*IACUC Guideline - Research Canine Socialization*

A. Purpose: To establish clear guidelines on responsibility of each party to contribute to the socialization, training, and welfare of research canines.

B. Background: According to the Guide "Habituating animals to routine husbandry or experimental procedures should be encouraged whenever possible as it may assist the animal to better cope with a captive environment by reducing stress associated with novel procedures or people. The type and duration of habituation needed will be determined by the complexity of the procedure. In most cases, principles of operant conditioning may be employed during training sessions, using progressive behavioral shaping, to induce voluntary cooperation with procedures (Bloomsmith et al. 1998; Laule et al. 2003; NRC 2006a; Reinhardt 1997)."
"One of the most important ways to minimize stress for dogs in the laboratory is to ensure that they react well to handling. The dog should feel at ease when being approached, picked up, carried and restrained. All dogs should, therefore, experience adequate socialization with humans during the 'primary socialization period', combined with appropriate habituation and training related to their activities during studies. Positive interactions with humans, through regular and appropriate handling, should continue throughout the dogs' lives." (Laboratory Animals)
"It is always preferable to train laboratory animals to cooperate during procedures and husbandry, rather than to automatically physically restrain them, unless there is likelihood that they will injure themselves or staff. Such training helps reduce the stress associated with procedures and is an essential part of everyday husbandry. Dogs should be trained to tolerate restraint, especially if they are to be restrained frequently or for prolonged periods. Positive reinforcement training should be used in the form of attention or praise, providing a favourite toy or morsel of highly palatable food. Positive reinforcement techniques can also be used to train laboratory dogs to accept procedures such as intramuscular injection, intravenous injection and oral dosing." (Laboratory Animals)

C. Responsibilities
   1. Centralized Animal Care Staff
      To provide environmental enrichment according to the Social and Environmental Enrichment Program for Research and Teaching Animals and exercise according to the Canine Exercise Plan. All attempts should be made to provide positive interactions/playtime with the animals for as long as can be afforded within the care staff's schedule each day. When possible, animals should be paired to interact with other compatible dogs during exercise/playtime.
   2. Research Staff
      To provide appropriate acclimation and positive reinforcement training to dogs to be able to perform needed research procedures (i.e. blood draws, restraint, etc). The expectation is that staff will interact with the animals regularly. To accomplish appropriate acclimation and training, the recommendation is to work with the dogs three days each week and spend approximately 5-10 minutes/day/dog training and giving positive interaction. It is recommended that research activities not take place until the animals are adequately trained and acclimatized to perform the procedures that are needed for the study. This may take approximately 4 weeks with training occurring 3 times/week. Training may not apply to studies in which the dogs are used acutely within one week of arrival.
   3. LAP Veterinary Technicians
      To assist care staff with providing environmental enrichment as needed. To provide positive reinforcement training for basic purposes (i.e. leash walking, sit, stay, come) according to the Research Animal Training SOP

to research canines in order to make care staff and research staff interactions more efficient when time permits. Training activities will be coordinated to not interfere with research study design.

To perform a Kennel Assessment Score using score chart and instructions in Appendix A approximately one week after arrival to assess socialization and acclimation to kennel environment. Follow-up scores are to be taken every 1-3 months for low-scoring dogs, every 6 months for medium-scoring dogs, and annually for high-scoring dogs. Animals with low kennel scores will be prioritized for training.

D. Recommendations (Laboratory Animals)
   a. All staff with responsibility for handling dogs should be trained and competent in the appropriate handling techniques.
   b. If restraint is necessary to control a dog during a scientific procedure, then the method used should provide the least restraint required to allow the procedure to be performed properly.
   c. The duration of restraint should always be minimized.
   d. Positive reinforcement techniques should be used to train dogs to tolerate restraint.
   e. Socializing, habituating and training dogs so that they become used to humans and experimental and clinical procedures should be considered an essential element of everyday routines.
   f. Extra time should be allocated before procedures begin for training animals to accept procedure rooms, metabolism cages, restraint devices and stressful procedures.

Appendix A

INSTRUCTIONS FOR KENNEL EVALUATION

A. An observer should score evaluations while handler interacts with dog. Handler and observer must agree on definitions and stay consistent across dogs and evaluation sessions.

B. Times are approximate and meant as a guide. Handler judgment-calls are acceptable, as long as they are consistent across dogs and evaluation sessions.

C. Do not to give dogs too long a time period in which to perform each response. This is an evaluation session, not a training session: don't "stretch" the time to help the dog succeed.

A. Definitions of Some Terms Used
   - Special Circumstances (In Header): Unusual situation, change in environment, routine, or dog handling personnel, other unusual circumstantial changes that may affect the dog's responses on the evaluation.
   - Questions 10-14 "Testing Room": Any room that is not the dog's usual home environment. Can be procedures room, grooming room, et cetera.

B. Definitions of Scoring Criteria for Behavioral Evaluation

   NA: Task cannot be tested due to environmental restrictions or other considerations.

   5-Excellent: Dog performs response immediately, without hesitation, the 1st or 2nd time asked.

   4: Dog performs response within 30 seconds, after third to fifth time it is asked.

   3: Dog performs response within 1 minute, after coaxing, with handler averting gaze.

   2: Dog shows approach-retreat, performs response with great hesitation within 1 min. after great coaxing, with handler averting gaze & minimizing threat (i.e., lying on floor, facing away or leaning away if standing).

   1-Fails to Do: Dog fails to perform response at all, after 1-2 minutes of handler coaxing, averting gaze, and minimizing threat.

C. Instructions for General Demeanor

A. General Demeanor is an attempt to judge the "affect," "personality," or temperament of the dog in a more global manner. It is a measure of sociability and shyness. General demeanor should represent an overall judgment of the dog throughout the evaluation process, not separate behavioral measures.

B. General Demeanor is scored with the same number-scale. But note that "Not at All" is now located to the right side of the scale, and "Strongly" is now located to the left of the scale. This maintains the rating-scale so that Good responses (whether "Excellent" or "Not at All") are high numbers and Poor responses (whether "Fails to Do" or "Strongly") are low numbers.

D. Definitions for General Demeanor

5-Not At All: Dog doesn't show any of these body signals or behaviors; outgoing & eager for attention.
4: Dog shows the body signals or behaviors briefly or mildly, quickly becomes outgoing/eager for attention
3: Dog shows these body signals or behaviors and shows hesitation about attention, but recovers.
2: Dog shows these body signals or behaviors for 1 minute, and avoids attention. Recovers slowly.
1-Strongly: Dog shows these body signals or behaviors and does not recover. It avoids attention.

From Proceedings of the Seventh International Conference on Environmental Enrichment, 31 July-5 August, 2005, Nancy Clum, Scott Silver and Pat Thomas (Eds.), Wildlife Conservation Society: New York. AN ASSESSMENT TOOL TO EVALUATE DOGS' SOCIAL ADAPTATIONS (COMFORT TO WORK, PLAY, AND SOCIALIZE WITH PEOPLE) IN THE KENNEL ENVIRONMENT Melissa R. Shyan-Norwalt, Ph.D., CAAB

Other References:

The Guide for the Care and Use of Laboratory Animals, 2008 Ed.

Meunier, LD. Selection, Acclimation, Training, and Preparation of Dogs for the Research Setting. ILAR Journal, 2006.

Laboratory Animals (2004) 38 (Suppl. 1) Refining dog husbandry and care. Eighth report of the BVAAWF/FRAME/RSPCA/UFAW Joint Working Group on Refinement.

**Kennel Assessment**

Dog's Name: _____ Site: _____Evaluators: _____/_____ Date: ___/___/___

Special Circumstances: _____Total Score: _____Evaluation #: _____

| Behavior | Fails to Do | Excellent | |
|---|---|---|---|
| 1. Takes treat from sitting handler outside kennel | 1--------2--------3--------4--------5 | | NA |
| 2. Takes treat from standing handler outside kennel | 1--------2--------3--------4--------5 | | NA |
| 3. Takes treat from sitting handler inside kennel | 1--------2--------3--------4--------5 | | NA |
| 4. Takes treat from standing handler inside kennel | 1--------2--------3--------4--------5 | | NA |
| 5. Permits petting from sitting handler inside kennel | 1--------2--------3--------4--------5 | | NA |
| 6. Permits petting from standing handler inside kennel | 1--------2--------3--------4--------5 | | NA |
| 7. Permits slip lead around neck | 1--------2--------3--------4--------5 | | NA |
| 8. Follows/leads handler on slip lead | 1--------2--------3--------4--------5 | | NA |
| 9. Enters hallways & crossed thresholds minimum hesitation | 1--------2--------3--------4--------5 | | NA |
| 10. Enters testing room with minimal hesitation | 1--------2--------3--------4--------5 | | NA |
| 11. Approaches sitting handler in testing room | 1--------2--------3--------4--------5 | | NA |
| 12. Approaches standing handler in testing room | 1--------2--------3--------4--------5 | | NA |
| 13. Accepts treats in testing room | 1--------2--------3--------4--------5 | | NA |
| 14. Accepts petting in testing room | 1--------2--------3--------4--------5 | | NA |
| 15. Orients to name | 1--------2--------3--------4--------5 | | NA |
| 16. Sits on command | 1--------2--------3--------4--------5 | | NA |
| 17. Comes on command | 1--------2--------3--------4--------5 | | NA |
| 18. Responds to Play Elicitation | 1--------2--------3--------4--------5 | | NA |
| **General Demeanor Strongly Not at All** | | | |
| 1. Cringes away from handler | 1--------2--------3--------4--------5 | | |
| 2. Shows aggression towards handler | 1--------2--------3--------4--------5 | | |
| 3. Tail tucked/submissive postures | 1--------2--------3--------4--------5 | | |
| 4. Refuses or rejects treats | 1--------2--------3--------4--------5 | | |
| 5. Unwilling to interact/play/engage | 1--------2--------3--------4--------5 | | |