

**UNC ANIMAL USE PROTOCOL**  
**Attachment D – ADMINISTRATION OF TEST SUBSTANCES**

Use this attachment if your protocol includes administering substances such as antigens, antibodies, vaccines, toxins, or micro-organisms to animals.

**D.1. Administration of Test Substances:** List all substances that will be administered to animals, including the agent, dosage, route of administration, total volume, frequency and duration of treatment. If further explanation is necessary for the administration of any substance, provide an explanation in the text box at the end of the table.

Agent/Substance	Dosage	Volume per Injection	Route	No. of Injections	Frequency & Duration

Additional Rows may be added by placing the cursor at the end of text in the last cell and hitting the TAB key.

Explanation if necessary:

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**D.2. Injection-Related Information:** Provide additional clarification of any aspects of these procedures that are not apparent from the information provided in D.1. Describe the method of preparing injection sites, if applicable, and how hemostasis is assured for venipunctures and arteripunctures.

Will anesthesia or analgesics be used?  YES.  NO. If yes, complete Attachment F.

Will restraint devices be used?  YES.  NO. If yes, provide a description below.

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**D.3. MONITORING & POSSIBLE OUTCOMES:** In order to minimize or alleviate pain or distress that may result from substance administration, it is essential to recognize the potential for pain and/or distress and to monitor the animals adequately. Indicate all of the following that are anticipated and provide an explanation for each yes answer.

YES NO

Animals are expected to die. Explain if yes.

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There is potential for animals to die as a result of manipulations. Explain if yes.

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Animals are expected to experience dehydration. Explain if yes.

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There is potential for dehydration as a result of manipulations. Explain if yes.

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Animals are expected to become moribund. Explain if yes.

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There is potential for moribundity as a result of manipulations. Explain if yes.

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Animals are expected to lose weight. Explain if yes, including frequency of body weight determination.

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There is potential for weight loss as a result of manipulations. Explain if yes, including frequency of body weight determination:

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Explain other possible outcomes

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**D.4. Possible Outcomes & Treatments:** Because studies of this nature sometimes have unpredictable outcomes, provide an explanation of methods employed to alleviate pain and distress and monitoring schedules. For example, it may be necessary to increase the frequency of monitoring during the immediate post-induction or post-challenge period. Specify if analgesics will be used. If other methods are used to enhance the animals' welfare, describe them here. Provide an explanation if treatment would interfere with scientific objectives of the study or if there is no treatment known to be effective. Provide a description of all procedures that have real or potential pain or distress, how the discomfort will be addressed, and treatment options. Use this addendum to complement the previous Attachment A if appropriate. Do not repeat information already provided in Attachment A, but do cross-reference pertinent information.

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