloves, mask, Lab shoes as needed
  - e. Optical Stimulated Luminescent Dosimeter (OSL) for detects the limit of radiation that personnel can receive
  - f. Dosimeter for detects the radioactive in real-time

**3. Additional requirement**

RSO and OHS Advisor may advise additional requirement regarding the practice of the study or primary barrier and safety equipment upon the assessment of radioactive material and approached of the study.