

<b>Institutional Animal Care and Use Committee</b>		<b>UNTHSC</b>
<b>Title:</b> Special Care of Animals (Formerly Food and Water Restriction)		
<b>Document #:</b> 028	<b>Version #:</b> 03	
<b>Approved by IACUC Date:</b> May 18, 2020		

**A. BACKGROUND INFORMATION**

- a. Special Care of animals, such as food and water restriction, special diet, treated water, or PI maintained animals may be required in order to achieve a variety of research and/or husbandry objectives.
- b. According to the Guide (Pg. 27), “Certain animal use protocols include procedures or approaches that require special consideration during the IACUC review process due to their potential for unrelieved pain or distress or other animal welfare concerns”.
- c. Justification for these special considerations must be stated in the protocol.

**B. RESPONSIBILITIES**

- a. It is the responsibility of the Principal Investigator to provide a description and justification of the special care for the animals, while addressing any animal welfare concerns. In addition, the Principal Investigator and research staff share the responsibility of following this SOP.
- b. The IACUC is responsible for weighing the objectives of the study against potential animal welfare concerns when reviewing the justification for the need of special care. The IACUC is also responsible for communicating and assuring this SOP is followed.

**C. PROCEDURES**

- a. **Categorization of Protocols (Only for Food and Water Restriction)**
  - i. Food and/or water restriction studies conducted in **healthy** animals will be considered category C if:
    - 1. The final weight is not less than 80% of the body weight from established growth curves, unrestricted control animals or, in the case of adults, healthy pre-study control weights
    - 2. The target weight is not less than 85% of this established body weight
    - 3. The experimental treatment is not expected to produce further weight loss than the restriction alone
    - 4. If the restriction is temporary and not a lifelong restriction.
  - ii. Deviation from these conditions may rank the protocol as category E.
  - iii. Food and/or water restriction studies in species other than mice or rats will be considered category E unless the IACUC determines otherwise.

**b. Justification**

i. Food and Water Restriction:

1. A statement indicating the need for dietary restrictions and how it relates to the study objectives, as well as the length of time in which the animals will be restricted. Please note that studies involving restriction for greater than 24 hours need to be scientifically justified.
2. The type of restriction should be described with the degree of restriction in % of the ad libitum or normal daily intake or as a percentage change in an animal's body weight. Please note that the protocol must use the least amount of restriction needed to achieve the scientific goal while maintaining the animal's well-being.
3. A description of the program for monitoring the physiologic and behavioral well-being of those animals on restriction and the criteria for temporary or permanent removal of an animal from the experimental protocol. Please note that body weights must be recorded weekly at a minimum, and more frequent for more severe caloric restriction (CR). Records must also include the daily food and fluid consumption (as applicable) and any behavioral or clinical changes. These records must be made available to the IACUC or DLAM staff upon request.
4. Other Considerations for food and water restricted animals:
  - a. In conditioned response research, use of highly preferred food as positive reinforcement should be used instead of food restriction and literature searches for alternatives must be provided.
  - b. Whenever an animal obtains any portion of its diet through positive reinforcement (food reward), the investigator must ensure that the sum of the nutritional value of the food earned through reward and of the food provided "free" (without necessity of earning it) is sufficient to maintain the animal in a stable weight.
  - c. The investigator is responsible for assuring that specially formulated diets are nutritionally adequate and palatable and fortified at levels to maintain health especially in long term restriction defined as over 14 days.
  - d. Intervention endpoints must be specified in the protocol. Examples of specific endpoints include:
    - i. Failure of animals that would normally be growing to gain weight.

- ii. For mice and rats, when segmentation of vertebral column is evident; dorsal pelvic bones are readily palpable.
  - ii. Special Diet/ Treated Water:
    - 1. A statement of the need for altering the diet or water for the animals, as related to the study objectives.
    - 2. A statement that the food is nutritionally balanced. If is not nutritionally balanced, it should describe the effects the diet might have on the animal.
    - 3. If animals will be provided fluids other than water, a description of the fluid given should be provided, along with any adverse effects it may have on the animals.
  - iii. PI Maintained Animals:

The Protocol should clearly state what the PI will be responsible for in the care of the animals, and when the PI maintenance is in effect.
- c. Special Care Form Procedures:
  - i. Investigators must use the Special Care Form to document the special care given to the animals. The form is found on the DLAM and IACUC website, or it can be requested from DLAM. This form is to remain in the animal room as long as the special care is in effect. Once the special care of the animal is completed, the PI may take the form for their records.
  - ii. Specific instructions and guidance on completing the form can be found on the second page of the form.
  - iii. A special care by the PI cage card must be on each cage of animals and documented appropriately. Please notify DLAM staff that these cards will be needed.

#### **D. ATTACHMENTS**

- a. Special Care by PI form with instructions
- b. Special Care by the PI cage card example

#### **E. REFERENCES**

- a. The Guide for the Care and Use of Laboratory Animals (2011), National Academies Press, Washington, D.C.