

Species: Rat or Mouse

Procedure Type: Compound Administration

Procedure Title: (insert protocol specific title)

Procedure Description Tab:

Procedure Description (select applicable route):

Intraperitoneal (IP) Injection:

1. Animals will be restrained manually or placed in a plastic decapicone bag to facilitate restraint. Restraint will be < 5 minutes.
2. The needle will be inserted into the lower right or left quadrant of the animal's abdomen, in between the midline and the medial side of the hind leg.
3. Prior to injecting the compound, the syringe will aspirated to confirm proper placement. If fluid is visualized within the hub, the needle will be removed and a fresh needle will be utilized for the subsequent attempt in a new location.
4. Once placement has been confirmed, _____ mg/kg of _____ (insert protocol specific dosage and the name of compound/agent) will be slowly injected. The maximum volume to be injected will be _____ (milliliters or microliters). Doses will comply with ACUC Guidelines for "Dosing Techniques and Limits." (If doses will not comply with ACUC Guidelines, insert variation with justification here.)
5. If bleeding occurs at the injection site, pressure will be applied until hemostasis is achieved. (Insert step 6 if animals will receive more than one injection.)
6. Each animal will experience a maximum of _____ IP injection(s). The time between injections will be a minimum of _____.

Intravenous (IV) Tail Injection:

1. Animals will be placed in a rodent restraint device. The animal will be monitored throughout the duration of restraint and will be removed if signs of pain or distress are observed. Restraint will be < 5 minutes.
2. The tail is warmed to dilate the vessel (via heat lamp, warm water, or warm compress). Care will be taken to avoid burning or overheating the animal.
2. The needle will be inserted into the vein and gently aspirated to confirm proper placement.
3. Once placement has been confirmed, _____ mg/kg of _____ (insert protocol specific dosage and the name of compound/agent) will be slowly injected. The maximum volume to be injected will be _____ (milliliters or microliters). Doses will comply with ACUC Guidelines for "Dosing Techniques and Limits." (If doses will not comply with ACUC Guidelines, insert variation with justification here.)
4. If bleeding occurs at the injection site, pressure will be applied until hemostasis is achieved. (Insert step 5 if animals will receive more than one injection.)
5. Each animal will experience a maximum of _____ IV injection(s). The time between injections will be a minimum of _____.

Subcutaneous (SC/SQ) Injection:

1. Animals will be placed on the wire bar lid of the cage or a clean table/bench top.

2. The skin of the dorsum will be tented up by pinching with the thumb and finger to create subcutaneous space for the injection.
3. The needle is inserted at the base of the tent and the syringe aspirated to confirm placement. If fluid is visualized within the hub, the needle will be removed and a fresh needle will be utilized for the subsequent attempt in a new location.
4. Once placement has been confirmed, _____ mg/kg of _____ (insert protocol specific dosage and the name of compound/agent) will be slowly injected. The maximum volume to be injected will be _____ (milliliters or microliters). Doses will comply with ACUC Guidelines for “Dosing Techniques and Limits.” (If doses will not comply with ACUC Guidelines, insert variation with justification here.)
5. If bleeding occurs at the injection site, pressure will be applied until hemostasis is achieved. (Insert step 6 if animals will receive more than one injection.)
6. Each animal will experience a maximum of _____ SC/SQ injection(s). The time between injections will be a minimum of _____.

Intragastric via gavage (OG):

1. The animal will be restrained by scruffing the loose skin across the shoulders, ensuring that the animal cannot move its head. Hold the head in a vertical alignment with the esophagus.
2. The appropriate size feeding needle will be selected and confirmed by measuring the length of the needle to reach the last rib of the animal.
3. The needle tip is inserted between the incisors and first premolars and directed towards the back of the throat. The needle is then inserted down the esophagus. Care is taken to not force the needle, but instead the needle should fall by gravity alone with no resistance felt.
4. Once placement has been confirmed, ___ milligrams of _____ (insert dosage and the name of agent) will be slowly injected. The maximum volume to be injected will be _____ (milliliters or microliters). Doses will comply with ACUC Guidelines for “Dosing Techniques and Limits.” (If doses will not comply with ACUC Guidelines, insert variation with justification here.)
5. Upon completion the needle will be removed vertically. (Insert step 6 if animals will receive more than one OG dosing.)
6. Each animal will experience a maximum of _____ OG dosing(s). The time between doses will be a minimum of _____.

How does this procedure fit into or address your overall research goals?

(Insert protocol-specific rationale here.)

Please list any clinical effects or changes from the normal health and behavior of an untreated animal which may occur as a result of this procedure.

While clinical effects from (IP/IV/SQ) injections are not expected, hematoma formation, tissue trauma, and infection may occur. (Additionally list any anticipated complications or outcomes from specific compounds/agents).

While clinical effects from OG injections are not expected, respiratory aspiration, and esophageal trauma may occur. (Additionally list any anticipated complications or outcomes from specific compounds/agents).

Describe post procedure monitoring that will be performed.

Animals will be monitored immediately following injections, as well as the following day, for the clinical signs listed below.

(May be dependent on experience of the lab member performing injections, compound to be injected, potential side effects, and/or the frequency of injections.)

What criteria will be used to determine if animals exhibiting clinical or behavioral changes should be euthanized?

Animals will be euthanized if they show signs of being hunched, scruffy, a BCS of <2/5, or signs of being moribund as defined by the ACUC's "Guidelines for Humane Endpoints in Animal Studies."

Anesthetic Regimen tab:

Not applicable.

Peri procedure Care/Analgesics tab:

Not applicable.

Other Agents Utilized tab:

(Insert each compound/agent to be administered via injection as separate entries. Describe vehicle within each entry or insert separately (for example if being used for the control group).)