

**UNIVERSIDAD CENTRAL DEL CARIBE
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

Policy on Satellite Animal Facilities

Definition: As defined by Federal law, a Satellite Animal Facility is any area holding animal's outside the vivarium for more than 12 hours. Satellite facilities are typically located in a laboratory and hold animals for a short period of time for a procedure that cannot be done in the vivarium. However, any animal holding or housing area at Universidad Central del Caribe (UCC) that is not an Animal Care Program vivarium is designated as a satellite facility. Federal regulations state that the authority and oversight of these facilities rests with the institution through the IACUC. The delegated authority for the oversight of these areas has been assigned to the Animal Care Program.

It is the general policy of the Universidad Central del Caribe Institutional Animal Care and Use Committee (IACUC) to centralize animal facilities as much as possible. Satellite animal facilities will be approved only in rare cases where there is **rigorous scientific justification for the exception**, and the appropriate environment, housing, care and oversight can be provided as required by federal law and current UCC policies. Other designations for satellite facilities are no longer used: e.g. "study area", "investigator-maintained", "satellite housing" or "exception".

All animal facilities and satellite facilities at the Universidad Central del Caribe must be approved by the UCC Institutional Animal Care and Use Committee and fall under the jurisdiction of the Animal Care Program (ACP) or its direct subsidiaries. Because a satellite facility is outside the ACP Animal Resources Center, it is the responsibility of the Principal Investigator (PI) to ensure that all federal regulations, as defined by the *Guide for the Care and Use of Animals*, as well as all of the Standard Operating Procedures (SOPs) for care and use of the animals are carried out, seven days a week, and 24 hours per day. It is also the PI's responsibility to see that all personnel having incidental exposure to the animals while in the laboratory are included in the Occupational Health Program. It is the responsibility of the PI to assure that all laboratory personnel involved in handling animals are appropriately trained in animal care and use. Veterinary and Animal Welfare Compliance Officer oversight remain the same as if the animals were in the ACP Animal Facility. Semi-annual IACUC Inspections are required of each Satellite Animal Facility (copies of housing site logs must be maintained at the housing site for inspection). Failure to meet these responsibilities will result in the loss of Satellite Animal Facility status.

UCC recognizes two levels of responsibility for maintenance of a Satellite Animal Facility.

- Level 1 generally refers to those areas with occasional holding (of non-USDA covered species) for a period greater than 12 hours but less than 72 hours.
- Level 2 generally refers to those facilities with animals held longer than 72 hours or to areas shared by multiple PIs. The specific criteria and requirements are described in

detail in the documents entitled Standard Operating Procedures Satellite Animal Facility Level 1, Standard Operating Procedures Satellite Animal Facility Level 2, and the individual Satellite Facility Standard Operating Procedures document created for each facility. The final decision regarding level assignment rests with the IACUC.

A Level 2 Satellite Animal Facility requires an ACP designee to check the facility daily to confirm proper animal care and assure animal health. Animal husbandry must be done by ACP or one of its subsidiaries OR under the supervision of ACP or one of its subsidiaries.

Satellite Animal Facilities must follow all applicable federal regulations, the *Guide for the Care and Use of Laboratory Animals*, and all UCC policies and guidelines. Failure to meet these responsibilities will result in the loss of Satellite Animal Facility status.

The required steps for development of a Satellite Animal Facility at UCC are:

1. IACUC approval of scientific justification for Satellite Animal Facility with designation of Level 1 or Level 2.
2. ACP, Emergency Health & Surveillance and IACUC approval of:
 - a. Space assignment
 - b. Facility Plan
 - c. Operational Plan
3. Facility construction/modification/renovation
4. Final Inspection—ACP, IACUC
5. Keys provided by PI
6. Occupancy

GUIDELINES FOR MANAGEMENT OF HOUSING AREAS

A. Animal Facility

1. Sanitation

The housing site must have a regular sanitary maintenance schedule and must be kept clean, neat, and uncluttered. The *Guide* (p. 44) states that “all components of the animal facility...should be cleaned regularly and disinfected as appropriate to the circumstances and at a frequency based on the use of the area and the nature of likely contamination.”

2. Food/Bedding Storage

Food and bedding materials must be stored in closed containers to avoid contamination and the potential spread of disease. Containers must seal so that vermin are excluded from the food and bedding being stored, and must be made of a material such that the container can be sanitized on a regular basis. It is important to note that, as stated in the *Guide* (p. 39), “contaminants in food can have dramatic effects on biochemical and physiologic processes, even if the contaminants are present in concentrations too low to cause clinical signs of toxicity.” If food is not stored in its original bag, its milling date (found on the bag seam) must be indicated clearly on the food container. If no milling date is listed on the food bag, label the bag with the date received. With proper storage, food can generally be used up to 6 months after the milling or receipt date. However, the shelf- life of food can be shortened by several factors, including temperatures above 21 o C (70 o F), humidity extremes, unsanitary conditions, light, oxygen, and pests. Furthermore, food with Vitamin C has a shelf- life of only 3 months.

3. Temperature and Humidity

Temperature and humidity must be monitored and recorded on a daily basis to ensure that adequate levels of these environmental factors are maintained in the housing area. Relative humidity should be maintained within 30 to 70%. Unless special environmental conditions are approved by the IACUC, the area temperature must be appropriate to the species (see table below). According to the *Guide* (p. 29-30), “the range of daily temperature fluctuations should be kept to a minimum to avoid repeated large demands on the animals’ metabolic and behavioral processes.” Temperature extremes can affect research results, alter an animal’s performance, or lead to clinical effects and death.

Recommended Dry-Bulb Temperatures for Common Laboratory Animals		
Species	o C	o F
Mouse, rat	18-26	64-79

4. Ventilation

Ventilation serves to “supply adequate oxygen; remove thermal loads caused by animal respiration, lights, and equipment; dilute gaseous and particulate contaminants; adjust the moisture content of room air; and, where appropriate, create static-pressure differentials between adjoining spaces” (the *Guide*, p.30).

Although factors such as species, animal size, number of animals, type of bedding, and frequency of cage-changing can affect the minimum ventilation rate required, an acceptable general standard for a vivarium room containing the maximum animal density permitted by other constraints is 10-15 fresh-air changes per hour. Investigators' laboratories are frequently set up in space not designed to permit 10 – 15 fresh-air changes per hour. An acceptable general standard in such cases is that the maximum number of animals in a housing area be reduced proportionately. Although lower or higher ventilation rates may be required in certain instances, provisions must be made to ensure that “harmful or unacceptable concentrations of toxic gases, odors, or particles” do not accumulate in an animal’s primary enclosure.

5. Illumination

The *Guide* (p. 34-35) states that, “in general, lighting should be diffused throughout an animal holding area and provide sufficient illumination for the well-being of the animals and to allow good housekeeping practices, adequate inspection of animals--including the bottom- most cages in racks---and safe working conditions for personnel. Light in animal holding rooms should provide for adequate vision and for neuroendocrine regulation of diurnal and circadian cycles...A time-controlled lighting system should be used to ensure a regular diurnal cycle, and timer performance should be checked periodically to ensure proper cycling. ” Several factors should be considered when determining adequate illumination, such as light intensity and wavelength, duration and time of light exposure during the circadian cycle, animal pigmentation and light history, body temperature, hormonal status, age, species, sex, and animal stock/strain.

6. Noise

Unnecessary noise in the housing area should be minimized. The *Guide* (p. 36) recommends that, “to the greatest extent possible, activities that might be noisy should be conducted in rooms or areas separate from those used for animal housing” and that “radios, alarms, and other sound generators should not be used in animal rooms unless they are parts of an approved protocol or an enrichment program.”

7. Walls

Walls should be smooth, moisture-resistant, non absorbent, and resistant to damage from impact. They should be free cracks, of sealed utility penetrated and imperfect junctions with doors, ceilings, floor, and corners. Surface materials should be capable of withstanding cleaning with detergents and disinfectants.

8. Hazardous Agents

Hazardous biological, chemical, or physical agents must not be stored where animals are housed.

9. Other

Doors must fit tightly within the frame to prevent escape of or injury to animals.

For more details see: Guide for the Care and Use of Laboratory Animals (version 1996) http://www.nap.edu/openbook.php?record_id=5140

9. Reporting Problems

Any problems with maintaining the conditions specified in this SOP should be brought to the immediate attention of the Attending Veterinarian or Animal Resources Center (787-798-3001 ext. 2096)

B. Animal Care and Husbandry

1. Daily Observation of Animals

In order to comply with federal requirements (and the *Guide*, p. 46), animals must be observed daily, including weekends and holidays by qualified personnel to assess their health and well-being. Daily observation of animals must be recorded on the housing site log. Additionally, it requires that a mechanism of direct and frequent communication with the attending veterinarian through Animal Resources Center exists so that timely and accurate information on problems of animal health, behavior, and well-being is conveyed. Contact an Animal Resources Center 787-798-3001 extension 2096 or btorres@uccaribe.edu for animal health concerns.

2. Food/Water

Adequate provisions for feeding and watering of animals must be made at all times. According to the *Guide* (p. 38), “animals should be fed palatable, uncontaminated, and nutritionally adequate food daily or according to their particular requirements.” To avoid contamination, food must be stored properly and provided in feeders that are so placed to prevent contact of food with feces and urine. Additionally, animals must have access to “potable, uncontaminated drinking water according to their particular requirements” (the *Guide*, p. 40). To avoid microbial cross-contamination, the *Guide* recommends either replacing water bottles or refilling them provided they are returned to the same cage from which they were removed. Watering devices should be checked daily to ensure proper operation and must be washed and sanitized at least weekly.

The conventional food used by Animal Resources Center: is Global 18% Pro Rodent Diet.

3. Cages/Bedding

The *Guide* (p. 42) states that “soiled bedding should be removed and replaced with fresh materials as often as is necessary to keep the animals clean and dry.” Bedding changes can vary from daily to weekly depending on factors such as animal number and size, cage size, urinary and fecal output, and experimental conditions. Cages must be cleaned and sanitized on a regular basis. The frequency of cage sanitation may vary depending on specific husbandry practices, such as bedding type, cage type and size, animal density, and frequency of bedding changes. Cages should be sanitized at least once a week. The Animal Resources Center used Harlan Pelleted Paper Bedding and changed the bedding one/week.

C. Record-keeping

1. Housing Area Log

Records of animal care, room maintenance, and environmental conditions must be posted in the housing site and be kept updated by responsible personnel. Attached is a sample housing area log, which can be modified as appropriate to the protocol and animal species. The format of the modified log should be kept on file and should accurately reflect the tasks performed and the frequency of each task as described in the Standard Operating Procedures (SOP) for the housing area. Copies of housing site logs must be maintained at the housing site by the investigator's personnel, for the duration of the housing period, and be available for inspection by ARC and IACUC personnel.

2. Standard Operating Procedures (SOP) for Animal Husbandry and Study Area Maintenance

A description of procedures for animal husbandry and housing site maintenance must be submitted to the ARC (please see attached SOP form). The SOP must be kept on file and available to representatives of the IACUC, the Attending Veterinarian, and regulatory agencies.

3. Room Ventilation

A copy of Facilities Management's or Environmental Health and Safety's report regarding room ventilation (exhaust and air exchange rate) must be submitted to the IACUC. This document must be kept on file and available to representatives of the IACUC, the Attending Veterinarian, and regulatory agencies.

D. Veterinary Access

The Supervisor of Animal Resources Center must be given access to the housing site in order to ensure the provision of adequate veterinary care in accordance with federal requirements. Specifically, the USDA AWR's §2.33(a)(2) mandates that "each research facility shall assure that the attending veterinarian has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use." Furthermore, the *Guide* (p. 12) states that "adequate veterinary care must be provided, including access to all animals for evaluation of their health and well-being."

3. APPROVAL

The Universidad Central del Caribe Institutional Animal Care and Use Committee has reviewed and approved this SOP as attested by the signature of the Committee Chairperson.

PROTOCOL #:	
EXPIRES:	

Universidad Central del Caribe

IACUC SATELLITE ANIMAL HOUSING
*This Housing Form and the Housing Site Daily Log
 must be posted within the Laboratory at all times*

Investigator Name:		Primary Contact:	
Work Phone:		Work Phone:	
Home Phone:		Home Phone:	

Justification for Satellite Animal Housing

List other person (s) responsible for daily care:	
Name	After-hours phone number:

Location (Building and room #):		Specie (s) housed:	
Average daily census of species:			
Average duration of housing:		Maximum duration of housing:	

Housing
Type of caging/bedding/# animals per cage
Procedures for cleaning cages, including frequency, agents used, how records are maintained, etc.
Contact the ARC Veterinary Staff through ARC (787-798-3001 ext. 2096 or

btorres@uccaribe.edu) to discuss proper caging/bedding, cleaning procedures, or any other questions.

Feeding

Type of Food	Frequency of Feeding:	How is the food provided to animals?
Where is the food purchased?	How is the food stored?	
Assurance of food quality (shelf life, monitoring of expiration, etc.)		
How is water provided?		

Animal Observation

Discuss the frequency of observations:

How are the animals identified?

Animal Environment (How are the following maintained and monitored?)

Temperature	Humidity	Lighting Cycle

Housing Site Daily Log-Satellite Housing-UCC

Month: _____ Year: 20____

Building: _____ Room: _____ Species: _____ Protocol Number _____

TASK	Frequency	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Initials
Check animals	Daily																																
Room temperature	Daily																																
Animals fed	Daily																																
Sanitize area	Weekly																																
Sanitize racks	Weekly																																
Sanitize food container	Monthly																																
For terrestrial species:																																	
Room humidity	Daily																																
Check feeders	Daily																																
Check water bottles	Daily																																
Changes cages & bedding	Weekly																																
Wash water bottles & feeders	Weekly																																

NOTE:

- The Supervisor of Animal Resources Center must be notified when animals are brought to the housing site 787-798-3001 extension 2096 or btorres@uccaribe.edu).
- Housing Site Daily Logs must be maintained in the housing site area and is available for inspection.
- Copies of Housing Site Daily Logs must be submitted to the ARC on a monthly basis or at the end of the study period, whichever comes first.
- Any animal health concerns must be brought to the attention of the ARC veterinarians through Supervisor of Animal Resources Center.

FOR OFFICIAL USE ONLY

TO BE COMPLETED BY THE ANIMAL RESOURCES CENTER SUPERVISOR.

PLEASE, INDICATE IF THE ANIMAL RESOURCES CENTER MAY PROVIDE THE HOUSING FACILITIES AND MATERIAL:

() Yes () No

COMMENTS:

SUPERVISOR

DATE

ONLY FOR MEMBERS OF IACUC

COMMITTEE MEMBERS NAME	COMMITTEE MEMBERS SIGNATURE	COMMENTS
1. DR. PEDRO FERCHMIN		
2. DR. KRISHNA BAKSI		
3. DR. PRISCILLA SANABRIA		
4. DR. LEGIER ROJAS		
5. DR. MISTY EATON		
6. DR. LUIS CUBANO		
7. MRS. LUISA MOLINA <i>COMMUNITY MEMBER</i>		
8. DR. JUAN AMIEIRO <i>ATTENDING VETERINARIAN</i>		

ACTION

- () APPROVED
- () APPROVED WITH MODIFICATIONS
- () DISAPPROVED

 PROF. ZILKA RIOS
 PRESIDENT OF UCC/IACUC

 DATE