Tail Clipping Mice and Rats for Genotyping Policy

I. Purpose

The purpose of this policy is to provide guidelines for tail clipping mice and rats for genotyping.

II. Scope

This policy applies to all research experiments and programs at Einstein.

III. Policy

Tail clipping requires prior approval by the Institutional Animal Care and Use Committee (IACUC).

a. The procedure must be clearly described in Appendix 3 of the Animal Protocol.
b. The PI must provide evidence that the procedure is conducted in the least painful and most humane manner possible.

Tail clipping is an acceptable method for genotyping rodents—21 days old.

For PCR, 2 mm of the distal tail is generally sufficient; no more than 5 mm is permitted.

A. Specific Age Requirements

a. 5-10 days old – recommended age: No anesthesia required.
b. 10-21 days old (conduct as early as possible in this age range): Local/topical anesthesia is required.
   i. Immersion of tail in ice cold alcohol for 10 seconds
   OR
   i. Spray with ethyl chloride (topical – freeze anesthesia)
   ii. Hemostasis is generally spontaneous, but may require digital pressure or cautery (especially older, i.e., close to 21 days of age)
   iii. Greater attention to hemostasis - cautery required in this age group (see Hemostasis below).

c. 22-35 days old: Anesthesia required.
   i. General anesthesia is recommended & provides easier handling of mice & rats.
   ii. Local anesthesia may be sufficient in the hands of an experienced handler.
   iii. Greater attention to hemostasis - cautery required in this age group (see Hemostasis below).
d. Greater than 35 days old: General anesthesia required.
   i. Pain perception and ossification is complete at this age.
   ii. To avoid injuring the bone, limit tissue sample to 2 mm of the distal tail. Hemostasis is critical and must include cautery (see Hemostasis below).

B. Hemostasis

Animals must be monitored for 5 minutes after return to cage for any signs of bleeding from the amputation site. In addition:

   a. Mice and Rats 7-12 days little bleeding expected; apply digital pressure for a few seconds.
   b. Mice and Rats 12-21 days; digital pressure or cautery of amputated stump.
   c. Mice and Rats greater than 21 days old – cautery required; use Silver Nitrate Stix, Quik-Stop powder or electro-cautery pen.

IV. Definitions

None.

V. Effective Date

Effective as of: 21 February 2018.

VI. Policy Management and Responsibilities

Einstein’s Institutional Animal Care and Use Committee (IACUC) is the Responsible Office under this Policy. The Institutional Official for the IACUC is the Responsible Executive for this policy. The IACUC Chairperson is the Responsible Officer for the management of this policy.

VII. Approved (or Revised)

Institutional Official 3/30/2015

Date

Revision dates: 9/21/1011, 4/29/2015, 10/20/2015, 2/21/2018