Transgenic Unit

Standard operating procedures

Handling Immuno-compromised mice

Purpose

Immunocompromised mice are at greater risk than conventional mice for the development of infectious disease. Frequently, infectious pathogens are transferred to mice by contaminated equipment or exposure to contaminated environments. The procedures described here are implemented to minimize the risk of infectious disease to mice.

General procedures

- All equipment and caging is wrapped and autoclaved prior to using with the mice. Entry should be as infrequent as possible and the immunocompromised mice room should be entered first, before any other procedures are performed in the ACF.

- Manipulating the mice should be under the laminar flow hood, the hood is sprayed with 70% ethanol with the blower on. After each use, the hood is sprayed with a disinfectant and wiped of all debris and again sprayed with the 70% ethanol.

- The biosafety cabinet should never be used to store supplies or laboratory equipment.

- The hood blower is left on at all times. The light is turned off when the hood is not in use.

- The Biosafety cabinet should be cleaned from inside, tested and the filters must be changed every six months.

- All individuals handling the mice must wear a sterilized gown, mask, hair bonnet cap and sterile gloves. Optimally, two individuals are present during the handling of the mice, one that is designated as the animal handler and maintains sterility, while the other handles the non-sterile items and opens the sterile materials for the handler.

Working Procedures

1) Follow all previous steps for hood preparation, gowning of personnel and cage handling.
2) The animal handler should re-glove after every 6-10 cages or if gloves are torn, contaminated or if a cage has ill animals.

3) Any cages with animals appearing sick will be placed at the end of the cage changing order to avoid possible exposure of healthy animals to pathogens or contaminants.

4) The mouse cages are changed at least once weekly or more often, if deemed necessary. The cages and the accessories (lids, cover filters, metal cage tag, water bottles and feed) are wrapped and sterilized by autoclaving. The cage will be replaced as a unit weekly. Autoclaved Feed must be replaced weekly to prevent humidity.

**Entering Room and cage changing procedures**

1) Upon entering the room, wash hands with sanitizer, put on surgical gown, gloves, head cover (Bonnet) and double shoe covers. Check gloves first for pinholes by inflating with air.

2) Turn on laminar air flow work bench allowing five to ten minutes for proper air flow.

3) Wipe or spray entire inside of hood with 95% ethanol.

4) Place autoclaved cages, lids, cover filters, clean metal cage ID, autoclaved water bottle and chow inside the biosafety cabinet and open it.

5) Place sterile cage on clean side of work bench.

6) Assemble the micro isolation housing unit before handling mice with chow and water bottle, and place on the opposite side of hood from sterile cage.

7) Wet gloved hands soaked with ethanol. Remove old water bottle and place on cart.

8) Dump remaining food in clean lid and place wire cover on rack.

9) Wet gloved hands soaked with ethanol again.

10) Slide back clean lid and with two fingertips, hold the mouse from the top of the tail and transfer it to the clean cage. (Observe animal health.)

11) After the mice are transferred, slide back wire lid. Place clean bottle on and cap with cover filter bonnet. Return cage to rack after spraying with ethanol.

12) Repeat complete procedure of decontamination of the biosafety cabinet twice with 95% Ethanol, also with disinfectant when required.

13) Carry on all the dirty cages and accessories to the dirty room and exit the room.

14) Remove protective equipment (surgical gown, gloves, masks, head cover and shoe cover) outside the room.
To be noticed:

✗ Place the filter top upside-down on the surface of the workbench. (This procedure prevents dust particles from blowing from the top of the filter top into the cage bottom).

✗ Never remove gloves inside the TU. In case of damage put on new pair over the first one.

✗ Never use the same surgical gown twice

✗ Autoclaved water must be changed weekly; this prevents a biofilm or overgrowth of Pseudomonas (and other bacteria) in the water bottle.

Routine Inspection of the Mice:

1. All animals will be checked daily, including on the weekends and holidays.

2. Examine the mice by viewing them through the cage. The micro-isolator top should not be opened without the permission of the investigator or the Veterinarian and NEVER outside the sterile hood.

3. In the event of a problem, the investigator should be called. Emergencies should also be directed to the chairman of the facility.

References:

- The CIEA NOG mice. Online: www.taconic.com/nog.


