

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 019.1

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<b>TITLE:</b>	<b>Histopathology</b>
<b>SCOPE:</b>	All Authorized Personnel
<b>RESPONSIBILITY:</b>	Research, Animal Care, and Laboratory Personnel
<b>PURPOSE:</b>	To Outline the Proper Procedures for Histopathology

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**I. PURPOSE**

1. To outline the proper procedures for collecting, preserving, identifying, and processing tissue specimens for evaluation by light microscopic histopathological evaluation.

**II. RESPONSIBILITY**

1. It is the responsibility of all staff that contributes to the collection, preservation, identification, and processing of specimens for histopathological processing, to do so in a manner that limits postmortem deteriorative change, or the formation of artifacts, and preserves the integrity of this data.

**III. PROCEDURES**

1. Adequate fixation is crucial to the success of histopathological evaluation.
2. Approximately twenty times the volume of 10% neutral buffered formalin (NBF) relative to the amount of tissue to be fixed should be used. Tissue samples should be less than 5mm thick to ensure thorough fixation.
3. Formalin is considered hazardous and should be handled only after reviewing the **MSDS**, while wearing gloves, and under a fume hood.
4. All specimens must be collected into a suitable container labeled as to the PI, IACUC #, animal ID, date of collection, tissues collected when appropriate, and fixative or specific storage requirements when necessary.
5. All tissues submitted for histopathological processing that will be reviewed by a pathologist must be accompanied by a completed **Veterinary Pathology Consultation** form that identifies the PI, IACUC #, animal ID, date of collection, tissues collected, and the number of cassettes submitted.
6. 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.

7. After tissue specimens are fixed in 10% neutral buffered formalin, they are dehydrated in graded alcohols, embedded in paraffin, sectioned at 3-5  $\mu\text{m}$ , stained with hematoxylin and eosin, and cover-slipped for standard light microscopic histopathological interpretation by the pathologist.
8. Microscopic observations are recorded on the ***Veterinary Pathology Consultation*** form by the pathologist. An interpretation of the gross and microscopic findings is recorded on the ***Veterinary Pathology Consultation*** form when appropriate. The pathologist signs and dates the form.
9. When histopathology is conducted as part of a GLP study protocol, the completed ***Veterinary Pathology Consultation*** form is considered raw data, and as such is archived along with the tissue blocks, slides, and final report with the QAU.

Approved:

Date: