

COMPARATIVE MEDICINE  
LABORATORY ANIMAL FACILITIES  
  
STANDARD OPERATING PROCEDURES  
for  
STREPTOZOTOCIN INJECTIONS AND HUSBANDRY OF INJECTED ANIMALS

1. Purpose:

This procedure outlines the Occupational Health and Safety Guidelines that should be followed when working with Streptozotocin in the animal facility. Streptozotocin is a carcinogen (a chemical that can cause cancer) and a teratogen (a chemical that can induce birth defects). It is used to induce diabetes in laboratory animals. Contact with skin and eyes should be avoided. Inhalation of the powdered form of the drug must be avoided. Streptozotocin is excreted for a short period of time in the urine and feces of animals that been injected with it, so precautions must be taken when handling urine, feces, or bedding from injected animals.

2. Scope:

This SOP applies to all Research staff and LAF personnel working with this chemical or performing animal husbandry on animals injected with this chemical.

3. Procedure:

- a. Personnel must enroll in the Occupational Health Medical Program at UB and attend Streptozotocin safety training.
- b. Streptozotocin should not be handled by persons who are pregnant or may be pregnant.
- c. Injection of animals with streptozotocin:
  - i. Reconstitution and handling of streptozotocin must be done in a chemical fume hood. Latex or nitrile gloves must be worn when mixing or handling streptozotocin. It is not necessary to wear a face mask or any other personal protective equipment.
  - ii. Any spilled powder or drug should be cleaned up with a damp paper towel while wearing latex or nitrile gloves.
  - iii. If an accidental needle stick or self-inoculation occurs while handling streptozotocin, standard needle puncture operating procedures, as outlined in SOP 3.F.1, should be followed. Persons who become accidentally exposed to streptozotocin should be removed from the study, to prevent further exposures.
  - iv. The person performing the streptozotocin injections will place a chemical hazard tag on the animal's cage after the injection is done.
- d. Husbandry of animals injected with streptozotocin:
  - i. Animals injected with streptozotocin will be housed in conventional animal rooms in standard wire-top cages.
  - ii. All injected animals will be identified with a chemical hazard tag and appropriate signage will be placed on the animal room door.

- iii. Animals with chemical hazard tags must be handled with latex gloves. Cage changing and handling of dirty bedding must be performed with latex gloves. After the cage has been emptied, dirty bedding may be disposed of in a standard manner.
- iv. Chemical hazard tags must stay on the animal cage for 24 hours. After 24 hours the tags may be removed by the animal caretaker and no further precautions need to be taken.
- v. Animals injected with streptozotocin will become diabetic and produce increased amounts of urine. They will need more frequent cage changing to maintain sanitary cage conditions.