UNIVERSITY STANDARD

Title

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
STANDARD ON ANIMAL TRANSPORT AND BIOSECURITY

Introduction

PURPOSE
The standards and procedures described below provide guidance to all investigators and animal handlers on how to safely transport animals across UNC facilities and between UNC facilities and off campus sites. It is essential to follow these procedures to ensure the health and well-being of research animals, as well as the health of research personnel engaged in the transportation, and any individuals that may indirectly come in contact with the animals or vehicles used to transport the animals.

SCOPE OF APPLICABILITY
All personnel engaged in the transportation of research animals on UNC’s campus. The standards described in this document apply to all animals used for research at UNC.

The UNC-CH IACUC expects that anyone involved in animal work at the University will comply with this Standard. Requests for exceptions to this Standard must be reviewed and approved by the IACUC and/or DCM Management.

Standard

Transportation of animals across facilities, buildings or laboratories is often essential to accomplish the research goals outlined in the animal protocols. 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 animal’s physical, physiologic and behavioral needs, and protecting the animals and research personnel from physical trauma” (Guide, 2011). Transportation of laboratory animals, including transport of empty cages, within or between animal facilities and research / core laboratories, should be accomplished with every effort to maintain biosecurity. Biosecurity includes all measures used to control known or unknown infections in laboratory animals, including those that are potentially harmful to humans.
Research personnel are required to receive prior approval for the following transfers:

- **Room to Room Transfer** (within a facility): Contact the DCM Animal Transport Specialist for approval.

- **Facility to Facility Transfer** (between Core and/or DCM areas): A transfer request form must be submitted online (available on the DCM Requests tab in ACAP).

- **Institution to Institution Transfer**: A request to IMPORT from or EXPORT to other institutions requires the appropriate form(s) to be completed and submitted to the DCM Animal Transport Specialist. The forms are available on the ACAP website: Import form, Export form. Contact EHS if transporting animals treated with hazardous agents.

- **Facility to Room Transfer** (between a DCM facility and research laboratory located in a separate building): The final destination for all animals must be outlined in the IACUC approved animal protocol. Investigators are to transport animals from DCM housing facilities to research laboratories, whereas DCM should transport to assigned DCM housing/holding/core locations. Once cages have been moved to the designated DCM holding room, investigators can move animals from the core area back to the DCM Return Room or back to the investigator’s laboratory. In situations in which the animals are transported to a laboratory located in another building and then returned to the DCM facility, the animals must be returned to a DCM Return Room.

**Animal Transport: Room to Room**

Each DCM maintained animal facility is ranked from clean (barrier pathogen free housing) to dirty (conventional housing) according to the overall health status of the animals. Rooms within facilities are also ranked from clean to dirty. All research personnel with animal facility access must adhere to the posted building and room rankings by entering clean rooms or facilities first, and wearing appropriate personal protective equipment (PPE) [shoe covers, mask, bonnet, gloves, and disposable lab coat or coveralls]. Before transferring animals between rooms, contact the DCM Animal Transport Specialist (919-966-0711 or 919-843-5031) for approval. Once an agreement is obtained between the facility supervisor, transportation specialist, and the investigator, permission to move animals from one designated room to another within the same facility is not required for each cage of animals.
Non-Vehicle Transport between Facilities

Research personnel should make every effort to obtain transport materials appropriate for each species. Animals removed from a facility cannot be returned to the facility housing area without prior approval, and then animals may only be placed into designated DCM Return Rooms. If DCM housing cages are used for transport, researcher personnel should return empty/dirty cages to their facility of origin. Each facility has a designated rack for return cages; all cages that are returned to the facility must be autoclaved prior to being processed through the cage wash. If the animals are not returning to the animal facility, please see the DCM supervisor / manager about the possibility of using disposable boxes for transport.

Procedures for transportation between facilities:

a. If the animal(s) must be moved through public areas, service elevators should be used, if possible, rather than common passenger elevators. For animals that have been treated with hazardous agents (i.e., biological, chemical, radiological), these cages need extra protection to ensure that transporter and building occupants are not exposed, and that if the cage is accidently dropped the animals cannot escape.

b. Animals, carcasses, and other items identifiable to the public as animal research related materials must remain covered at all times when not inside an animal housing facility or laboratory designated for animal work.

c. It is essential to maintain the animals' health status by avoiding exposure to pathogens, preventing injury, and reducing stressors (e.g., temperature extremes, noise).

d. Transport of animals must be done in a timely manner and animals should not remain in the transport containers for more than 20 minutes. Note that rats cannot be maintained in closed cages after removal from the ventilation system for more than 30 minutes, whereas mice can be maintained for approximately 12 hours.

e. Animals must be transported in a container appropriate for the species. Secondary containment is recommended.

f. Containers must comply with the following: capable of being sanitized (or be disposable); secured: spill proof; escape proof; not allow animal waste to be dropped on the floor; provide adequate ventilation; have a solid floor; maintained in a manner to prevent tipping or falling; and free of sharp edges that could harm the animal.
g. Transport containers must be sanitized after each use (or be disposed of).

h. Animal transport containers should not be over crowded, and the animals have sufficient floor space to make normal postural movements.

i. Opaque transport containers should be used. Containers should be covered such that the animals and containers are not visible to the public and that the cover does not compromise ventilation.

j. Empty containers should be covered when being returned to the animal facility and placed on the DCM designated rack for return cages.

k. Temperature extremes and stressors must be avoided during outside transport.

l. It is important to take into consideration the specific sensitivities of both the species and strain when determining the appropriate method of transport. For example, vibrations can produce seizures in some mice strains, thus it is recommended that they be transported in carts with pneumatic tires.

m. Please contact your DCM facility supervisor/manager to obtain and use transport materials.

Vehicle Transport between Facilities

DCM is authorized to routinely transport laboratory animals in vehicles between UNC facilities or to / from other institutions. Contact the DCM Animal Transport Specialist for more information at 966-0711 or 843-5031.

Transportation of animals using university vehicles that are not maintained by DCM (i.e., Zipcars, Point to Point, Campus Bus, or Carolina Motor Pool) is not permitted. The use of private vehicles is strongly discouraged as a means to transport laboratory animals as it presents a risk of contamination due to exposure to allergens, zoonoses, and other hazards associated with animal exposure. Transportation should only be done in laboratory animal dedicated, IACUC inspected vehicles. This includes labs with dedicated vehicles utilized only for the transfer of USDA species from building to building and are inspected by the IACUC. However, it is acceptable in the event of emergency circumstances in which this is unavoidable, such as transportation across campus during conditions of inclement weather. Even under emergency circumstances, the IACUC encourages investigators to first contact DCM to make arrangements for transportation prior to using a private vehicle. The University is not responsible for any damages to the private vehicle caused by the transport of laboratory animals.
Procedures for local transportation in private vehicles:

a. Transportation should provide an appropriate level of animal biosecurity (contact EHS for additional recommendations: 919-962-5507), ensure the protection of the animals (contact DCM for additional recommendations: 919-962-5335), and protect research personnel from injury.

b. The vehicle must be operated by personnel listed on the IACUC protocol.

c. Containers must comply with the following: able to be sanitized; spill proof, preventing waste from falling outside the container; secure and escape proof; provide adequate ventilation; have a solid floor; and be free of sharp edges that could harm the animal.

d. Animal transport cages should not be overcrowded, and the animals have sufficient floor space to make normal postural movements.

e. Non-research personnel are prohibited from being in the vehicle when animals are being transported.

f. Animals that have been treated with hazardous agents (i.e., biological, chemical, radiological) should not be transported in a private vehicle.

g. Vehicles carrying laboratory animals should be suitable for the purpose, insulated and fitted with controllable heating, cooling and ventilation and have internal lighting. The interior of the cargo area must be designed to allow for thorough cleaning and disinfection. This should performed as detailed on the DCM or laboratory cleaning log, e.g. daily, weekly, or biweekly. Logs must be properly documented and available for review by IACUC inspectors.

h. The persons responsible for transportation should have a mobile phone, consult with individuals knowledgeable about the transport of the species, and minimize transport times by careful planning of the route and avoiding any delays.

i. For specific guidelines regarding crating and transporting each species: http://lan.sagepub.com/content/39/1/1.full.pdf

j. USDA covered species that must be transported via vehicle, must be transported using DCM vehicles or other vehicles inspected semiannually by the IACUC and dedicated to the transport of laboratory animals.
Long distance transport or transport of wildlife:

a. Wildlife transportation from the site of trapping to the housing facility must comply with local, state and federal laws and regulations.

b. Wildlife transport should be a planned activity and the proper vehicle should be used.

c. Transport time and distance should be kept to a minimum.

d. It is important to consider the climate, season and time of day when animals will be travelling.

e. For trips exceeding a few hours, the animal shipping containers must comply with the following: not be overcrowded; have sufficient floor space to make normal postural movements; have a sufficient supply of food and water; contain sufficient bedding; and maintain an environment that minimizes stress.

f. Vehicles carrying animals should be suitable for the purpose, insulated and fitted with controllable heating, cooling and ventilation, have internal lighting, and the interior of the cargo area must be designed to allow for a thorough cleaning and disinfection after each transport.

g. Consult with DCM veterinarians or experts for the transport recommendations for specific species.

Please note:
Any animals not owned by UNC and/or present for approved research activities are prohibited from any area where research animals may be present (i.e. animal housing facilities, open lab spaces, etc.)

EXCEPTIONS
Requests for exceptions to this Standard must be reviewed and approved by the IACUC and/or DCM Management.

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Definitions

IACUC: Institutional Animal Care and Use Committee

DCM: Division of Laboratory Animal Medicine

University Standard: The minimum acceptable limits or rules used to achieve Policy implementation, enforceable by the IACUC.
Related Requirements

EXTERNAL REGULATIONS AND CONSEQUENCES

UNIVERSITY POLICIES, STANDARDS, AND PROCEDURES

For more detailed guidance, please refer to the University Policy on the Care and Use of Vertebrate Animals for Research, Training and Teaching Purposes.

Contact Information

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<th>Subject</th>
<th>Contact</th>
<th>Telephone</th>
<th>Email</th>
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<tbody>
<tr>
<td>IACUC Protocol</td>
<td>OACU</td>
<td>919-966-5569</td>
<td><a href="mailto:iacuc@med.unc.edu">iacuc@med.unc.edu</a></td>
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<tr>
<td>Animal Health and</td>
<td>DCM</td>
<td>919-962-5335</td>
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<td>Husbandry</td>
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<td>Animal Transport</td>
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<td>(919) 843-5031</td>
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Important Dates

- Effective Date and title of Approver: 3/31/2001; UNC IACUC

Approved by: UNC IACUC

Dr. Roland Tisch
UNC IACUC Chair

03/2019