



HARVARD UNIVERSITY
FACULTY OF ARTS AND SCIENCES
OFFICE OF ANIMAL RESOURCES
16 DIVINITY AVENUE
CAMBRIDGE, MA 02138

Husbandry Statement

Overview

The Office of Animal Resources (OAR) manages 2 barrier rodent facilities, the Biological Research Infrastructure (BRI) and Northwest Laboratories (NWL), used for breeding and experiments. All rodents are housed in individually ventilated caging.

Colony health surveillance has been performed in all animal rooms since the opening of each facility to monitor the health status of the rodent colony. Surveillance sample testing is performed primarily by Charles River. The results of the colony health surveillance program are available upon request.

Only animals purchased from approved vendors may be introduced directly into the animal housing rooms. Quarantine is mandatory for animals from non-approved suppliers, and additional health monitoring, treatment and/or rederivation may be required by the veterinary staff prior to receipt or transfer into the barrier colony.

Animal housing, handling, and infection control measures

Standard husbandry and further preventative measures taken to protect colony health status and minimize the introduction of unwanted infectious agents include:

- Rodents are housed on solid-bottomed cages, bedded with corncob bedding, and all rodents are provided with enrichment (nesting material at a minimum, most also have plastic huts) as part of normal husbandry.
- The use of disinfecting and sterilizing compounds such as chlorine dioxide, quaternary ammonium compounds, hydrogen peroxide, and peracetic acid.
- Standard rodent diet is irradiated and special diets must be purchased through OAR and sterilized prior to arrival.
- Reverse osmosis deionized water is chlorinated at 2 ppm and provided via automatic watering.
- Cages, bedding, and cage furnishings are autoclaved prior to use.
- Animals are housed in positively pressured individually ventilated caging that receives HEPA-filtered air.
- Cages are changed using microisolation technique in HEPA-filtered, laminar-flow work stations by dedicated staff.
- Dedicated clothing worn by OAR staff and personal protective equipment worn by OAR staff and researchers.

Animal entry and movement

Approved suppliers

Animals of known microbiological quality obtained from suppliers approved by OAR are allowed to enter directly into the barrier rooms. These approved suppliers include Charles River, the Jackson Laboratory, Harlan, and Taconic; others may be added following veterinary review.

Other origins

To obtain animals from non-approved suppliers, an import request form must be submitted to and approved by OAR. This will initiate veterinary review of health and husbandry information from the facility of origin. All rodent shipments are coordinated by OAR. If approved for import directly into the facility, the animals will undergo quarantine in a dedicated suite and health monitoring by PCR. Additional testing may be requested before animals can be received. Animals are transferred to long-term housing rooms only after PCR results confirm the absence of excluded agents. Animals from non-approved suppliers may also be quarantined off-site and tested via PCR as above. Depending on results, animals may then be allowed to enter the facility, or may need to be treated or rederived before entry.



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Transfer within OAR-managed facilities

Transfer of animals between housing areas may not occur without prior permission from OAR facility supervisors and must be performed by OAR animal care staff.

Animal exports

To export animals, an export request form must be submitted to and approved by OAR. All live rodent shipments are coordinated by OAR following approval by the recipient facility.

Health monitoring program

Routine colony health surveillance

Routine colony health surveillance is performed in all animal rooms in both OAR-managed rodent facilities. Additional focused health monitoring can be conducted on an as-needed basis. Monitoring may be performed using PCR, sentinel monitoring, or any other relevant diagnostic test on colony or sentinel animals. Colony animals are not submitted for health surveillance without the investigator's permission.

In the current sentinel program, outbred sentinel rodents (4-5 weeks of age) are purchased from an approved vendor and housed 2 animals per cage and 1 cage per rack side. Each sentinel cage is exposed to dirty-bedding samples from other cages on its rack, accounting for 100% of sentinel cage bedding. Surveillance diagnostics are carried out quarterly, ~10 weeks after sentinel placement and initially on 1 sentinel animal per rack. The remaining sentinel may be used to resolve ambiguous results. New sentinel animals are placed following the receipt and approval of each quarter's results.

Beginning in March of 2015, all animal testing will be performed by PCR of rack plenums and testing feces, fur swabs, and oral swabs of randomly selected colony animals. Testing will still occur quarterly.

Use of biological material of animal origin

Biological materials and cell lines of rodent origin or passaged in rodents must be tested and certified free of rodent infectious pathogens prior to use in animals.

If an excluded agent is detected

In the event of detection of an excluded agent in the facility, an appropriate course of action would be determined by the veterinary staff, and may include a combination of isolation, retesting, treatment, euthanasia, and/or rederivation.

Agents present in this facility:

Animals colonized by or originating from facilities with evidence of the presence of *Helicobacter* species, mouse norovirus, or colonization by typical rodent commensal or opportunistic bacterial pathogens are not currently excluded.

Current outbreak status (Jan 2015)

One room in the facility tests positive for *Spironucleus muris* by environmental PCR. Sentinels remain negative.