SECTION K

NON-SURGICAL PROCEDURES

NOTE: Repeat items 1 through 13 for each species that will have non-surgical procedures.
The following items 1 - 13 apply to (identify species):

1. NARRATIVE OF NON-SURGICAL PROCEDURES

Species:
Description of non-surgical procedures:

2. PRE-PROCEDURE ANIMAL SUPPORT (NOT ANESTHESIA)

Will special pre-procedural care be provided?

☐ NO. The procedures do not require special pre-procedural care.
☐ YES. Specify pre-procedural actions that will be taken to prepare animals for the procedure(s) (select all that apply):

- ☐ Physical exam
- ☐ Clipping of fur
- ☐ Ophthalmic ointment to eyes
- ☐ Overnight food withdrawal
- ☐ Body temperature support
- ☐ Iodine (or Chlorhexidine) + alcohol skin scrub, 3 alternating cycles
- ☐ Chemistry profile
  (define blood sampling method):
- ☐ CBC
  (define blood sampling method):
- ☐ Drugs (other than anesthetics and sedatives) or fluids (list agents below):

TABLE 2.A. DRUG AGENTS

To add additional agents, please attach a separate document.

AGENT	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISTRATION	DURATION OF TREATMENT

3. PRE-PROCEDURE ANESTHESIA/SEDATION/TRANQUILIZATION

Will pre-procedure anesthesia, sedation or tranquilization be provided to the animals?

☐ NO. Drugs will not be administered to the animals prior to the procedure(s)
☐ YES. Pre-procedure drugs will be used to calm the animals. (List below)

TABLE 3.A. PRE-PROCEDURE DRUG

To add additional drug, please attach a separate document

DRUG	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISTRATION	DURATION OF TREATMENT

4. Intra-Procedure Animal Support (not anesthesia)

Will special intra-procedure care be provided?

☐ NO. The procedures do not require special intra-procedural care.
☐ YES. Specify intra-procedure care that will be provided to animals during the procedure(s) (select all that apply):

- ☐ Intravenous fluids
- ☐ Ophthalmic ointment to eyes
- ☐ Heat to prevent hypothermia
- ☐ Cooling to prevent hyperthermia
- ☐ Other (specify):
- ☐ Other (specify):
- ☐ Drugs (other than anesthetics and sedatives) or fluids (list agents below):

Table M4.a. Drugs

To add additional drug, please attach a separate document

AGENT	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISTRATION	DURATION OF TREATEMENT

5. Intra-Procedure Anesthesia or Chemical Restraint

Will intra-procedure anesthesia or chemical restraint be provided?

☐ NO. The procedures do not require intra-procedural anesthesia or chemical restraint.
☐ YES. The procedure requires chemical restraint as described in Section J or anesthesia as described below:

TABLE 5.A. INTRA-PROCEDURE ANESTHESIA OR CHEMICAL RESTRAINT

To add additional anesthetic agents, please attach a separate document

ANESTHETIC AGENT	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISRATION	DURATION OF TREATMENT

6. NEUROMUSCULAR BLOCKING AGENTS (PARALYTICS)

Will neuromuscular blocking agents (paralytics) be used at any time during the procedure?

☐ NO. Neuromuscular blocking agents will not be used for the procedure.
☐ YES. Neuromuscular blocking agents will be used. (Provide details below)

TABLE 6.A. PARALYTICS

To add additional paralytic agents, please attach a separate document.

PARALYTIC AGENTS	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISTRATION	DURATION OF TREATMENT	REVERSAL AGENT (if appropriate)

Please state why the use of paralytic agents during the procedure is necessary.

Please describe how adequate anesthesia will be ensured during the time the animal is undergoing neuromuscular blockade:

7. Monitoring Depth of Anesthesia During Procedures

Indicate below the indices that will be used for monitoring animal condition and depth of anesthesia.

- ☐ Respiratory rate / effort
- ☐ Mucous membrane color Blood pressure
- ☐ Heart rate
- ☐ Body temperature
- ☐ Oxygen saturation
- ☐ Capillary refill time
- ☐ EKG
- ☐ Reflex (specify):
- ☐ Other (specify):
- ☐ Other (specify):

Specify the frequency at which the above indices will be recorded:

8. Post-Procedure Animal Support

Will special post-procedure care be provided?

☐ NO. The procedures do not require special post-procedural care.
☐ YES. Specify post-procedure care that will be provided to animals after the procedure(s) (select all that apply):

- ☐ Heat to prevent hypothermia
- ☐ Cooling to prevent hyperthermia
- ☐ Intravenous fluids
- ☐ Ophthalmic ointment to eyes
- ☐ Other (specify):
- ☐ Other (specify):

9. Monitoring During Recovery from Anesthesia (if used)

Indicate below the indices that will be used for post-procedure monitoring of animal condition during recovery from anesthesia (i.e., until sternal recumbancy is regained and maintained):

- ☐ Respiratory rate
- ☐ Mucous membrane color Blood pressure
- ☐ Heart rate

- ☐ Body temperature
- ☐ Oxygen saturation
- ☐ Capillary Refill Time
- ☐ EKG
- ☐ Reflex (specify):
- ☐ Other (specify):
- ☐ Other (specify):

Specify the frequency at which the above indices will be recorded:

10. Pain Management Intra- or Post-Procedure

NOTE: The IACUC encourages the use of pre-emptive analgesia for pain management. Analgesia should be provided as early as possible in the procedure if it is expected to be painful or result in residual pain, ideally before the procedure begins.

Is the procedure expected to cause pain or result in residual pain?

☐ Yes ☐ No

If pain is expected, will analgesia be provided for pain relief?

☐ NO. Analgesia will not be provided. (justify the omission of analgesia below)
☐ YES. Analgesia will be provided. (specify details below)

If pain is expected and analgesia will not be provided, please explain why pain relief will be withheld:

If analgesia will be provided for pain relief, please list analgesics and dosing regimens below:

TABLE 10.A. ANALGESICS

To add additional analgesics, please attach a separate document.

ANALGESIC	TIMING OF ADMINISTRATION	DOSE	ROUTE OF ADMINISTRATION	FREQUENCY OF ADMINISTRATION	DURATION OF TREATMENT
	☐pre-procedure ☐intra-procedure ☐post-procedure				
	☐pre-procedure ☐intra-procedure ☐post-procedure				
	☐pre-procedure ☐intra-procedure ☐post-procedure				

11. SPECIMEN COLLECTION FROM LIVE ANIMALS

Will specimens be collected from living animals during or after the procedure(s)?

☐NO. Specimens will not be collected from living animals.
☐YES. Define the specimen type and collection details below.

☐ Fluids (e.g., blood, lymph, ascites, CSF, GI fluids, etc.)
Fluid type (specify):
Collection method:
Volume (mls) per collection:
Frequency of collection:
Method of disposal:

☐ Solid Tissues
Tissue type (specify):
Collection method:
Volume (mm3) per collection:
Frequency of collection:
Method of disposal:

12. Humane Endpoints That Will Prompt Intervention to Prevent Continued Pain or Distress

According to The Guide, information that is critical to the IACUC's assessment of appropriate endpoint consideration within a protocol includes precisely defining the humane endpoint (including assessment criteria); the frequency of animal observation; training of personnel responsible for assessment and recognition of the humane endpoint; and the response required upon reaching the humane endpoint. The IACUC has determined that the list below defines the commonly accepted clinical milestones which should be regarded as humane endpoints for most terrestrial animal studies. Choose all of those which are appropriate for the species being used. For each milestone, indicate the action that will be taken. Add other milestones (in the row marked 'other') if applicable for defining the humane endpoints for the proposed study.

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
Infection unrelated to the protocol.	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Not eating or drinking (will require individual housing to effectively assess)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Decreased fecal and urine output	☐yes ☐ no		☐yes ☐ no	☐Consult Vet	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
(will require individual housing to effectively assess)				☐ Euthanize	
Delayed wound healing (requires checking at least daily until suture removal)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Sudden behavioral change (Ex: aggression, guarding, hiding)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Licking, biting, scratching of the operative / injection site (requires checking at least daily until suture removal)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
Poor posture or ambulating difficulty (Ex: tense, tucked-up, stiff gait)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Lost hair coat condition (Ex: ruffled fur, lack of grooming, piloerection)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Sudden activity level change (Ex: restlessness, pacing, reluctance to move)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Unexpected sweating or salivation (Ex: stressed rodents salivate excessively when stressed)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
'Painful' facial expression (Ex: grimace, eyes dull, pupils dilated, pinning of ears)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Oculonasal discharge (Ex: rats shed porphyrin pigment when stressed)	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Teeth grinding	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Signs of moderate to severe pain or distress that was not anticipated by the study plan.	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet ☐ Euthanize	
Body weight loss exceeding 15%	☐ yes ☐ no		☐ yes ☐ no	☐ Consult Vet	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
of free-feeding body weight relative to an age-matched reference. (Ex: Requires regular <q 48 hours> weighing)				☐ Euthanize	
Self mutilation (requires checking at least daily until suture removal)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Neurological disorders (e.g., seizures, blindness, ataxia) that were not anticipated by the study plan.	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Cardiopulmonary disorders (e.g. sudden	☐yes ☐ no		☐yes ☐ no	☐Consult Vet	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
weakness, vascular collapse, coma) that were not anticipated by the study plan.				☐ Euthanize	
Abnormal feeding or defecation for 48 hours (e.g., decreased feed or water intake and/or decreased fecal production that is unrelated to the study plan).	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	
Non-weight bearing for 72 hours (e.g., difficulty walking, inability to maintain upright posture)	☐yes ☐ no		☐yes ☐ no	☐Consult Vet ☐ Euthanize	

CLINICAL OBSERVATION/ MILESTONE	APPLICABLE TO MY PROPOSAL	FREQUENCY OF OBSERVATION (e.g., 4 hrs., 12 hrs., weekly)	PROTOCOL PERSONNEL ARE TRAINED TO RECOGNIZE	RESPONSE REQUIRED UPON REACHING THE HUMANE ENDPOINT	PROVIDE DURATION (DAYS, WEEKS, ETC.) OF MONITORING OR A SCIENTIFIC JUSTIFICATION FOR NOT USING THE MILESTONES LISTED.
Other humane endpoints which will be employed in this project.					
Other humane endpoints which will be employed in this project.					