

January 15, 2019

## ANIMAL CARE AND USE PROGRAM

### Pain, Distress, Analgesia, and Anesthesia

I. **POLICY:** Research investigators will adhere to all animal care and use guidelines to reduce or eliminate discomfort, distress and pain to animal subjects. The relief of pain and distress is ethically sound, humane, and promotes good science.

#### 2. PROCEDURES:

a. **RESEARCH PROPOSAL:** Each research proposal involving animals must indicate all details of animal use. All aspects that may use more than momentary pain and/or distress must be addressed; alternatives to painful or distressful procedures must be considered; and methods, anesthetics and analgesics to minimize or eliminate pain and distress must be included for any painful or distressful procedure that cannot be relieved or minimized. Only exceptions that are justified in the Animal Component of the research proposal and approved by the Institutional Animal Care and Use Committee (IACUC) are permitted.

b. **RECOGNIZING PAIN OR DISTRESS, MORBIDITY:** Animals must be monitored for evidence of pain or distress. Critical to the assessment of the presence of pain/distress is the ability to distinguish between normal and abnormal animal behavior. Attachment I identifies signs associated with animal pain or distress.

c. **SEDATIVES, ANALGESIA, AND ANESTHESIA:** The Principal Investigator should consult with the veterinary medical consultant (VMC) prior to submitting the research proposal. Sedatives, analgesia and anesthesia used in experiments must be approved by the IACUC.

d. **WITHHOLDING OF SEDATIVES, ANALGESICS, OR ANESTHETICS:** In experiments that cause pain or distress, the withholding of sedatives, analgesics, or anesthetics must be justified scientifically by the Principal Investigator in writing and approved by the IACUC.

e. **GUIDANCE:** All procedures that cause more than momentary/slight pain or distress, and the use of anesthetics and analgesics must be discussed with the VMC in the planning stage prior to submission of the animal protocol for review by the IACUC. Subsequent changes should be brought to the attention of the veterinarian by the investigator.

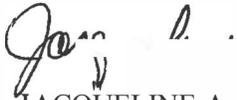
f. **MONITORING:** The investigators utilizing surgical studies in the VMU maintain anesthetic records. The IACUC facility inspection team during semi-annual inspection of facility can check the records.

g. **TRAINING AND EXPERIENCE:** Research personnel caring for and using animals must receive training in, and be responsible for, assessing pain and distress in the animals. Research personnel performing anesthesia must have experience in the techniques used. Training is obtained through on-the-job training and continuing education.

## Research Service Policy Memorandum 19-12

**h MORIBUND CONDITIONS:** Attachment 2 provides the investigator signs and symptoms for judging moribund conditions (state of dying) in rodents. The investigator and his staff have primary responsibility for proper use and monitoring. The VMC, VMU Supervisor and VMU staff provide additional oversight.

3. **RESCISSION:** Research Service Memorandum 15-12, dated January 15, 2015.
4. **RECERTIFICATION:** January 15, 2024



JACQUELINE A. PUGH, M.D.  
ACOS for Research and Development

### Attachments

1. Pain/Distress Symptoms
2. Moribund Symptoms

## Research Service Policy Memorandum 19-12

### Attachment 1

	<b>Mice</b>	<b>Rats</b>
Decreased Food and Water Consumption	<b>X</b>	<b>X</b>
Weight Loss	<b>X</b>	<b>X</b>
Self-imposed isolation/hiding	<b>X</b>	<b>X</b>
Self-mutilation, gnawing at limbs	<b>X</b>	<b>X</b>
Rapid breathing	<b>X</b>	<b>X</b>
Opened-Mouth Breathing	<b>X</b>	<b>X</b>
Abdominal Breathing	<b>X</b>	<b>X</b>
Grinding Teeth		<b>X</b>
Biting/Growling/Aggression		<b>X</b>
Increased/decreased movement	<b>X</b>	<b>X</b>
Unkempt Appearance (Erected, matted, or dull hair coat)	<b>X</b>	<b>X</b>
Abnormal Posture/Positioning (e.g., head-pressing, hunched back)	<b>X</b>	<b>X</b>
Restless Sleep		
Tearing (including porphyria), Lack of Blinking reflex		<b>X</b>
Dilated pupils		
Muscle rigidity, lack of muscle tone	<b>X</b>	<b>X</b>
Dehydration/skin tenting/sunken eyes	<b>X</b>	<b>X</b>
Twitching, trembling, tremor	<b>X</b>	<b>X</b>
Vocalization (Rare)	<b>X</b>	<b>X</b>
Redness or Swelling around surgical site	<b>X</b>	<b>X</b>
Increased Salivation		

**Attachment 2**

**Signs and Symptoms for Judging the Moribund Condition (state of dying) in Rodents**

Signs and symptoms for morbidity plus:

1. Impaired ambulation (unable to reach food or water easily).
2. Evidence of muscle atrophy or other signs of emaciation (body weight is not always appropriate).
3. Extensive ulcerative dermatitis and infected tumors
4. Any obvious illness including such signs as lethargy (drowsiness, aversion to activity, physical or mental alertness), anorexia (loss of appetite, especially when prolonged), bleeding, difficult breathing, central nervous system (CNS) disturbance, and chronic diarrhea.