

Life Sciences Animal Facility Handbook

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Welcome

This handbook has been prepared to provide information and guidelines for anyone currently using or planning to use animals in the Life Science Animal Facility (LS). It may not cover all of your questions, so please feel free to ask any of the people listed in the section below.

The Life Science Animal Facility provides animal care to over 10 of the University's Faculty Investigators. The facility is staffed from 8:00am to 4:30pm on weekdays and part-time on weekends. The staff is made up of both full-time and part-time staff members, many of which hold American Association for Laboratory Animal Science certifications. The staff is also available to assist researchers and instructors whenever possible, but please keep in mind their busy schedules and provide advanced warning when possible so that the staff can plan to be available to assist you.

Standard animal caging, feed, lighting, temperature and humidity are provided by the facility, and exceptions can only be made with approval from both the IACUC and Assistant Director. The majority of mouse caging provided is Tecniplast brand individually ventilated caging

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Key Cards and Facility Access

The Life Science Animal Facility is protected by a magnetic card reader system. All facility users seeking access to LS must acquire a proximity card from the UGA Card Office in the Tate Center. Cards should be obtained at least 2 working days before expected use, to enable any unforeseen problems to be cleared before the card is needed.

Once a proximity card is obtained, a legible photocopy should be made of the front and back of the card with the name of the lab's head investigator written on the copy. The copy should then be given to the facility supervisor, Kristine Wilcox. Access to the facility is usually granted in 24 hours. If you do not already have building access, please contact Robin Kavanaugh at (706) 542-6083.

Please keep in mind that children and pets are not permitted in the facility. All visitors must be approved by URAR-LS, and a member of the URAR-LS staff, or a designee, must accompany all visitors.

Entry and Exit Procedures

Facility Entry

The entrance to the LS facility is located in the basement of the Life Science building. The elevators in the A and B towers of the building have basement access. To enter the facility one must pass their proximity card over the card reader. The double doors will audibly unlock. When entering the animal facility, be sure not to allow others to follow in behind you. This undermines the security of our facility and keeps us from identifying users. Do not let in people you do not recognize, even if they say they need to be let in. If you hear knocking, or someone follows you in, find the Facility Supervisor or a Full-time Technician and alert him or her.

Personal protective equipment (PPE), such as lab coats, scrubs and shoe covers, are available in the main hallways and room B026. Upon entering the facility, please get a lab coat or scrubs from room B026 and change into them. The bathrooms available for changing clothes are located outside of the LS facility by the B tower elevators.

To enter the facility, you must wear shoes with covered toes. If you are entering the facility, but will not enter an animal room or handle equipment, no further PPE is required. To enter an animal room, or handle equipment, you **must** wear a lab coat, gown, or scrubs. There are PPE signs outside of each animal room, pay close attention to the specific PPE listed for the room you plan on entering.

Entering General Animal Rooms

To enter an animal room you **must** wear a lab coat, gown or scrubs. This practice is to protect you from carrying allergens and contaminants on your street clothes back to your lab or home, and to protect your mice from the microbes you bring into the facility on your street clothes. To handle anything in the animal room (cages, animals, equipment) you **must** wear gloves. This protects both you and the animals.

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Exiting General Animal Rooms

Wash your hands after removing and properly disposing of your gloves in the trash receptacle provided by the door to each room.

Rooms Requiring Special Procedures

Entering a Barrier/Immunocompromised Room

Barrier housed mice are sterile housed and require special procedures to ensure their health. Autoclaved or disposable gowns, gloves, face masks and shoe covers are available **inside or immediately outside of** the rooms; do not use personal protective equipment (PPE) from other rooms in the facility. Tape on the floor marks the barrier “ante-room” area, where PPE is donned. You can only step into the area beyond the tape with shoe covers. Gowns should be donned before crossing the barrier tape, and shoe covers should be put on one at a time while stepping over the barrier tape one foot at a time. Gloves should be donned after shoe covers have been put on, to keep them from getting contaminated if they touch your shoes.

Exiting a Barrier/Immunocompromised Room

When procedures are finished in the barrier room, you may walk directly over the tape and remove your PPE. Autoclaved gowns can be reused if placed back in their bags. Bags should be labeled with the name of the user, and after one week of use they should be placed in the gown bin to be laundered and re-autoclaved. Gloves, shoe covers and facemask should be thrown away in the trash receptacle provided.

Entering Infected/Quarantine Rooms

Animals with questionable health status and or injected with a chemical agent are housed in cages with micro-isolator bonnets. The cages in these rooms are marked clearly as to what they are. Bio-containment is extremely important in these rooms and we require your full cooperation in these procedures. Disposable isolation gowns, facemasks, gloves and shoe covers are provided in the hallway out the door of each room that holds infected or quarantined animals. All of these items must be worn to protect both user and animals. There is no need for step over procedures for shoe covers when entering in these rooms.

Exiting Infected/Quarantine Rooms

Specific exit procedures are required to contain infectious organisms within the quarantined room. Shoe covers should not be allowed to touch the floor beyond the quarantine room threshold, so remove shoe covers as you step over the threshold, placing them into the biohazard trash receptacle provided. Remove the isolation gown and mask and place them into the biohazard trash receptacle provided. Remove your gloves last.

If you have dirty biohazardous cages to remove from the room, they must also be bagged inside the animal room before you remove your PPE. The bag should be sprayed with the appropriate disinfectant. The appropriate disinfectant will be agreed upon by animal resources in consultation with your lab and provided by animal resources. Remember to notify the Life Science staff that you have left dirty cages in the room, so they may be properly handled.

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Exiting the Animal Facility

Upon finishing your work, please take off the lab coat or scrubs and place them in the laundry baskets in the bathrooms, or the laundry basket in room B026.

Animal Environment

Macro-environment

Light cycles in the animal rooms are controlled by light timers in each room. The default light cycle is 12:12, 12 hours light and 12 hours of dark. Light cycles can be adjusted by the Facility Supervisor if an investigator's research warrants it.

Housing

The Life Science Animal Facility houses mice, rats, frogs and guinea pigs. The facility follows all federal regulations and guidelines for the housing of animals in research. All animals on automatic watering receive reverse osmosis (RO) water.

For social animals (mice, rats, guinea pigs), social (pair or group) housing is the default standard. These species must be socially housed unless there is permission to singly house them in the IACUC approved AUP, for incompatibility reasons, for standard breeding reasons (males, pregnant females), if the animal is the last in its experimental group, or for veterinary reasons. See the IACUC policy, Social Housing of Animals, at <http://research.uga.edu/docs/policies/compliance/oacu/UGA-IACUC-Social-Housing-of-Animals-Policy.pdf> for details.

For mice, Tecniplast GM500 individually ventilated cages are the standard housing provided by the facility. These cages provide automatic watering, with removable lixits and a slot for regular water bottles if they are needed. These cages are bedded with Bed-O-Cob combination bedding and a nestlet. Based on federal regulations and UGA IACUC policy, the maximum number of adults which can be housed in one cage is 6 mice, and only 1 litter, with no more than 2 adults, can be housed in one cage. Please adhere to this regulation.

For rats, shoebox caging, either small (standard) cages or larger cages, is provided. Smaller rats (up to 300g) may be pair housed in small (standard) rat cages, however rats over 300g should be pair housed in larger rat cages. Small rat cages can be used to singly house rats over 300g, if there is permission to singly house them. These cages are bedded with Bed-O-Cob combination bedding. Regular water bottles are provided for drinking water.

Feed is provided in-room, in labeled containers for rodents. Feed for other species is stored in the feed room (room B036). Enrichment foods are kept in the kitchen (room B002) in appropriate containers. The facility kitchen stores animal food only, no food intended for consumption by staff or researchers should be stored in this room. Life Science provides Purina Lab Diets, including 5053- Rodent Diet, 5058 – Mouse Diet (breeder diet), 5025 – Guinea Pig Diet. Arrangements for special diets must be made with the Facility Supervisor.

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Animal Use

Handling and Animal Use

Any investigator, or researcher may request an animal handling training session from the Life Sciences Animal Resources Unit if they feel one would benefit their work. Please contact the Facility Supervisor or Attending Veterinarian regarding handling training. When working with or around the mice, work quietly to avoid disturbing or distressing the mice. Any excessively distressing procedures, such as blood collection, euthanasia, any surgeries or animal manipulations **must** be done outside of the animal housing room, in the PI Labs or in the facility procedure/surgery room. These procedures are to protect the animals and to avoid unnecessary stimulation of the animals.

During the course of your research please keep in mind that mouse cages **must** only be opened inside a laminar flow change station or biosafety cabinet. Any and all in-room animal manipulations **must** be done under a laminar flow change station or biosafety cabinet. These procedures are to protect the animals. The biosafety cabinets in the facility are not appropriate for work with volatile chemicals or anesthetic gases.

Anesthesia

URAR-LS requires researchers who use the animal facility provided anesthesia vaporizers to provide and use their own induction chamber and nose cone/face mask. URAR does not provide these items for general use. This is to protect the health status of the colony rodents by preventing the spread of infection among colonies in the facility via anesthesia equipment.

In order to prevent contamination from your lab, please do not bring this equipment back and forth from your lab. You will be allowed to store your items in the animal facility, and your Supervisor will inform you of the location options for storage. We suggest you keep it in a locked container labeled with your lab name.

The systems are manufactured by VetEquip. Purchase information is listed below. Please ask your Supervisor if you have any questions.

List of Vet Equip options Induction

chambers: <http://www.vetequip.com/item.asp?cat=6&catalogID=941443-54>

Rodent nose cones/face masks:

<http://www.vetequip.com/item.asp?cat=2&catalogID=nosecone>

At each use of the inhalant anesthesia vaporizer, the carbon waste gas scavenger canister (F/Air) must be weighed and the weight recorded on the Log. If the canister has reached the weight limit for use (as referenced on the Log) notify the Facility Supervisor and use a new canister.

Breeding

There are alternate methods for breeding rodents. Pair breeding consists of 1 male and 1 female in the cage. With this method, only 1 female is reproducing with the male, but due to the post-partum estrus, they can have a litter approximately every 21 days.

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Harem/group breeding consists of 1 male with multiple females (2-3 depending on the cage dimensions; over 3 females per 1 male is not recommended). We do not allow multiple litters in the same cage, because pups of different ages can out compete each other for milk, or trample each other, and by the time of weaning, the cage is too crowded. Therefore, with harem breeding, females must be separated before they give birth. With this method, more females are simultaneously reproducing with 1 male, but they do not mate at the post-partum estrus, and will not breed again until the litter is weaned and the female is placed back with the male.

Planned variations on these acceptable methods must be discussed with the Facility Supervisor or Attending Veterinarian before breeding is initiated.

Weaning

Litters of mice over the age of 21 days are considered adults and should be weaned accordingly, unless specific exceptions are in the project's AUP to extend the age of weaning. Weanlings should be separated by sex into cages of 6 animals or less, independent of their weight at weaning. If training is needed on weaning procedures, please contact the Facility Supervisor.

Census Log

Any permanent removal of animals, animals found dead, newly weaned animals and transfer of animals from another other investigator's colony or vice versa must be recorded on the census sheet to ensure proper billing. Animals and cages are both counted. The personnel responsible for their weaning must add weaned litters to the census sheet. Columns on the left side of the sheet are designated to different categories such as, received/weaned, used by the lab, transferred or found dead. The two large columns are for animal count and cage count. Any entries should be initialed.

Reporting Sick or Dead Animals

If a sick or dead animal is found in an animal room, the animal must be reported to the lead tech and/or facility supervisor, or the vet tech. If no one is available, or animals are found on the weekend or a holiday, there are numbers for on-call veterinary assistance listed next to the Facility Supervisor's office.

Sick animals should be reported to a member of the URAR staff immediately. Sick animals will be given an identifying tag or cage card. For mice, the pink identifying card is the medical record, and all treatments must be noted on the back of the card. For some species, a paper medical record maybe used.

The Attending Veterinarian and/or Vet Tech will be contacted, will determine the appropriate veterinary care, and will contact, directly or via the Animal Resources staff, the investigator's lab with the recommended treatment plan. The plan will be discussed, and with input from the lab, a plan will be decided. It is the responsibility of the lab to follow the treatment plan decided. Changes to the plan may only be made by the Attending Veterinarian or Vet Tech.

Dead animals should be removed from the home cage and placed in a bag labeled with the room number, investigator name, date and location of cage. Once placed in a properly

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labeled bag, the carcass should be put in the necropsy refrigerator (room B016) and logged in on the log sheet. The animal should also be recorded under the found dead column of the census sheet on the proper date. The lead tech or facility supervisor should be informed of the death.

Acquiring Equipment

Clean cages are provided for your use in Clean Cage Storage (room B007 and B029). You may take clean cages as needed, but please take only the number of cages you need, as cages cannot be used in other rooms once they have entered an animal room. If your animals are housed in a barrier room, or housed in sterile cages, cages are prepared by the animal care staff and provided in the animal rooms. Please notify the facility supervisor if you find you do not have enough prepared equipment available.

Animal Transportation

Movement of animals from one animal room to another animal room within this facility or to another animal facility must be arranged with your facility supervisor before you move the animals. Also, if you plan to take animals out of the facility and return them alive to be housed in the facility again, you must arrange the plan with your facility supervisor before you move the animals. Please note that you **MUST** have IACUC approval on the AUP to move live animals out of the animal facility.

Transportation within the Facility

Animals that are being transported within the facility must be transported in a closed container, preferably a rodent cage. This is to prevent escapes and protect the health of both animals and staff.

Transportation outside the Facility, within the Building

Animals that are being transported to labs on the upper floors of the Life Science must be transported in cages with microisolator tops. Use of the home cage is preferred, if possible.

If live animals are returned to the facility, the container must be sprayed thoroughly with disinfectant before it is placed into the laminar flow change station or biosafety cabinet. The animals should be transferred to a clean cage, and the dirty cage taken directly to the dirty cage wash room.

Transportation out of the Building

Animals that are being transported out of the Life Science building must be transported in closed opaque containers or containers that have been covered to conceal their contents. Covering the cage with a trash bag is acceptable, along with using larger shopping bags that conceal their contents. Bags should not be closed tightly, and should be removed from the cages as soon as they arrive at their destination, to prevent smothering. For rats or large numbers of mice, LS staff can provide you with shipping boxes to use as temporary holding during transport to the lab.

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If live animals are returned to the facility, the container must be sprayed thoroughly with disinfectant before it is placed into the laminar flow change station or biosafety cabinet. The animals should be transferred to a clean cage, and the dirty cage taken directly to the dirty cage wash room.

Animal Health and Veterinary Services

The Attending Veterinarian for University Research Animal Resources- Life Sciences Unit provides veterinary services for the Life Science Animal Facility.

The animal care staff checks animals visually, on a daily basis. Any injuries or illness noted by the animal care staff will be reported to the Facility Supervisor and/or Attending Veterinarian and/or Vet Tech. A pink Sick animal card and placed on the cage. This card should only be removed when the animal is dead or the illness/injury has been determined to be resolved. Only the Attending Veterinarian or the Vet Tech, or their designee may resolve a case. The Facility Supervisor and/or Attending Veterinarian and/or Vet Tech will examine the animal. Investigators will then be contacted about the animal and the recommended treatment plan.

Concerns about animal welfare, illness or injuries should be taken to your lead technician, Facility Supervisor, or Attending Veterinarian.

Euthanasia Station

Life Science Animal Facility has one CO₂ euthanasia station located in the Treatment room (room B001). This station provides gaseous CO₂ for humane euthanasia. Standard Operating Procedures for the use of the CO₂ stations are posted and must be followed. The required CO₂ flow rate is 10-30% of the chamber air volume replaced by CO₂/minute. A secondary, physical method is required after CO₂ administration to ensure complete euthanasia. Appropriate secondary methods are listed at the stations. The method of euthanasia used must be on the approved research AUP.

If you need instruction on proper euthanasia techniques, please contact the Facility Supervisor.

Non-Animal Investigator Needs

Locker Rooms

The locker rooms house our bathrooms and showers. If your lab uses gowns, you may use the sets of washers and dryers in room B026.

We ask that you do not bring lab coats from your personal labs into the facility, as we provide clean, facility laundered lab coats for your use in the facility. Please let a member of the staff know if you are unable to locate a clean lab coat.

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Drugs

Investigator drugs should be stored in the investigator's lab, not the animal facility. If an investigator feels that s/he must store drugs in the facility, the investigator will need to discuss the matter with the Facility Supervisor and Attending Veterinarian.