Title: Transporting Research and Teaching Animals

I. Purpose:

This policy describes procedures investigators, staff, and students must follow in order to minimize cross contamination, minimize stress, prevent escape during transport of animals, and maintain a secure environment. The procedures also seek to minimize the allergen exposure to personnel working with and around animals. A standard operating procedure (SOP) template is available to assist investigators with developing a functional and feasible procedure while following the policy.

II. Background:

A. Animal transportation is a potential biosecurity risk, a source of stress for the animals, and a potential mode for escape. It is also a possible source of allergen exposure for the human population. In order to safeguard both animals and humans working in laboratories, precautions must be taken.

B. Additionally, transporting research animals through public spaces increases risk of unwanted attention to the animals, the animal facility, the laboratory where procedures are carried out, and the researchers carrying out the work. It is essential that all personnel transporting animals minimize attention to the animals being transported and that the transport is conducted in an IACUC approved manner.

III. Policy:

A. Transportation of animals must be described in the animal care and use protocol in section 9 when it is performed by PI staff or students on a protocol and not by veterinary or husbandry staff.

B. A university-owned vehicle is preferred for transport but a personally owned vehicle is allowed for transport when the animals are within appropriate containment. When vehicles are used to transport non-livestock animals, it must occur in the cab or other climate-controlled area of the vehicle, with a minimum of stops. A cart may be used in place of a vehicle for very short distances that are not open to the public, in mild weather only, and the cages must be appropriately covered to avoid drawing attention
to the animals. Under no circumstances are animals to be taken on public transportation, for example the shuttle or bus.

C. Since some vivaria do not allow in and out traffic of animals, it is essential to check with the facility manager/technician-in-charge regarding each specific instance.

D. **Note: Nonhuman primates are never to be transported by research or laboratory staff, they must always be transported in dedicated university vehicles by vivarium or veterinary staff under the required BSL2 conditions. These vehicles are designated for nonhuman primate transport and are equipped and sanitized per Facility or Veterinary procedures.**

E. Rodents must be transported in filter top cages and those tops must be secured to the cage during transport using tape or similar means. Other small mammals, birds, and reptiles can be transported in secure pet carriers; ensuring the animals are contained, allergens minimized, and the crates are appropriately sized for the animal. Taping filter paper or other breathable barrier over the air holes of the containers and following the above barrier instructions will reduce allergen exposure of personnel and minimize contamination of the transport vehicle. Plastic bags must never be used to cover cages/containers during transport because they restrict airflow and place the animals at risk. All transport containers, including rodent caging, should be freshly cleaned to minimize the transfer of allergens. Alternatively, original/home rodent caging may be wiped down on the external surfaces that do not come into direct contact with animals to remove allergens prior to transport; this will minimize the additional stress of a cage change to a transport container prior to travel.

F. Livestock and animals for which suitable transport includes a trailer, must be transported in a trailer that is in good repair, registered, with floor mats or other covering to reduce slips and possible falls. Trailers must not be overcrowded. Additionally, the livestock must be of similar size or segregated in the trailer, for example calves should not be loaded with full size cattle as they can be trampled. The trailer vehicle (Truck) must similarly be registered and in good condition and both the truck and hitch, rated for the weight being pulled. Some smaller livestock may be transported in crates, in the cab of the vehicle, following the provision above for small mammals. The bed of a pickup is only used when so equipped for transport, or crates are secured for small livestock per routine agricultural practices. Additionally, livestock must be transported in accordance with all laws and regulations regarding length of trip and required overnight stops for watering and feed if transported long distances.

G. Special care must be given to aquatics. They are temperature sensitive, often need water or moist substrate, and can be sensitive to movement stress. Care must be given to ensure the water quality of aquatics is maintained, for example, dissolved oxygen for fish transported in a static or closed container. Escape of restricted species can be
hazardous to both the animals and the environment. Every precaution must be taken to ensure aquatics have water and adequate temperature is maintained.

IV. Procedures:

A. Ensure you are allowed to remove and, if applicable, return animals.
   1. Ensure the destination procedure/laboratory space is listed on the approved Animal Care and Use Protocol before moving any animals.
   2. To ensure appropriate biosecurity, movement between the housing area procedure/laboratory space must be approved by the IACUC and listed on the protocol. Movement requires the use of the Animal Tracking System.

B. Vehicle transport
   1. The caging/transport containers must be covered from view of the public using a laboratory coat, cloth, fabric drape, or similar items for covering the cages without inhibiting air flow. Plastic bags must never be used to cover cages/containers during transport because they restrict airflow and place the animals at risk. Additionally, a barrier must also be placed between the cages/pet carrier and the upholstery or floor. Use a seat belt or other means to secure the carriers as necessary. Placing them on the floor will stabilize the transport enclosure.
   2. Smoking, eating, or drinking when animals are in the vehicle is not permitted.
   3. During transport of animals, unnecessary stops are not permitted (i.e., drive-through at a bank or restaurant). Animal transport must be direct from the housing area to the facility they are being transported. Animals must never be left unattended in a vehicle.
   4. When using a personal vehicle to transport animals, non-university affiliated individuals must not be in the vehicle during transport. Additionally, individuals in the vehicle must be cleared through the Occupational Health Surveillance System for animal exposure/animal work to be in the vehicle while animals are present.
   5. The vehicle’s climate control must be used as needed to maintain the temperature appropriate for the animals.
   6. Bicycles may only be used if secondary containment is provided (e.g., enclosed trailer or wagon) and IACUC approval is obtained.
   7. Personally owned vehicle transport is discouraged, but may be permitted as a transportation method provided:
      i. The vehicle is legally registered.
      ii. The vehicle is clean and in good condition: For example, the tires have adequate tread, the windows are intact and functional, the
seat/upholstery are clean and not torn, seat belts and safety features are all functional, and the vehicle is running properly with no known hazards. 

iii. The vehicle has a functioning climate control system.

iv. The IACUC and/or Veterinary staff can inspect the vehicle at their discretion or if any concerns arise regarding the suitability of the vehicle for animal transport.

8. Please see an example of a lab specific SOP in the appendix.

9. An emergency plan must be included in the SOP regarding what to do if the vehicle breaks down or is in an accident.

C. Species specific procedures:

1. Rodents cage/transport container dimensions are determined based on the number and weight of the animals and comparable to their normal housing cage size. Rodents may not be overcrowded for transport. For example, a cage designed to house four mice may not have more than four mice for transport. While this increases the number of actual cages moved, it ensures compliance with cage space requirements and comfort of the animals. Additionally, combining unfamiliar animals (i.e., animals typically housed in separate cages) into the same transport cage is discouraged as this can result in additional stress and potential trauma, even for short transfer periods.

2. Terminal transport boxes may be available for rodents, see your vivarium manager for details.

3. Ensure there will be no water leaks during transportation.
   i. Turn water bottles upside down (ensure they are returned to appropriate position at destination).
   ii. Hydropac pouches can be left in place, as they typically do not drip when moved. They will leak if removed.

4. Cage cards remain with the cage and must accompany the animals.
   i. Do not put cards inside the cages as the animals may destroy them.

5. The visual barrier covering the transport container/rodent cage must be clean, sanitizable or disposable and may not be taken into the animal facility. It may not be stored in the vehicle as it may be contaminated with allergens. When the transport event is complete, anything contacting the transport container must be removed from the vehicle and the vehicle appropriately sanitized and items in contact with the transport container discarded.

D. Small Mammals, Birds, and Reptiles

1. Crates appropriate for the animals must be used. They must be transported in the climate-controlled portion of a vehicle if used (see vehicle transport).
2. A covering must be in place between the crates and the vehicle, and allergen-reducing measure must be used, for example breathable material placed over the vents.

E. Agricultural Animals/ Livestock

1. Livestock should be transported in a University-owned trailer, if possible.
2. Trailer floors should be covered with non-slip mats and cleaned after each use. If unhealthy animals are transported (to the VMTH or CAHFS for example), the trailer must be disinfected after use.
3. Additionally, a light check must be performed and all lights on both the truck and trailer must be operational, as must the trailer braking system if so equipped. All tires must have adequate tread, and tire pressure and an inflated spare must be available. All gates and doors must securely fasten and be checked prior to departing.

V. Resources:

1. Animal Welfare Act and Regulations
2. ILAR, Guide for the Care and Use of Laboratory Animals
   http://nap.edu/12910
3. PHS Policy
4. SC-20-108 “Transportation of Research and Teaching Animals”
5. Animal Tracking System
   https://iacuc.ucdavis.edu/protocol/AnimalTracking/index.cfm
Appendix

Standard Operating Procedure

(Insert your labs name Operating Procedures)

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<th>Title: Transportation of Animals</th>
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I. **Purpose:** To describe the transportation of animals to and from research areas (e.g., laboratories, housing facilities). This SOP assumes the following conditions exist: the IACUC Protocol is approved for the transportation, Animal Tracking System approval has been obtained (if needed).

II. **Scope/Responsibility:** It is the responsibility of staff preparing, transporting and returning animals to follow this SOP.

III. **Materials:**
   A. Transport containers/caging/crates
   B. Animal Tracking System (as needed)
   C. Cage Cards
   D. Barriers for vehicles (e.g., pads/lab coats, cloth to cover cages)

IV. **Procedure:**
   A. If needed a transfer request is paced in the animal tracking system.
      1. Approval must be given in the system
   B. The animals are placed in a suitable container for shipping.
      1. This may be the home cage for rodents, a crate for small mammals, a sealed container with appropriate substrate for aquatics.
      2. The home cage/crate/container itself must be intact, free from wear, holes or other perforations. The filter in the top must be intact, and not clogged with bedding or debris to allow for air exchange, but still prevent contamination/exposure.
      3. The crates/containers are sealed to prevent both escape and exposure.
      4. The cage card must accompany the animal(s).
      5. For animals transported in vehicles belonging to the university or personally owned vehicles the animal must be transported in the passenger compartment of the vehicle and climate control must be used to maintain species appropriate temperature. For vehicles with climate controlled cargo areas, those may be used as long as species appropriate settings are used on the cargo climate control. Please see the Standard of Care SC-20-108 Transportation of Research and
Teaching Animals for further detail, and the IACUC policy on animal transportation for more detail on climate control, appropriate vehicles, and the use of trailers for larger species.

6. A barrier between the animal cage/carrier should be used, for example a lab coat or pad.

7. No Personnel not affiliated with the animal care program should be in the vehicle.

8. Loud music or turning the radio on should be avoided.

9. Stops are to be minimalized (refueling or other necessity based stops only-preferable to obtain fuel required prior to loading animals), no eating, drinking, or smoking in vehicles transporting animals in the same compartment as personnel.

   i. Under no circumstances should stops be made where animals are left unattended in a vehicle, or taken through the drive through or other places visible to the public.

   ii. An emergency plan must be in place in case the vehicle breaks down or is in an accident.

V. Revision History:

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<td>IACUC Staff Member</td>
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