IACUC POLICY ON RODENT TOE CLIPPING

Policy Statement

According to the Guide for the Care and Use of Laboratory Animals, “toe-clipping, as a method of identification of small rodents, should be used only when no other individual identification method is feasible and should be performed only on altricial neonates.” Toe clipping must be adequately scientifically justified in an approved IACUC protocol prior to use.

Definitions

Altricial- meaning "requiring nourishment", refers to a pattern of growth and development in organisms which are incapable of moving around on their own soon after hatching or being born

Hallux- ‘dew claw’ or ‘little toe’ or ‘thumb’

Toe clipping- A method for genotyping and/or identification of small rodents; the practice of removing the toe from the most distal joint to the tip of the toe; removal of the last phalangeal (toe) bone of a digit from one or more limbs corresponding to a predetermined numbering code

Audience

Any researcher, core facility, or regulatory personnel involved with rodent research at UNC-CH.

Reason for Policy

The UNC-CH IACUC is responsible for overseeing humane care and use of animals used in research and teaching and for ensuring adherence to regulatory expectations in the PHS Policy and the Animal Welfare Act as well as standards contained in the Guide for the Care and Use of Laboratory Animals. The purpose of this policy is to properly educate personnel in proper technique in order to ensure humane treatment of animals receiving the toe clip procedure.
Compliance

Failure to comply with this policy can result in reporting of non-compliant activities to the Office of Laboratory Animal Welfare (OLAW), retraining of personnel, and possible sanctions on the laboratory or individual involved.

Roles and Responsibilities

Principal Investigator: Ensure personnel receive training and are listed on the approved IACUC protocol prior to use of the technique in live research animals.

Animal Handler: Obtain proper training from the Office of Animal Care and Use (OACU) or Laboratory Animal Coordinator (LAC) and perform the technique according to all applicable policies.

OACU, IACUC, and DLAM: Provide required training and oversight to ensure this policy is understood and carried out as written.

Related Regulations, Statutes, and Related Policies

Guide for the Care and Use of Laboratory Animals: p75

Contacts

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<th>Contact</th>
<th>Telephone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Policy</td>
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Document History

- Effective Date: 01/2003
- Last Revised Date: 04/2003, 04/2005, 10/2013
Procedures

- Restrain the animal for the minimum amount of time required for the procedure.
- Remove the toe(s) at the most distal joint with a sharp instrument.
- Sharp scissors are recommended for toe-clipping in neonatal rodents. Instruments must be clean and disinfected initially, and blade surfaces should be cleared of debris and wiped with 70% alcohol between animals.
- Apply pressure to the exposed tissue with gauze or other clean and absorbable material to ensure hemostasis.

Standards

- Toe clipping should only be used when no other identification methods are feasible and its use must be scientifically justified in the approved IACUC protocol.
- Ideally, use of toe for identification should be combined with genotyping.
- The IACUC allows toe clips on a maximum of 4 toes, and no more than 2 toes per foot; only the minimum amount of tissue should be taken. Any numbering system should be designed to minimize the number of toes clipped per animal.
- Toe clips must be performed on or before 10 days of age with the ideal time being between 5-7 days of age when the toes are separate and large enough to work with but are not yet calcified. References below.
- The hallux may not be cut as this may decrease the rodent’s grasping ability.
- Topical analgesics are recommended.
- Neonatal mice should be handled gently and should be placed back with the mother as quickly as possible.

Forms

Ensure that the toe clipping procedure is adequately described in all relevant Animal Care Applications.

Other Related Documents


Identification methods in newborn C57BL/6 mice: a developmental and behavioural evaluation. 2010. Castelhano-Carlos et al, Lab Anim 44: 88-103