

The Institutional Animal Care and Use Committee

THE UNIVERSITY OF MISSISSIPPI MEDICAL CENTER

POLICY STATEMENT

Tail Amputation of Mice

The IACUC recognizes that tail amputation of mice may be necessary to obtain tissue from which DNA is isolated for the purpose of genotyping mice. Although this procedure does not alter the physiologic function of the mouse, pain and distress may be associated with the collection technique and the immediate post-procedural period.

The IACUC has set forth the following guidelines for collection of tissue from mice for the purpose of genotyping.

- 1) The amount of tissue necessary to perform various genotyping assays may vary (i.e. PCR vs. Southern blot analysis).
 - Collect the minimum amount of tissue necessary to carry out the required assay
 - **In some cases ear punches are used as a source of DNA for genotyping assays. Consider this method with protocols for isolation of DNA from very small quantities of tissues.**
 - The maximal amount of tail tissue amputated should not exceed 1.5 cm.
- 2) Consideration for the age of the mouse at the time the tail is amputated.
 - The coccygeal vertebrae of pre-weanling and weanling mice are poorly ossified and therefore amputation can reasonably be expected to be less traumatic in weanling vs. adult mouse (coccygeal vertebrae are completely ossified).
 - The IACUC recommends collection from pre-weanling or weanling age mice (2-3 weeks of age) when possible.
- 3) The requirement for post-procedural local analgesia will depend upon the age of the mouse at the time of amputation and the amount of tissue collected.
 - The use of analgesics is recommended but not required when collections of <1 cm are performed on mice ≤ 3 weeks of age.
 - Mice > 3 weeks or those having greater than 1 cm of tail amputated must receive local analgesia at the time of amputation
 - Topical application of Marcaine to the amputated tail is recommended as an analgesic
- 4) In cases where a second tail amputation is necessary, anesthesia is required if the mouse has reached adulthood (>6 weeks) and/or the collection will be >0.5 cm of tail tissue.