



SOP #: 504.01

Title: SOP - Animal Quarantine

Approvals:

Attending Veterinarian

[Signature]

Date:

10/11/12

Assistant Director LAR

[Signature]

Date:

10/11/12

1. Purpose

1.1 This SOP applies to rodents shipped from non-approved facilities, those suspected or confirmed positive for excluded pathogens and rodents that need to be quarantined for other reasons as deemed necessary by the Director or Assistant Director.

2. Responsibility

2.1 Personnel working with animals held in quarantine are responsible to follow this SOP. Supervisory personnel ensure compliance with this SOP and train employees responsible for performing these procedures.

3. Definitions

3.1 Approved vendor: Vendors with consistent pathogen free colonies as verified by their periodic reports sent from their point of origin.

3.2 Approved vendor list: Charles River (including NCI), Jackson Laboratories, Taconic and Harlan.

3.3 Non-approved vendors: Vendors shipping rodents to FIU other than the listed approved vendor. Typically these are institution of higher education, but other vendors are also possible.

3.4 Director: Director of the Laboratory Animal Research.

3.5 AD: Assistant Director of the Laboratory Animal Research.

3.6 PCR: Polymerase Chain Reaction.

3.7 CR: Charles River.

4. Guidelines

4.1 No exception to this SOP is permitted unless specifically authorized by the Director or Assistant Director.

4.2 Quarantine location and assignment.

4.2.1 Quarantine for rodents is located in the OE 139. This room is preceded by an anteroom with positive pressure and entrance fan.

4.2.2 When rodents of different species are housed in the same room at the same time, cage change will be done per species on different days of the week to avoid any cross species pathogen or pheromone exposure. Every effort will be made to avoid direct, close visualization between different species.

4.3 Personnel in quarantine room.

4.3.1 Only personnel trained on this SOP are permitted to enter the quarantine room.

4.4 Animal receipts.

4.4.1 No animal from non-approved sources will be accepted at FIU until the Director or designee gives the OK and after prior review of the health monitoring program from the originating institution.

4.4.2 Follow SOP ACF 402 current revision - Receiving and Placement of Animals.

4.4.3 Upon receipt of shipped animals don PPE, then mist primary container with an approved disinfectant and wipe it for 3 times before handling container.

4.4.4 Transport container to quarantine anteroom, enter quarantine room and house animals according to this SOP.

4.5 Housing and changing equipment

4.5.1 Rodents are housed in dedicated rooms held under negative pressure, in individually ventilated cages (IVC).

4.5.2 All cage changes are performed under a biosafety cabinet (BSC) or a ventilated cage change station.

4.6 Quarantine routine procedures

- 4.6.1 Don required posted PPE in the anteroom before entering the quarantine animal holding room. All quarantine disposable PPE is considered non-reusable and must be disposed of in the trash bin located inside the animal holding room.
 - 4.6.2 Prepare BSC or cage change station and change cage per SOP ACF 505 current revision - Rodent Cage Changing Technique and Cage Sanitization
 - 4.6.3 ALWAYS perform necessary tasks inside the hood. NEVER open cages outside hood.
 - 4.6.4 At the end of the procedure, remove PPE and place in Trash.
- 4.7 Introduction of sentinel and initial bedding exposure
- 4.7.1 If a sentinel program is being used, the used bedding from the shipping containers of newly arrived quarantine animals is used to expose sentinels at the time new sentinels are set up. If a PCR testing is being used, no sentinel set up is necessary.
 - 4.7.2 Cage changing frequency.
 - 4.7.2.1 Serology tested cages (mice and rats): All cages will be changed at a minimum frequency of once a week. However, the routine change as it occurs in mouse ventilated cages may not provide enough dirty bedding exposure to the sentinels. A weekly or more frequent change will ensure a more frequent and adequate dirty bedding exposure, which will in minimize false negative results.
- 4.8 Animal removal from quarantine
- 4.8.1 Animals are not permitted to leave quarantine room until the quarantine period is concluded unless authorized by Director or Assistant Director with the exception of animals that die spontaneously, by euthanasia or other special circumstances. For early release from quarantine see "Early release of animals from quarantine" section in this SOP.
- 4.9 Authority to release animals after quarantine tests are received
- 4.9.1 Animals are released to the main colony under the authority of the Director or Assistant Director if all results are negative for excluded pathogens.
 - 4.9.2 Excluded pathogens are those that are tested for during quarantine. Exceptions to tested pathogens are Murine Norovirus, and with approval from the Director *Helicobacter* spp.
 - 4.9.3 This exception does not apply to investigator's colony if the Director has previously determined that animals containing these pathogens are specifically excluded from the investigator's colony.

- 4.9.4 Animals removed from quarantine room will only be removed by ACF staff trained on this SOP.
- 4.9.5 Animals will be relocated within two (2) business days to normal housing room unless otherwise instructed by the Director or Assistant Director.
- 4.9.6 If a sentinel animal is used, it will be sacrificed once health status of quarantine animals is cleared. These animals may not be transferred to another use or protocol (e.g. for training) as they pose a relatively high risk to FIU's rodent colony.
- 4.10 Early release of animals from quarantine
 - 4.10.1 Any animals prematurely removed (without negative test results) from quarantine cannot return to any of the animal holding rooms unless specifically authorized by Director or Assistant Director.
 - 4.10.2 Early release from quarantine without a health report and shortened quarantine periods are rare but occasionally required. No animal may be released without testing results and no shortened quarantine periods are permitted without the approval of the Director or designee.
- 4.11 Procedure for delivering quarantined animals without a received health report
 - 4.11.1 Don PPE and mist cage as described above.
 - 4.11.2 Cover cage with an opaque plastic bag.
 - 4.11.3 Spray the bag with an approved disinfectant before leaving the quarantine area.
 - 4.11.4 Deliver to PI's lab.
- 4.12 Infectious disease testing methods of quarantine animals & prophylactic treatment
 - 4.12.1 Ectoparasite (fur mites) and endoparasite (pinworm) testing
 - 4.12.1.1 All animals originating from non-approved sources are tested for fur mites and pinworms by the clear "Scotch" tape method or by PCR screening.
 - 4.12.1.2 Perform test at time of arrival and just prior to release from quarantine.
 - 4.12.1.3 Upon arrival (EXCEPT THE SENTINEL) and just prior to release from quarantine all quarantined animals and sentinels are tested for fur mites and pinworms by the clear "Cellophane" tape (fur mites and pinworms) and the gut maceration (pinworms) methods.
 - 4.12.1.4 Mites prophylactic treatment

4.12.1.4.1 After the arrival “Cellophane” tape test or Mites PCR testing is completed, treat all quarantine animals (EXCEPT THE SENTINEL) for fur mites as follows:

4.12.1.4.1.1 Rodents: provide cotton balls with “Mite Arrest”

4.12.1.4.1.2 Alternatively it can be used for:

4.12.1.4.1.3 Mice: Apply 3 µl of moxidectin to the dorsum of the mice, between scapulae, by using an automatic calibrated pipette. DO NOT USE MOXIDECTIN IN SAM (Senescent Accelerated Mouse) MICE as it has been reported to induce mortality in this strain.

4.12.1.4.1.4 Rats: Administer ivermectin at a dose of 0.2 mg/kg SC every 2 weeks for 3 treatments. For expedited (shortened) quarantined rats, Ivermectin treatment will continue in the assigned animal holding room after release from quarantine.

4.13 Serology testing

4.13.1 Prepare sentinel box with 2 sentinels at the time of animal arrival.

4.13.2 One sentinel cage is prepared per up to 30 quarantined cages. If more cages are quarantined, provide additional sentinel cages accordingly, for example, 31-60 cages should have 2 sentinel cages assigned and both sentinel cages are tested before releasing from quarantine.

4.13.3 Sentinels are assigned per arriving group and dates. For example,

4.13.4 if the room is holding animals assigned to 3 different PIs (PI A, PI B & PI C), there will be at least 3 sentinel cages, each assigned to each PI group (sentinel cage A, sentinel cage B and sentinel cage C).

4.13.5 If PI A has a shipment coming from institution X and a week later receives a second shipment from the same institution X, the 2 shipments are treated separately and each shipment group will have 2 separate sentinel cages assigned to each group.

4.13.6 Follow sentinel bedding exposure procedures during quarantine period as described in SOP ACF 502 current edition - Sentinel Soiled Bedding Procedures.

4.13.7 Test sentinel four weeks or longer if instructed by the Director after new animals are introduced into quarantine using Charles River (CR) Prevalent profile. Other tests may be ordered by the Director based on clinical judgment.

4.13.8 Release animals from quarantine only after test results are obtained and after Director or designee allow quarantine release.

- 4.14 Testing animals provided by the PI
 - 4.14.1 PI-provided animals may be tested in lieu of or in addition to the sentinel testing at the discretion of the Director or Assistant Director when PI provides animals from the same shipment/origin. This may generally shorten the quarantine period if PI-provided animals test negative for all excluded pathogens.
 - 4.14.2 Quarantine period may be extended or shortened at the professional discretion of the Director.
- 4.15 PCR testing (no sentinels required)
 - 4.15.1 Allow 3-5 days for stabilization before collecting samples. This ensures adequate exposure and shedding of potential infections agents.
 - 4.15.2 After 3-5 days collect fecal pellets from the mouse cages as follows:
 - 4.15.2.1 Up to 10 fecal pellets per test sample may be sent to the lab.
 - 4.15.2.2 At least one fresh pellet per animal (2 pellets per animal is preferred).
 - 4.15.2.3 To the extent possible, collect 10 fecal pellets per sample submission.
 - 4.15.2.4 Each testing submission should not represent more than 10 animals.
 - 4.15.2.5 Submit samples to CR (or equivalent lab, e.g. RADIL) for enteric PCR testing to include pinworm testing.
- 4.16 Reporting unacceptable diagnostic results to submitting institution
 - 4.16.1 The Director or designee immediately notifies submitting institution of unanticipated diagnostic results.
- 4.17 Waste disposal
 - 4.17.1 Remove trash bag from trash container.
 - 4.17.2 Close bag securely with tape.
 - 4.17.3 Mist bag with ACF-approved disinfectant before removing from room.
 - 4.17.4 Dispose of bag and containers following standard disposal procedures.