

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

SOP#: 006.29

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TITLE:	Animal Health and Environmental Surveillance
SCOPE:	All Animal Program Personnel
RESPONSIBILITY:	Facility Manager, All Animal Program Personnel
PURPOSE:	To Daily Review Animal Health, and Identify and Report a Change in Overall Animal Health or Environmental Conditions.

I. PURPOSE

1. To ensure the highest quality of animal health and preclude the development of spontaneous diseases or disorders, which could compromise the integrity of studies and the interpretation of results.

II. RESPONSIBILITY

1. All program staff contribute to the oversight and reporting of animal health status.

III. PROCEDURES

1. Each animal housing room is assigned to an Animal Care Technician. Daily observations of the Animal Care Technician are recorded on the **Room Status Sheet** in the **Room Log Book**.
2. Surveillance of animals by animal care staff will occur twice per day during weekdays at the ALZ, CAMLS, COM, CPH, IDRB, BPB, PSY, MDD and RSB facilities. The initial surveillance will be accomplished prior to 9:30 AM. These observations and communications must be noted on the **Room Status Sheet**, the Facility Manager's **Animal Health and Environmental Concern Form** (CMDC #077), and when the concerns require veterinary attention, the **Animal Health Concerns Form** (CMDC #155). Exceptions to this schedule can be made with prior arrangement with CM management and IACUC approval.
3. The second health and environmental surveillance will occur about mid-afternoon during weekdays (with the exception of rodent quarantine). These observations and communications must be noted on the **Room Status Sheet**, the Facility Manager's **Animal Health and Environmental Concern Form**, and when the concerns require veterinary attention, the **Animal Health Concerns Form**. Exceptions to this schedule can be made with prior arrangement with CM management and IACUC approval.
4. On weekends and holidays facility environmental and health surveillance for all species is assigned to Animal Care Technicians; and occurs upon arrival of the Animal Care Technicians. Each technician is required to text the Manager/Supervisor on call (A) when they arrive to begin assessments, (B) if any environmental or health concerns require deliberation or assistance, and (C) before departing to report the completion of all tasks. Weekend schedules must be posted uniformly in the MDD, COM, RSB and ALZ facilities and on share point. Just prior to each weekend or holiday, managers review with assigned staff the anticipated tasks to ensure redundant understanding of needs at each site.

5. Health and environmental surveillance of animals at satellite facilities and at IACUC-approved laboratories outside of animal facilities where animals are housed > 12 hours must be performed daily by the PI and/or research staff.
6. Daily oversight of animals at satellite facilities and laboratories outside of animal facilities is performed and documented by the PI and associated research staff named on the approved IACUC protocol using forms provided by Comparative Medicine or similar.
7. Records of daily animal health and environmental assessments made by the PI/research staff at satellite facilities or at IACUC-approved laboratories outside of animal facilities where animals are housed >12 hours are reviewed by the IACUC during semi-annual evaluations of these locations.
8. Performance of health surveillance:
 - a. Each animal/enclosure is to be given a cursory examination that will include the following, as appropriate:
 1. Food and water intake/supply
 2. Urine and fecal output
 3. Assurance of water supply patency
 4. General appearance
 - a. Presence of lesions or injuries
 - b. Physical condition
 - c. Disposition/behavior
9. Performance of environmental surveillance:
 - a. Each room will be examined for the following, as appropriate:
 1. Temperature
 2. Humidity
 3. General room condition
 - a. Lighting
 - b. Plumbing
 - c. Cleanliness
 - b. Aquatic environments will be examined for the following:
 1. Water condition/clarity
 2. Tank condition/function (i.e., aeration, filtration, and/or pumps)
10. Adequate animal care includes adequate medical record keeping. It is the responsibility of the Animal Care Technician to monitor the medical records of their assigned animals to ensure that all the required entries by research and animal care staff are recorded as described in **SOP #012** entitled "**Animal Medical Records**", and to report inadequate animal medical record keeping (e.g., noncompliance with SOP #012, the IACUC protocol, and current *IACUC Principles and Procedures*) as an animal health concern.
11. If no significant health or environmental concerns are observed, a check mark is placed in the NSC (no significant concerns) A.M. or P.M. column and the technician's initials will be made in the appropriate space on both the **Room Status Sheet** and the Facility Manager's **Animal Health and Environmental Concern Form**.
12. **If a health concern is observed which has not been previously noted or anticipated, especially those not attributable to the research activity or for which treatment has not been initiated, staff are to:**

- a. Flag the animal's primary enclosure with a **red cage card** and **treatment label** identifying the animal, the concern, and the date the concern was first noticed.
- b. Record the IACUC protocol number, and animal or cage identification in the Health and Environmental Concerns column on the **Room Status Sheet**, and the entry initialed.
- c. For all USDA-regulated species-record the date and briefly describe the concern on the **Progress Notes Form** (CMDC #013) in the animal's medical record, and the entry initialed.
 - i. For USDA-regulated species, the **veterinarian must be notified** by the room technician when the health concern is first identified.
- d. For all non-USDA-regulated species - record the date, animal and/or cage identification, and briefly describe the concern on the **Progress Notes Form** that represents the IACUC protocol of that animal, and the entry initialed.
- e. Record the IACUC protocol number and animal or cage identification (if applicable) on the Facility Manager's **Animal Health and Environmental Concern Form**, indicate "HC" for health concern, and initial the entry.
- f. Record the relevant information on the veterinary **Animal Health Concerns Form** when an animal health concern requires veterinary attention.
- g. Each weekday an Animal Care Technician appointed by the Facility Manager will review the **Animal Health Concerns** form, triage cases, recommend actions and treatments to the room technician, and directs the room technician to communicate with the research technician prior to initiating treatments.
- h. If assistance with a choice of treatment is needed, contact the veterinarian.
- i. Email the lab contact and describe in the body that the animal(s) have a health concern and a recommended treatment. Within 48 hours, the room animal care technician receives approval from the research technician to initiate treatment, and logs such in the **Progress Notes** form, or initiates treatment if no response is received.
 - i. The animal care technician can consult the veterinarian at any point to start treatment as recommended.
- j. Ensure the primary enclosure remains flagged until the health concern is resolved. Resolution should be recorded in the **Progress Notes**. If resolution is not achieved in a timely manner, email the lab contact and veterinarian and request whether euthanasia should be considered.

13. If an animal is approaching or has reached an experimental endpoint (e.g., tumor size, ulcerated tumor, paresis, weight loss):

- a. Flag the animal's primary enclosure with a **neon orange cage card** and **endpoint criteria label** identifying the animal, the concern, the date the concern was first noticed, and that the lab has been notified of the concern.
- b. For all USDA-regulated species-record the date and briefly describe the concern on the **Progress Notes Form** (CMDC #013) in the animal's medical record, and the entry initialed.
- c. For all non-USDA-regulated species - record the date, animal and/or cage identification, and briefly describe the concern on the **Progress Notes Form** that represents the IACUC protocol of that animal, and with the entry initialed.
- d. Record the IACUC protocol number and animal or cage identification (if applicable) on the Facility Manager's **Animal Health and Environmental Concern Form**, indicate "EP" for approaching end point concern, and initial the entry.
- e. Email the lab contact and describe in the body that the animals are approaching or have reached endpoint. Be sure to include the protocol number, animal identification, and what you are observing (see examples, below).

- f. Confirm that you have informed the lab in the “Acknowledgement” column of the **Animal Health and Environmental Concern Form**.
 - g. Ensure the primary enclosure remains flagged until the end point concern is resolved.
 - h. If assistance with a choice of treatment is needed, contact the veterinarian.
 - i. Treatments may be initiated in response to an approaching end point by the veterinarian or as described in the protocol, after the research technician has been notified, and are noted in the **Progress Notes** form.
 - j. If no resolution is achieved within 24 hours, email the lab again, copy the veterinarian, and request that the veterinarian assist with resolution. Resolution should be recorded in the **Progress Notes**.
14. When informing the lab of an animal that is approaching, or at a clinical end point, or that has developed a health concern that requires treatment, consider using the following format for your email.
 - a. Address your email to the lab contact and PI, and in the “subject” line indicate “Animal health or end point concern, IACUC protocol XX, room XX, rack XX”
 - b. For a **health concern** requiring treatment, consider stating: “Animals housed on your behalf in room XX, rack XX, under IACUC protocol XX, require treatment, as follows. The primary enclosure has been labeled with a **red** flag and treatment label. Please acknowledge receipt of this notification and indicate approval of the proposed treatment.”
 - c. For animals approaching or at an **end point**, consider stating: “Animals housed on your behalf in room XX, rack XX, under IACUC protocol XX, are approaching end point and require your attention. The primary enclosure has been labeled with a **neon orange** flag and endpoint criteria label. Animals approaching clinical end point must be monitored closely and scheduled for euthanasia. Please acknowledge receipt of this notification and indicate that you will resolve this end point concern promptly.”
15. Health concerns observed by the PI or research staff at a satellite facility or laboratory outside of an animal facility where animals are housed >12 hours should be promptly communicated to the veterinary staff.
16. If the animal has a unique identification # it should be recorded on the red cage card used to flag the animal’s primary enclosure, and recorded in the **Progress Notes** whenever entries are made regarding this animal. In addition, the animal room technician assigns a number, sequentially, starting with one (1). Each room will have its own sequence of numbers. A new sequence of numbers will begin each year on January 1 and run to December 31.
17. Procedures for the handling/reporting of animals found dead are described in **SOP #017** entitled, **Handling of Animals Found Moribund or Dead**.
18. If an environmental concern is observed:
 - a. Record the concern in the **Health and Environmental Concerns** column on the **Room Status Sheet** and initial.
 - b. Record the room number and the concern on the Facility Managers **Animal Health and Environmental Concern Form** and initial
 - c. At a satellite facility or laboratory outside of an animal facility where animals are housed >12 hours, environmental concerns should be promptly communicated to local physical plant personnel by the research staff.

NOTE: If at any time there is a medical emergency (e.g., moribund, dystocia, bleeding, irretractable seizures, lethargy, dehydration, etc.), the veterinarian or their designee and the laboratory contact is to be notified immediately.

19. The Facility Manager or designee must contact the research staff to assure resolution of a end point or health concern, and if not promptly resolved contact the veterinarian, or contact physical plant/maintenance personnel to assure resolution of an environmental concern. This communication must be noted on the Facility Manager's **Animal Health and Environmental Concern Form** under the acknowledgment column.
20. Research staff and/or veterinary staff are responsible for ensuring that entries are made in the animal's medical record (on a **Progress Notes Form**) for each USDA-regulated species whenever clinical abnormalities are recognized. These entries will at least document:
 - a. The abnormal physical/physiological parameters observed.
 - b. A description of specimens taken for diagnosis.
 - c. Any laboratory and diagnostic findings.
 - d. Treatment initiated
 - e. Final resolution
21. When clinical abnormalities are communicated to the research staff and/or veterinary staff regarding non-USDA-regulated species that do not have individual medical records, a description of the clinical abnormality, course of action, and resolution will be recorded on a **Progress Notes Form** in the **Room Log Book**. This record should also include the animal or cage identification, rack number, and laboratory test requested. These entries in conjunction with the Facility Manager's **Animal Health and Environmental Concern Form** and the veterinary **Animal Health Concerns Form** are necessary to help track health concerns and epizootic outbreaks.
22. **Progress Notes** when used for recording animal health concerns for those animals that do not have individual animal medical records are indexed by the IACUC protocol # and identified by room number.
23. The **Animal Health Concerns Form** provides a comprehensive list of all animals in the facility that is currently under the care of the veterinary staff. These notes will contain the room number, the animal and/or cage identification, the health concern, and any comments as to the treatment or condition of the animal. When the animal no longer requires veterinary services, a single line will be drawn through the entries denoting the problem has been resolved.
24. All treatments, post treatment follow ups, and required observations prescribed by the veterinary staff must be recorded on the **Progress Notes Form**, and the entry initialed.
25. Animal care staff is responsible for ensuring that all treatments, post-treatment follow-ups, and required observations prescribed by the veterinary staff are carried out as recorded on the **Progress Notes Form** until the concern is resolved.
26. Veterinary staff must routinely review the **Progress Notes Forms** to ensure that the prescribed treatments and observations are being performed and recorded as ordered.
27. Facility Managers must routinely review the **Room Log Books** to ensure health and environmental concerns are properly recorded, reported, and all animal medical-keeping requirements are being fulfilled by research and animal care staff, and if record keeping is

found to be inadequate, contacts the responsible individual for resolution. Inadequate animal medical record keeping that cannot be satisfactorily resolved is reportable to the IACUC and can result in the suspension of animal use privileges in accordance with *IACUC Principles and Procedure X*.

28. Typical HVAC system performance in Florida, when providing the *Guide's* recommended fresh-air changes per hour, may result in an occasional relative humidity reading that exceeds the *Guide's* recommended humidity range for a brief period (i.e., less than 10 consecutive days) in an individual room (e.g., housing, feed storage). Facility Managers should notify the Assistant Director whenever relative humidity readings are outside the *Guide's* recommendations for a period of 10 consecutive days (e.g., housing room humidity >80%; feed room humidity >50%). Facility Managers should also notify the Assistant Director whenever housing room relative humidity readings are less than 15% humidity or greater than 85% humidity for more than 2 consecutive days. The Assistant Director will notify physical plant staff and ask that they evaluate HVAC system performance. If relative humidity readings remain out of range one week after notifying physical plant, the Assistant Director will ask the PI to consider whether these conditions, or the use of portable humidifiers/dehumidifiers or air conditioners, introduce variables that may affect the integrity of their research.
29. Circumstances may occasionally occur that require the temporary use of portable spot coolers or space heaters to maintain ambient temperature in vivarium housing rooms within acceptable ranges (e.g., failed chilled water or reheat water distribution to vivarium HVAC systems, or extreme weather patterns with sustained high or low environmental temperature extremes). When portable spot coolers or space heaters are used in vivariums, such equipment should be capable of being remotely monitored and adjusted whenever possible. Placement of such equipment should be sufficiently distant from all animal primary enclosures that temperature extremes inside the cages is not possible. Whenever such equipment is used, the frequency of ambient temperature monitoring and recording must be in accordance with this SOP and ensure environmental conditions remain within acceptable ranges.
30. The ***Health and Environmental Concern Forms, Animal Health Concerns Forms*** and ***Room Status Sheets*** are retained by the Facility Manager in accordance with ***SOP #010***, (Handling, Storage, and Retrieval of Records and Data).
31. ***Progress Notes*** for USDA-regulated species are submitted for electronic archival with the animal's medical record at the time of final disposition. ***Progress Notes*** for all other species are retained by the Facility Manager when it has been determined by the veterinary staff that all concerns that have been recorded are resolved.
32. Colored cage flags are used to indicate the following:
 - a. **Red** – Health concern (indicating date, treatment number, treatment or monitoring plan, lab notified and acknowledged)
 - b. **Neon Orange** – Approaching or at a clinical endpoint (indicating date, endpoint criteria, lab notified and acknowledged)
 - c. **Neon Pink** – Research related special instructions (i.e., special diets, special water, diabetic, clip teeth)
 - d. **Light Blue** – Breeding Instructions (separate pregnant female, check for litter, pups in cage)
 - e. **Navy Blue** – Check for copulatory plug
 - f. **Neon Green** – Pup manipulations (identification/genotyping, wean)
 - g. **Light Pink** - Cross Foster

- h. **Neon Yellow** – Euthanize
- i. **Orange** – Containment (i.e., animal biosafety)
- j. **White** – Caretaker status (i.e., label flag with “caretaker” PI & IACUC approval)

Approved:

Date: