Subject: Management of Fighting and Fight Wounds in Mice

BACKGROUND

The *Guide for the Care and Use of Laboratory Animals* (the *Guide*, NRC 2011) states: “Not all members of a social species are necessarily socially compatible. Social housing of incompatible animals can induce chronic stress, injury, and even death. In some species, social incompatibility may be sex biased; for example, male mice are generally more prone to aggression...” (p. 64) and “Social stability should be carefully monitored; in cases of severe or prolonged aggression, incompatible individuals need to be separated.” (p. 64)

IACUC Procedure

**Fighting Prevention:**

To minimize fighting, the following group-housing practices should be followed for mice bred in-house:

1. Adult male mice (older than 5 weeks) should NEVER be combined.
   a. Unfamiliar adult male mice will almost certainly fight.
   b. This is especially true if the males have been used as breeders.
   c. This does not apply to littermates that have been cage mates since birth.
2. Weaned males should ideally be group-housed only with their littermates.
   a. Males grouped from different litters should be combined within 1 week of weaning, and only with males that are 1 week apart in age or less.
   b. When combining males from different litters, a clean cage should be used to prevent territorial behavior.

**Fight Wound Treatment:**

Some strains are more aggressive than others, and will fight regardless of the age at which they are combined. When fight wounds are seen, the following steps should be taken:

1. Mice with mild to moderate wounds (those involving minimal damage to the epidermis, i.e. small dry scabs) should be treated with topical or systemic therapy as prescribed by veterinary staff.
2. Mice with severe wounds (e.g., those involving the genitals or extremities that compromise normal function, significant damage to the epidermis, or significant morbidity) must be euthanized in a timely manner. DLAR will euthanize the mice if they are unable to reach the PI or laboratory staff, or if the laboratory cannot attend to the animal in a timely manner.
3. The aggressor (typically the mouse without wounds) should be placed in a separate cage immediately, and NEVER recombined with other males.
4. If there are multiple aggressors (multiple mice without wounds, or all mice have wounds), mice should be separated into groups of 2 or 3 per cage and closely monitored. If aggression continues, the aggressive mouse (or mice) should be housed individually, clearly labeled as aggressive, and NEVER recombined with other males.

*Adapted from the University of Michigan*