

STANDARD OPERATING PROCEDURE #416
SOCIAL DEFEAT MODEL - MICE

1. PURPOSE

This Standard Operating Procedure (SOP) describes the social defeat model in mice.

2. RESPONSIBILITY

Principal investigator (PI) and their

- 5.1.3.1. The aggressive bouts are stopped after a maximum of 3-5 seconds with a tool (e.g., ruler, rod, other blunt-end tool), not the hands, to prevent injuries to the animals and the experimenter.
 - 5.1.4. To ensure consistent behavior and social stress induction, the selection criteria for the aggressor are:
 - 5.1.4.1. Latency to first attack is less than 1 minute.
 - 5.1.4.2. More than 5 aggressive bouts per screening session over 2 consecutive days.
 - 5.1.5. Overly aggressive animals are excluded, i.e., aggressor that attacks continuously or that consistently inflicts severe wounds.
 - 5.1.6. The test mice (intruder) are examined by the experimenter after each trial for signs of injuries and their body weight is measured daily as described in 5.4. The test mouse will be presented to different aggressors every day for 3-5 days.
 - 5.1.7. The test mice used in this first phase are euthanized at the end of the screening phase.
- 5.2. Second phase: induction of the social stress
- 5.2.1. The selected aggressor is acclimated to one side of the social defeat cage for a minimum of 24 hours.
 - 5.2.2. Social defeat is initiated when a rodent is introduced into the home cage compartment of an older, aggressive, dominant aggressor.

5.5. Humane intervention points

5.5.1. Before starting a social defeat experiment, acceptable treatments should be determined in consultation with the researcher and veterinarian and described in the AUP.

- - - Animals with severe injuries or >20% body weight loss from pre-trial baseline should be euthanized

SOP REVISION HISTORY

DATE	NEW VERSION
2021.06.14	4.3 Group-housed animals are constantly affected by social stress and conflict in regular housing conditions. The physical contact is necessary for the expression of natural antagonistic social behaviors in male mice. However, the goal is to induce social stress not injuries. Injuries are not necessary to induce stress, and efforts are made to avoid them. The incidence of injuries reaching humane endpoints is in general low. The incidence of injuries reaching humane endpoints is in general low (<5 %)

DATE	NEW VERSION
2022.01.07	5.4.5.1. Provide topical treatment to the skin wounds as determined by the veterinarian.

Social Defeat Daily Observations Log

ID: