UNIT FOR LABORATORY ANIMAL MEDICINE
018 Animal Research Facility
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TITLE OR SUBJECT: Canine Receiving, Quarantine, and Conditioning Protocol

REASON OR PURPOSE FOR PROTOCOL: To define the standard operating procedures for receiving, processing, housing, and quarantine of dogs for use in research.

PROCEDURE:

I. Sources and Appropriate Use of Non-conditioned, Conditioned, and Purpose-Bred Dogs

A. Non-conditioned Dog

1. A random source dog (dog from Class B dealer) that has NOT been vaccinated against disease or tested for parasites. The dog may be clinically normal upon arrival at the University, but may be incubating infectious diseases which may be manifested clinically during the experiment.

2. A non-conditioned dog should be used only in short-term experiments or in experiments involving anesthesia from which the animal does not recover. Non-conditioned dogs should not be used in experiments in which recovery from anesthesia is planned. Generally, non-conditioned dogs should be used within five working days after arrival at the University. Investigators should make every effort to use non-conditioned dogs within this time frame. Short-term survival studies may be conducted on non-conditioned dogs with prior UCUCA approval; requests for these studies should be addressed in the Form 8225.

B. Conditioned Dog

1. A random source dog (dog from Class B dealer) that has been held for a minimum of thirty days. These dogs are clinically normal, have a known vaccination history, and are free of generally free of ectoparasites, nematodes, and *Dirofilaria immitis*.
2. Conditioned dogs are intended for use in experiments in which recovery from anesthesia is planned, such as recovery from surgical procedures, and for all long-term experiments not involving anesthesia or surgery.

C. Purpose-bred Dogs

1. Dogs raised specifically for use in biomedical research also may be used as conditioned dogs. They are obtained from commercial vendors or from research colonies. These animals are clinically normal and free of parasites.

2. Purpose-bred dogs are intended for use in experiments in which recovery from anesthesia is planned, such as recovery from surgical procedures, and for all long-term experiments not involving anesthesia or surgery.

II. Arrival

A. Examination of Incoming Dogs (all types)

1. Incoming dogs are examined upon arrival by a veterinary technician. Any dog which appears systemically ill will be rejected at the dock with permission from the laboratory personnel. Signs of systemic illness in dogs include respiratory difficulty, lameness, diarrhea, or skin lesions.

2. Any animal with mild or localized signs of disease not warranting immediate rejection may be accepted at the dock, but an Animal Treatment Report (ATR) must be generated for that dog, and the clinical veterinarian notified so that a thorough clinical examination can be performed. Similarly, the investigator who owns such animals must be contacted by the veterinary technician.

    a) Mildly ill dogs need to be monitored closely, as options for a refund or replacement dogs from the vendor must be made within 48 hours. Close communication between the investigator and the veterinary technicians will have to be maintained so as to quickly determine the best course of action.

    b) All dogs with mild or localized signs of illness will be reevaluated by the veterinary clinician every 24 hours, and a decision of whether or not to institute appropriate treatment will be made after consultation with the investigator.

3. All dogs which are to be used in long-term procedures will be given a more thorough examination within 48 hours after arrival.

4. Any dog which develops clinical illness after arrival will be treated appropriately after consultation with the investigator. If treatment of incoming dogs is authorized, a regimen appropriate for the clinical disease should be selected.

B. Identification (all dogs)

1. The weight, sex, length, exercise category, USDA number, and ULAM clinical identification number will be recorded on the animal's cage card.

2. All dogs will wear a collar with the USDA number engraved on the tag.

a) **Exception:** Microchip implantation may be used for permanent identification for conditioned dogs in long term experiments in which use of collars is contraindicated (e.g. surgical incisions in the neck). The microchip will be injected into the subcutaneous tissue between the shoulder blades by the veterinary technician. The microchip reader will be kept in the veterinary technician's office. The microchip identification code must be recorded on the animal's cage card and in the animal's permanent record.

III. Processing

A. Non-conditioned Dog Processing

1. There are no standard health care procedures for the non-conditioned dogs, other than the examination at the time of receipt. ULAM has found that the most humane and cost-effective means of handling these animals is to encourage their use in terminal experiments within five days after arrival. Non-conditioned dogs often have an unknown health status; thus no guarantees are provided for such animals.

2. Non-conditioned dogs will be treated for disorders under the following circumstances:

   a) The dog has an illness which requires treatment, and the investigator requests animal treatment instead of euthanasia for humane reasons.

   b) The treatment of non-conditioned dogs is necessary for the health of other dogs in the facility, or to prevent the spread of a zoonotic disease.

3. Non-conditioned dogs will be indicated with a yellow acetate denoting their intended "ACUTE" use. If these dogs stay within the facility for 5 days, the animal care staff is to notify the veterinary technicians (on an ATR), so that the veterinary technician can consult with the investigator and either process the dog (physical exam, clinical #, etc…), or permit it to stay one additional day.

B. Conditioned and Purpose-bred Dog Processing

1. Quarantine: Conditioned Dogs

a) Conditioned, random source dogs should undergo a two day (48-hour) quarantine period because of the possibility that they may have become infected with one of the causative agents of a respiratory illness during shipment, or were latent carriers of one of these agents, with disease expression stimulated by the stress of transport.

   (1) The quarantine period provides the dog with a stabilization period after shipment, enables completion of all testing and deworming procedures, and helps prevent transmission of any of these agents to other University dogs.

(2) It also allows ULAM to reject the dog for any medical conditions not detected upon arrival, and possibly receive a refund from the vendor.

b) Any outbreak of disease may necessitate a longer quarantine period. The veterinary technician will release dogs from quarantine upon completion of the 48-hour holding period; the clinical veterinarian will release dogs from quarantine when a longer period is necessary.

c) Dogs arriving together from the same vendor should be housed separately from other dogs at the University for the period of the quarantine.

d) Purpose-bred dogs can be housed immediately in their permanent room; thus there is no official "quarantine." However, these dogs should not be used in experiments for 2-3 days in order to provide an acclimation period for recovery from transportation.

2. Physical Examination: Conditioned Dogs

a) Conditioned dogs are typically given a physical examination within 48 hours after arrival (exceptions noted below). Medical charts for dogs are initiated by the veterinary technician at this time. The dog's arrival body weight, sex, length, exercise category, and USDA number, which were noted on the cage card on the day of arrival, should also be noted in the animal's medical record. Dogs will be microchipped at this time, if applicable; the microchip code should be noted both on the cage card and in the medical record.

b) **Exceptions:** Dogs intended for short-term, non-survival procedures need not receive a physical examination. However, such procedures can be done for investigators should they feel that information gained from the examination or hematology is important to know prior to initiation of the study. These dogs will be indicated with a yellow acetate denoting their intended "ACUTE" use. If these dogs stay within the facility for 5 days, the animal care staff is to notify the veterinary technicians (on an ATR), so that the veterinary technician can consult with the investigator and either process the dog (physical exam, clinical #, etc…), or permit it to stay one additional day.

3. Parasite Control: Conditioned Dogs

a) Conditioned dogs will be treated, within 24 hours of arrival, with ivermectin @ 200 mcg/kg SQ. Purpose-bred dogs will be treated only if their medical history indicates that such treatment would be necessary.

b) A fecal sample from all conditioned dogs will be obtained by the veterinary technician two weeks after ivermectin treatment. This sample will be tested by fecal flotation for the presence of parasite ova.

c) Those dogs with a positive test result will be retreated with an appropriate anthelminthic as prescribed by the clinical veterinarian. Fecal samples will be obtained and retested two weeks following this second treatment.

d) Dogs with a negative fecal examination will be retested every three months.

e) The investigator **must** be contacted prior to **any** treatments subsequent to the routine inprocessing (e.g., initial ivermectin), and permission for the specific treatment must be obtained.

f) All dogs will be visually inspected for evidence of ectoparasites and will be treated appropriately if identified on the animal. The investigator must be contacted in order to obtain permission to treat the animal(s) unless blanket permission has been received.

g) Conditioned dogs will not be routinely screened for heartworm (*Dirofilaria immitis*) microfilaria, unless it is requested by the investigator or needed for diagnostic purposes. If requested, serum will be obtained and sent to a reference laboratory for adult heartworm antigen assay. The veterinary technicians will maintain information on current heartworm detection procedures performed by the vendors which supply dogs to the University.

4. Vaccination: Conditioned Dogs

a) The veterinary technicians will vaccinate all healthy adult conditioned dogs against Distemper virus, Adenovirus Type II, Parainfluenza virus, and Parvovirus within 24 hours of arrival. A booster vaccination will be administered 2-3 weeks later, then at yearly intervals. If the vaccination history is known, then an appropriate schedule will be established for annual booster vaccinations.

b) Conditioned dogs of unknown vaccination history that are estimated to be four-to-six months of age will receive three vaccinations, three weeks apart.

c) Conditioned puppies will be vaccinated at three-week intervals through 18 weeks of age.

IV. Housing

A. Non-conditioned and conditioned dogs should not be housed in the same room.

B. Non-conditioned dogs in quarantine should be housed separately from non-conditioned dogs already housed at the University. When possible, dogs should also be separated by vendor source.

C. Newly arrived conditioned dogs should not be housed in an already established conditioned dog colony until after the two-day quarantine.

D. Purpose-bred dogs can be housed immediately in their permanent room. When possible, purpose-bred dogs should be housed separately from other conditioned dogs, as the two sources may not be free from, or vaccinated for, the same canine pathogens.

E. Dogs will be exercised daily according to ULAM protocols #3005 “Dog Exercise Protocol,” and #2014 “Animal Husbandry SOP on How to Identify and Exercise Dogs as Required by the USDA.”

V. Costs

A. In general, the individual investigator pays for the cost of treatments. See also the ULAM protocol entitled “Standard Procedures for Recharges to Investigators.”

VI. Permission for Treatment

A. After initial routine in-processing, permission of the investigator is required for **all** treatments.

B. For non-conditioned dogs, if it is determined that an illness warrants treatment to make the animal comfortable, the veterinary technician will notify the investigator of the animal's illness and encourage use in a terminal experiment within 24 hours. If the animal cannot be used experimentally, the alternatives are institution of appropriate medical treatment, or if the animal's condition is poor enough, euthanasia without experimentation. The 24-hour rule does not apply, however, to mildly ill animals observed on the weekend - the laboratory will be given 24 hours from the time of contact, or until Monday afternoon, whichever is later.

C. The investigator must be notified of the treatment plan so that they can assess whether or not it introduces unacceptable experimental variables. The investigator must also be informed that they will bear the cost of any treatments (including technician time). All animals to be treated should be moved to individual cages when possible. When possible, an understanding of treatment possiblities for the animals belonging to a given investigator should be achieved beforehand. This will enable prompt care of the animals belonging to that investigator, especially on the weekends and holidays.