

I. Purpose

This policy provides standardized requirements for approval and use of laboratory housing, researcher care, and extended study of unconscious animals. Researchers may request permission to provide researcher care, utilize laboratory housing and extended study of unconscious animals when justified and approved by the IACUC. When possible, all animals must be housed within a LARC or UCSF IND Animal Facility at Hunters Point (HP)- managed facilities. Animals may only be housed outside of LARC or HP managed facilities if there is no suitable space within LARC or HP vivaria. When outside of LARC or HP vivaria, animals may not be held unattended overnight unless approved for laboratory housing or extended study of unconscious animals.

II. Regulatory Authority

Guide for the Care and Use of Laboratory Animals (Eight Edition), Institute of Laboratory Animal Resources, National Academy Press, Washington, D.C., 2011.

Public Health Service Policy on Humane Care and Use of Laboratory Animals, Office of Laboratory Animal Welfare, National Institutes of Health, Public Health Service, 2002.

Animal Welfare Act, United States Code, Title 7, Chapter 54

Animal Welfare Regulations, Code of Federal Regulations, Title 9, Chapter 1, Subchapter A, Parts 1-4.

III. Definitions

- A. Extended Study of Unconscious Animals – Any non-LARC location used for greater than 12 hours for USDA regulated species or 24 hours for non-USDA regulated species where the study of *unconscious* animals is conducted (i.e., neurophysiological testing under anesthesia or non-survival surgeries).
- B. Housing – Maintaining conscious animals for more than 12 hours for USDA regulated species and more than 24 hours for non-USDA regulated species.
- C. Laboratory Housing – Housing animals outside of LARC space where approved research staff are designated sole or select husbandry and monitoring responsibilities.
- D. LARC (centralized) space – Any animal use location within Laboratory Animal Resource Center vivaria at UCSF.
- E. Non-LARC (decentralized) space – Any animal use location outside of LARC vivaria at UCSF.

- F. Researcher Care – The continuous study and/or housing of specific groups of animals within LARC space where approved research staff are designated sole husbandry and daily monitoring responsibilities, including weekends and holidays (e.g., behavior study rooms, neurophysiological testing under anesthesia, metabolic caging, ABSL3 housing locations).

IV. Policy

- A. LARC veterinary staff must have access to evaluate animals, 24 hours/day 365 days/year, or at intervals determined by the LARC veterinarian based on the specificity of the study model. Keys or codes must be provided to LARC and IACUP.
- B. All locations will be inspected by the IACUC at least once every six months as per federal regulations. These inspections may or may not be announced. IACUP staff will conduct post-approval monitoring as necessary.
- C. The housing conditions, environmental parameters, and husbandry practices in lab housing locations must meet the same standards as LARC-managed facilities.
- D. Animals held outside of approved housing locations must be maintained in a manner consistent with the temperature requirements of the species involved, allows for adequate air exchange, and provides a stable and secure environment and appropriate nutritional support to maintain the baseline condition of the animal (e.g., diabetic animals).
- E. Animals may not be held unattended overnight outside of LARC space without justification and IACUC approval.

V. Requirements for Laboratory Housing

- A. Contact the IACUC office prior to planning to construct/reallocate space for animal housing. The location must be inspected and approved prior to use. The PI is responsible for ensuring that the space is appropriately prepared and maintained for use as a housing location. Standard sized cages are to be used unless specialized caging is necessary (any non-standard cages must be justified in the approved IACUC protocol); Ventilated racks may be required. Aquatic housing rooms require floor drains and GFI electrical outlets.
- B. Documented Daily Observations & Husbandry Activities – All animals must be observed every day that they are present, including weekends and holidays. Daily checks include:
- general assessment of health, including reporting all health concerns to the LARC veterinary staff,
 - ensuring sufficient amount of food and potable water,
 - temperature and humidity highs and lows must be recorded and hygrometers/thermometers must be reset daily (min/max cleared),
 - Feed and supplies must be appropriately stored in dated, lidded, leak-proof, vermin-proof containers and used within its shelf life. The housing area must be kept clean and organized with proper disinfection procedures in place.
 - Cages, including water bottles, stoppers and feed, must be changed -per IACUC/LARC standards for static and ventilated rack cages. Dirty cages and

equipment must be removed by the end of the day and transported to a cage return area or cage wash facility.

Lab Housing Daily Check Sheets must be used to record daily observations and all routine husbandry (e.g., feeding, cage changing, cleaning/sanitation). Documentation should clearly indicate when animals are not present. All documentation must be retained for one year and be available upon request by LARC and IACUC.

- C. Standardized environmental parameters – To assure the provision of a stable environment and minimize variables, environmental parameters must be controlled and documented.
- i. Lighting: Time controlled lighting on standard 12:12 light:dark cycle, unless approved in the IACUC protocol for any study-related adjustments. Control may be through a central monitoring system (preferred). It is not acceptable to turn lights on when personnel arrive for the day and turn lights off when personnel leave. Standard lighting control must be in place 7 days a week. Any windows must be blacked out unless approved by the IACUC.
 - ii. Ventilation in areas housing animals should be maintained at approximately 10-15 air changes per hour. Report of air exchanges per hour provided prior to approval and as requested by the IACUC (contact Facilities Management). Room air exchange information is not required for aquatic housed species.
 - iii. Temperature and humidity should be stable and consistent. Prior to IACUC approval, provide 7 consecutive days of temperature and humidity readings from a calibrated and re-settable thermometer/hygrometer device for assessment. The device(s) need to remain calibrated while in use. For rodents, humidity is to be between 30-70%; temperature 68-79 degrees F. Refer to the *Guide* for other species requirements.
- D. Sanitation – There should be no clutter in the animal housing area, only equipment related to housing. All surfaces (e.g., shelves, tables, floors, walls) including the primary enclosure and other equipment associated with animal housing must be able to be cleaned and sanitized. Impervious surfaces should be used (e.g., plastics, stainless steel, etc.). If any equipment must be constructed of wood, this must be treated with an appropriate paint or coating to allow for proper sanitization and maintenance. A disinfection protocol describing sanitation practices is required.
- E. Pest Control – Laboratory housing area should be designed to prevent the entry of insects and vermin and implement a pest control program. This should include regularly scheduled and documented visits by a certified professional and daily documented checks of any live rodent traps. Glue traps for rodents are not acceptable. If live rodents are captured in the laboratory during normal work hours, please contact LARC for any follow-up (e.g., necropsy, serology). Whenever possible, nontoxic means of pest control should be used.
- F. Security – All facilities are required to maintain controlled access. Animals must be maintained behind at least one locked barrier/door, separated from public areas—facility doors must be equipped with locks or electronic security devices.
- G. Identification – All animals must be properly identified in all types of housing areas. This may be by group designation for some species (e.g., a cage of mice or a tank of fish) or must be

individually identified for non-rodent USDA-covered species. The RIO cage card should be the standard means of identification, except in unique circumstances, and cannot be reused.

- H. Emergencies and contingency plans – Emergency procedures for handling special facilities or operations should be prominently posted and personnel trained in emergency procedures for these areas. A contingency plan should take into account both personnel and animals as part of the overall safety plan for animals housed in any facility at the institution. Satellite facilities must have a written disaster/contingency plan or must be incorporated into LARC's institutional plan. Guidance regarding disaster planning and response is offered by OLAW.
- I. The following must be posted in the lab housing and researcher care area:
- i. Approved Protocol number(s)
 - ii. LARC veterinary staff emergency number
 - iii. Emergency contact information for lab staff
 - iv. Sign for reporting Animal Care and Use Concerns
 - v. IACUC Policy on Expired Drugs, Medical Materials & Devices Used in Animal Research
 - vi. A disinfection protocol for the laboratory housing area

VI. Requirements for Researcher Care

- A. Researchers designated as responsible for sole husbandry and monitoring tasks must follow LARC standards for husbandry and documentation. Protocol-specific requirements that differ from LARC standards must be approved by the IACUC.
- B. LARC and IACUC will review the request and coordinate required training for lab users.
- C. Separate IACUC inspection may be needed based upon the nature of the Researcher Care request.

VII. IACUC Approval

Lab housing, researcher care, temporary holding in non-LARC space and extended study of unconscious animals requires specific approval by the IACUC. Approval is contingent on scientific necessity, protocol justification, non-availability of equivalent LARC space, and suitability of the proposed location. Justification must be consistent with the objectives of the approved IACUC protocol. Convenience to the investigator or laboratory staff is not an acceptable justification.

IACUC approval is protocol specific. Each IACUC protocol must include a scientific justification and detailed description of each applicable study model and/or experiment. Approval is only for the specific procedure, project, or protocol; **one approval for a laboratory does not automatically apply to any other protocols a laboratory may hold or to any other model or study described on a protocol.**

Training is required for the PI and all lab members involved in the care and use of animals housed in laboratories or solely cared for by research staff in LARC space prior to approval.

- A. Lab Housing

- a. All locations must be listed and approved for each IACUC protocol in section K4 with all requested information (e.g., justification, LARC/PI designation of husbandry, protocol-specific needs).
- b. If the lab housing request is approved, the lab becomes solely responsible for providing complete animal care at all times unless contracting with LARC to provide husbandry services. When LARC services are contracted, the lab remains responsible for evaluating daily the health and welfare of lab housed animals and all husbandry tasks.

B. Researcher Care:

- a. All locations must be listed and approved for each IACUC protocol. "Researcher Care" is selected in section K1 and specific locations are selected in section K2, including all requested information (e.g., justification for providing your own animal care within LARC space, LARC/PI designation of husbandry, protocol-specific needs).
- b. If the researcher care request is approved, the lab becomes solely responsible for providing complete animal care at all times including daily health assessment and husbandry. Signage is required on the door or at cage location notifying IACUC and LARC staff when animals are present or on study and if entry or access is restricted (as during conduct of behavior studies).
- c. Researcher care for up to one week may be mandated due to biosafety requirements. These locations (e.g., shedding locations) do not need to be listed in the IACUC protocol as 'Researcher Care'.

C. Extended Study

- a. All locations must be listed and approved for each IACUC protocol in section K4 with all requested information.