

## WVU IACUC Policy: Transportation of Animals used in Biomedical Research and Teaching

### Purpose

The purpose of this policy is to describe the requirements for movement of animals on and off campus, between campus buildings, and within areas outside the vivarium space. The *Guide for the Care and Use of Laboratory Animals* (the *Guide*, NRC 2011) states: "Careful planning for all types of transportation should occur to ensure animal safety and well-being. The process of transportation should provide an appropriate level of animal biosecurity while minimizing zoonotic risks, protecting against environmental extremes, avoiding overcrowding, providing for the animals' physical, physiologic, or behavioral needs and comfort, and protecting the animals and personnel from physical trauma." (p. 107) Implementation of appropriate handling procedures reduces spread of disease, exposure to allergens, and ensures safety and well-being of the animals during transport.

### Policy

- Transportation of animals from the vivarium space to a procedure room or laboratory space outside of the vivarium within the same building does not need to be described in the animal use protocol.
- Transportation of animals between buildings **must** be stated in the IACUC-approved protocol. It is recommended to contact the Office of Laboratory Animal Resources staff ([OLARhusbandrysupervisors@hsc.wvu.edu](mailto:OLARhusbandrysupervisors@hsc.wvu.edu)) to help facilitate this type of animal transportation. Use of personal vehicles is not allowed without expressed permission by the attending veterinarian (AV).
- Transportation of animals to or from another institution requires the use of a commercial transportation service and should be coordinated with OLAR ([olarvetstaff@hsc.wvu.edu](mailto:olarvetstaff@hsc.wvu.edu)). Prior approval from veterinary staff is necessary prior to bringing animals on campus from a non-approved source (not a commercial vendor). See OLAR's website for information about animal import or export: <https://hsc.wvu.edu/olar/importexport/>

All methods of transportation **must** ensure animal health and safety. All animals **must** be alert and mobile (not sedated or anesthetized) during the transportation process unless described and approved in the IACUC protocol. Efforts should be taken to ensure the transportation time is minimized and public areas avoided. Public or university transportation systems cannot be used to transport animals between campus locations. If transporting USDA-covered animals, additional considerations may be necessary and veterinary staff **must** be consulted prior to moving animals.

## **Definition**

**USDA-covered animal**- USDA-Covered species include all live or dead warm-blooded animals used in research except birds, rats of the genus *Rattus*, and mice of the genus *Mus* bred for research. This also excludes "cold-blooded" animals such as fish, reptiles, and amphibians. (Animal Welfare Regulations)

## **Transportation Considerations**

- 1) Animals should not be removed from the vivarium space for >12 hours (USDA-covered) or >24 hours (non-USDA-covered) unless the area is an approved satellite facility. If this occurs, the area is a satellite housing location and **must** be described in the IACUC-approved protocol.
- 2) Water source:
  - a. If animals have water bottles on their cages, bottles need to be inverted prior to transport and returned to normal position once the destination is reached.
  - b. If animals are on automatic watering systems, an additional water source needs to be provided in the cage (water bottle, hydrogel) when removed from the rack.
  - c. For transportation to another institution, hydrogel will be provided.
- 3) Rodents **must** have a filter top on their cages during transportation. If transporting by vehicle, filter tops should be secured with tape.
- 4) Non-rodent species **must** be placed into an appropriate transport carrier for movement outside of the vivarium space.
- 5) **ONLY fish can be placed into bags for shipping/transporting.**
- 6) Animals can only be transported together within the same primary container if they are a stable group. Animals cannot be placed in groups of unfamiliar animals for transport purposes. Animals of different species cannot be placed in the same primary container for transportation.
- 7) When animals are moved outside of the vivarium space, the cages should be placed into a secondary container or covered with a drape on a cart. Coolers are placed throughout the vivarium space with instructions on transportation. Coolers **must** be returned to dirty cagewash after use for appropriate cleaning by OLAR staff. Animals **must** be removed from the secondary container immediately upon arrival at their expected destination. Animals should not remain in the coolers for >15 minutes, and coolers should be propped open as soon as feasible for ventilation.
  - a. Animals **must not** be visible when moving outside of the vivarium space.
  - b. Ensure animals are protected from temperature extremes during the transportation process.
  - c. Carts that enter the vivarium should be cleaned with accelerated hydrogen peroxide process before entering the animal rooms.
  - d. If carts are used, cages cannot be stacked for transportation.
  - e. 1-2 cages of animals can be covered and carried by hand.
- 8) Animals which are exposed to biological, chemical, or radiation hazards **must** have transportation approved by EHS staff and guidance provided regarding the safe movement of these animals.
  - a. If animals exposed to hazards are moved between buildings on campus and require vehicular transportation, OLAR **must** move the animals.

- 9) Only elevators designated for animal use (freight or designated elevators) can be used to transport animals within a building. Elevators which are used by the public cannot be used for these purposes. Animals **must not** be transported through or contact any areas where food is prepared or served.
- 10) If animals need to be transported through patient areas of the hospital, additional approvals may be required.
- 11) All caging equipment brought up to the laboratory (empty dirty cages) **must** be returned to the vivarium dirty cage wash for appropriate sanitation. Dirty cages cannot be left within the laboratory space and **must** be returned to the vivarium dirty cage drop within 24 hours.

### **Vehicle transport**

- 1) Use of personal vehicles for animal transportation is **prohibited** unless approved by the AV. When used, animals **must** be transported within an environmentally controlled passenger compartment. This creates potential allergen and pathogen contamination of the vehicle. OLAR can provide vehicle transportation to other campus locations.
- 2) Transport vehicles **must** have a mechanism for heating and cooling to maintain a thermoneutral environment during transport. The vehicle **must** reach a comfortable temperature prior to placing animals for transport.
- 3) USDA-covered animals cannot be transported via personnel vehicle, and laboratories requiring vehicle transportation **must** make transport arrangements with OLAR.
- 4) Cages, in a secondary container, **must** be placed on a non-porous surface that can be disinfected within the vehicle.
- 5) Vehicle should be clean and uncluttered.
- 6) Equipment or cargo should not be transported in the same area as the crates or cage.
- 7) Drivers **must** always remain in or near the vehicle. Animals cannot be left alone, and the vehicle **must** remain running to ensure proper environmental temperatures while animals are present.
- 8) Do not smoke or eat/drink in vehicle if animals are present.
- 9) Stress should be minimized during the transportation process.
- 10) Cages should not be opened within the vehicle or during transport.

### **Fish Transport**

- 1) When shipping fish from WVU to another institution/facility: Fish can be shipped and received via Fedex or other courier services. Steps should be taken to reduce shipment time (overnight) as much as possible to prevent animal loss. Animals should not be shipped during times of extreme weather (cold or warm) to avoid loss.
- 2) Instructions for packing and shipping zebrafish can be found at:  
[https://zfin.org/zf\\_info/zfbook/chapt1/1.7.html](https://zfin.org/zf_info/zfbook/chapt1/1.7.html)
- 3) Appropriate containers may vary by species.
- 4) Transportation on campus
  - a. Animals can be transported by walking or vehicle between rooms/buildings on campus.
  - b. Fish should be placed into a plastic bag for transport:
    - Fill bag 1/3 full with fish water. Add fish.

- Include as much air as possible. Bag should be 2/3 air and 1/3 water.
- Seal bag by knotting or twisting the neck so that the twist doubles over. Secure rubber band tightly over knot.
- Place into another plastic bag, double bagging it. Line the bags up with each other (by their seams) so that they are in the same orientation. Suck the air out of the second bag, so that if the inner bag leaks, there will be no place for the water to go. Close the outer bag by knotting and/or sealing with a rubber band.
- Place the bagged fish into a Styrofoam box.
- Place a heat pack taped to the inside lid if weather requires (<25 degrees C).
- Vehicle instructions above should be followed.
- Animals should be unpacked as soon as possible upon arrival at destination.

### **References**

1. [Animal Welfare Act and Animal Welfare Regulations](#), United States Department of Agriculture, 2017.
2. [Guide for the Care and Use of Laboratory Animals](#), National Research Council, 2011.
3. [Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching](#), Federation of Animal Science Societies, 2020.