

Document Number: ANP038	Title: DETERMINE MORIBUND STATE <i>CONFIDENTIAL INFORMATION</i> MOLECULAR MEDICINE RESEARCH INSTITUTE	Effective Date: JANUARY 2005
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1.0 OBJECTIVE

- 1.1 The objective of this procedure is to describe the criteria used to determine if an animal is in a moribund state.

2.0 SCOPE

- 2.1 This procedure applies to rats and mice in the MMRI animal facility.

3.0 POLICY

- 3.1 It is the policy of MMRI to establish written and approved procedures to ensure that animals are treated in a humane manner. This is accomplished by educating the animal care staff and investigators in recognizing the clinical signs of morbidity.

4.0 RESPONSIBILITIES

- 4.1 It is the responsibility of Animal Facility Manager or designated alternate to implement this procedure and revise it when necessary.

5.0 REFERENCES

- 5.1 Montgomery, C.A. "Oncogenic and Toxicological Research: Alleviation and Control of Pain and Distress in Laboratory Animals," Cancer Bulletin 42:230-7, 1990.
- 5.2 "Guidelines on Death as an End Point", Stanford University Administrative Panel on the Laboratory Animal Care, April 1991.
- 5.2 ANP005, Euthanasia of Rats and Mice.

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6.0 PROCEDURE

6.1 General Information

- 6.1.1 For purposes of this procedure and policy, moribund is defined as “in a state where death is imminent” The signs of morbidity listed here can lead to the moribund state.
- 6.1.2 In any protocol where the signs of morbidity are expected to occur, the investigator must define the point at which euthanasia will be performed.
- 6.1.3 Unless specifically justified for scientific reasons, animals found in a moribund state must be euthanized.
- 6.1.4 Death as an experimental end-point is discouraged and must have specific approval from the IACUC.

6.2 Observation of the Animal

The following is a list of characteristics of animal morbidity. The animal may exhibit one or many of these characteristics. Exhibition of any characteristic in an animal requires immediate veterinary attention, if not intervention. The characteristics are not listed in any particular order.

- 6.2.1 Rapid weight loss: 20% to 25% within a week or less.
- 6.2.2 Extended period of weight loss, progressing to an emaciated or cachectic state.
- 6.2.3 Lesion interfering with eating, drinking, urination, or defecation.
- 6.2.4 Prolonged (greater than 3 days) inappetence and or clinical dehydration and not responsive to fluid therapy.
- 6.2.5 Inability to ambulate that prevents the animal's easy access to food and/or water.
- 6.2.6 Diarrhea or constipation, especially if debilitating or prolonged (1 week).
- 6.2.7 Distinct anemia and or icterus or other hematological or biochemical parameters that indicate organ failure incompatible with life.

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- 6.2.8 Rapid growth of a neoplastic mass such that it interferes with ambulation or other bodily functions (eating, drinking, urinating, or defecation) or becomes traumatized or ulcerated.
- 6.2.9 Prolonged central nervous system signs such as head tilt, tremors, spasticity, seizures, circling, or paresis-paralysis, especially anorexia.
- 6.2.10 Rough hair coat, hunched posture, distended abdomen, or lethargy especially if debilitating or prolonged (1 week.)
- 6.2.11 Frank bleeding from any orifice other than from a minor mucosal laceration.
- 6.2.12 Markedly discolored urine, polyuria or anuria.
- 6.2.13 Severe or persistent coughing, rales, wheezing, and/or purulent nasal discharge not responsive to treatment.
- 6.2.14 Progressive or severe alopecia or dermatitis covering greater than 25-30% of the body.
- 6.2.15 Persistent self induced trauma.
- 6.2.16 Severe trauma, such as a broken back, extensive soft tissue damage, etc.
- 6.2.17 Behavioral manifestations of chronic severe, unrelieved pain or distress.
- 6.2.18 "Near death" signs such as inability to maintain an upright position, agonal breathing and/or vocalization, cyanosis, or unconsciousness with no response to external stimuli.

6.3 Taking Action

- 6.3.1 NOTIFY the Animal Facility Manager AT ONCE, if any of these characteristics, or a combination thereof, is exhibited by any animal in the facility. If necessary, notify and confer with the study's principal investigator.
- 6.3.2 If the AF manager is unable to observe the patient first hand, the characteristics will have to be related to that person over the phone, via fax, email or other means of communication.
- 6.3.3 The AF manager, or the designee, will evaluate the situation, and give detailed instructions on treatment or method of euthanasia that is to be given to the animal.
- 6.3.4 Carry out the AF manager or designee's instructions immediately.
- 6.3.5 Do NOT attempt to treat the animal until after conferring with the Animal Facility Manager and/or study's Principal Investigator.