STANDARD OPERATING PROCEDURES

DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

TITLE:	**Necropsy and Post Mortem Examination**
SCOPE:	All Authorized Personnel
RESPONSIBILITY:	Research and Animal Care Personnel
PURPOSE:	To Outline the Proper Procedures for Animal Necropsy

I. PURPOSE

1. To outline the proper procedures for performing a necropsy and post mortem examination.

2. Circumstances that may warrant necropsy performance include research diagnostic purposes, or colony health diagnostic purposes.

II. RESPONSIBILITY

1. Research staff or veterinarians conduct necropsies and post mortem tissue examinations of research animals.

2. Necropsies must be performed by investigators and staff when unexpected morbidities or mortalities are observed that are not attributable to the research protocol in order to assess animal colony health status.

III. PROCEDURE

1. Animal necropsy is performed in areas specifically designated for that purpose.

2. Cork boards used during necropsy must be covered with a clean, impervious disposable pad and the surface decontaminated after each use.

3. Necropsy should be performed in a manner that avoids the occurrence of artifacts or post mortem change in the collected tissues, and as soon after death as possible to insure tissue integrity. A ***Necropsy Report form, CMDC #187*** is used when conducting comprehensive necropsies on regulated species.

4. Animals that cannot be necropsied immediately should be identified and refrigerated per ***SOP #017***, and the attending research staff notified.

5. Proper personal protective equipment and attire must be worn when performing necropsy.
    a. Disposable gloves, shoe covers, and gown must be worn when conducting a necropsy.
    b. Full protective clothing must be worn when handling animals infected with biohazardous materials or chemical carcinogens and includes double gloves,

cap, disposable gown, shoe covers, mask (or respirator if required), and eye protection.

6. Specimens for microbiological assessment must be collected using sterile instruments and aseptic technique.

7. All specimens, whether collected for submission to a laboratory for analysis or for archival purposes, must be placed in a suitable container and labeled as to the PI, IACUC #, animal ID, date of collection, the tissue or sample collected when appropriate, and the fixative or specific storage requirements when necessary.

8. All tissues submitted for histopathological assessment by a pathologist for studies conducted in accordance with Good Laboratory Practices (GLP) must be accompanied by either a completed ***Veterinary Pathology Consultation*** **form (CMDC #031),** a ***Necropsy Report*** form (**CMDC #187)**, or study specific GLP form, that includes all of the necessary information to completely identify the specimen, including the PI, IACUC #, animal ID, date of collection, tissues submitted, fixative used or specific storage requirements, any special laboratory tests or procedures requested, and the name of the person conducting the necropsy.

9. All tissues collected as part of a study conducted in accordance with ***21 CFR Part 58 Good Laboratory Practices for Nonclinical Laboratory Studies*** will be additionally handled and labeled as per protocol.

10. When possible, the necropsy should be planned in advance to insure that the evaluation is thorough, efficient, and appropriate to the aims of the study protocol. The purpose of the study, applicable SOPs, and precedent data should be considered when determining which tissues are to be evaluated, collected, and/or weighed, and what if any specific procedures or tests are required.

11. Small specimens should be placed in labeled tissue cassettes, wrapped in lens paper or placed on a tissue sponge.

12. **When conducting a necropsy for a GLP study:**
    a. Confirm the identification of the animal.
    b. Determine and record the animal's body weight. Scales used for weighing animals or organs must be calibrated as per ***SOP #1103***.
    c. Verify and record the animal's sex and age.
    d. Conduct a thorough external examination by reviewing the body surface and orifices for abnormalities. Palpate for superficial swellings, or for enlarged organs or masses within body cavities.
    e. Examine organs and tissues *in situ* before dissecting or collecting tissues and record any abnormalities.
    f. Label all containers and tissue cassettes with the animal's ID number, and any protocol-relevant information.
    g. All lesions that were observed during the study, or that are observed during the necropsy must be recorded on the appropriate necropsy form, and include a complete description (e.g., size, number, color, shape, texture, severity, and weight or volume as appropriate0.

h. Indicate on the **appropriate necropsy** form which tissues are collected or sampled for evaluation, the number of cassettes submitted for routine tissue processing, and any specimens that are submitted for other tests.
i. Necropsy findings and records are raw data and must be treated accordingly.
j. The necropsy prosector must sign and date the completed **necropsy** form.
k. For necropsies conducted as part of a GLP study protocol, the QAU must be present during a representative necropsy to determine whether the practices of gross evaluation, tissue manipulation, derivation, collection, fixation, and identification are conducted in a manner that protects the integrity of the evaluations made.

13. For species specific necropsy procedures, the following references are recommended:
    a. Feldman, D. B. and Seely J.C., *Necropsy Guide: Rodents and the Rabbit*. CRC Press Inc., Boca Raton Fl, 1988.
    b. Pathology of Domestic Animals 3rd ed., vols. 1-3 Academic Press Inc., 1985.
    c. Devor, D.E., Henneman, J.R., Kurata, Y., et al. Pathology Procedures in Laboratory Animal Carcinogenesis Studies. In Waalkes, M.P. and Ward, J.M. (eds.), Carcinogenesis, New York: Raven Press, pp. 429-466, 1994.
    d. Sundberg, J.P. and Boggess, B. Systematic Approach to Evaluation of Mouse Mutations. Boca Raton: CRC Press p. 199, 1999.

Approved: **Date:**