

## Guideline 01.3

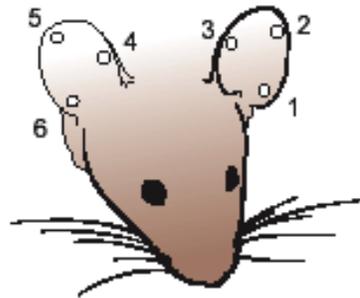
### Identification Methods for Mice

All identification methods for mice must be approved in the Animal Study Proposal ASP. The following means of animal identification may be requested in the ASP.

#### 1. Ear Punching

The identification method of choice for the NHGRI Animal Care and Use Committee is ear punching. Ear punching is appropriate for animals 10-15 days of age or greater. This method does not require anesthesia and the tissue removed by the ear punch may also be used for DNA analysis.

- A. Manually restrain the mouse by grasping near the base of the tail with one hand and grasping the nape of the neck with the opposite hand. Place tail between fingers to secure and control the animal.
- B. Use a sterile ear punch device to punch out a circular section of the ear in the appropriate location. See the figure below.
- C. Sanitize the ear punch applicator with 70% alcohol between cages.



#### **Other Choices for Identification are as follows:**

#### 2. Avid Microchip

Avid microchips are provided by the Office of Lab Animal Medicine (OLAM) and may be requested by any investigator. Chip readers are present in most animal facilities on campus, and OLAM will work with any facility that does not have a

Chip reader to provide this equipment. Avid chips are recommended for valuable animals in long-term genetic studies, but can be used to identify any mouse of weaning age or beyond.

- A. Anesthetize the animal. Remember to use scavenging system if using gas anesthesia (see Isoflurane Anesthesia standard operating procedure).
- B. Load the microchip into the dispenser or use the preloaded dispenser.
- C. Prep the injection site with alcohol.
- D. Insert the needle of the dispenser into the loose folds of the skin over the animal's shoulder. Inject the chip subcutaneously. Use a sterile gauze pad and direct pressure, if necessary, to achieve hemostasis. Use glue, if necessary, to close the wound.
- E. Use the reader as needed to scan the identification number.

### 3. Tattooing

Tattooing is recommended for animals from neonate to adult in age. This method is appropriate as a less expensive alternative to the Avid microchip. However, please note that tattooing is not as effective as the microchips in that poor technique can render the identification difficult to read.

- A. Restrain the mouse in a mechanical or bag-type restrainer.
- B. Use AIMS® tattoo gun, or similar device, and ink to apply identification number to the tail.

Note: Training in the use of the tattoo devices will be arranged by the OLAM. Refer to the NHGRI Standard Operating Procedure "Proper Care and Use of the AIMS IIIA Tattoo Identification System" for more information.

### 4. Ear Tags

In general, ear tags are not preferred over Avid microchips by the NHGRI ACUC for identifying animals. Ear tags can be easily lost and may cause irritation or tearing of the ear. Ear tags are suitable for mice at or approaching weaning age. Ear tags must be sterilized prior to use. Steam autoclaving or gas sterilization can be provided by OLAM Staff upon request.

- A. Load the ear tag into the applicator.
- B. Manually restrain the mouse by grasping near the base of the tail with one hand and grasping the nape of the neck with the opposite hand. Place tail between fingers to secure and control the animal.
- C. Apply the ear tag in the lower quadrant of the animal's ear distal to the outer edge of the ear.
- D. Should the ear become irritated or inflamed, the site will be treated as directed by the facility or attending veterinarian. Should the area become necrotic or fail to respond to treatment, the animal should be humanely euthanized.

## 5. Indelible Markers

Sharpie™ or other similar markers can be used as a temporary means for marking animals. This method is appropriate for animals of any age but is especially useful for animals prior to 10-15 days of age when other forms of identification may be inappropriate. The markers are available in several different colors. Marks should be placed on the animal in an area not likely to be groomed. Marks should be checked every 1-2 days and reapplied, if necessary.

## 6. Toe Clipping

ARAC Guidelines (refer to website <http://oacu.od.nih.gov/ARAC/toeclip.pdf>) allow for this method only under specific circumstances. Toe clipping is strongly discouraged by the NHGRI ACUC and scientific justification is required in person to the committee at the time of ASP submission. Specific reasons why indelible markers or tattooing cannot be used to identify animals until they are large enough for ear punching (10-15 days) must be presented.

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