Auburn University Risk Management and Safety **Standard Operating Procedure**	*Effective Date:* 03/01/2019		*SOP Number:* AP – 115-0
	Supersedes NA	*Superseded:* NA	*Page:* **1 of 4**
Subject: **Use of Bromodeoxyuridine in Mice Housed in Disposable Caging**	*Approval:* _Donna Tucker_____Risk Management and Safety		

I. PURPOSE

This document provides standard operating procedures (SOP) for handling bromodeoxyuridine and managing mice and other objects potentially contaminated with bromodeoxyuridine or its metabolites after the mice have been dosed with bromodeoxyuridine. This SOP is for use with mice that are housed in disposable caging.

II. OBJECTIVE

The purpose of the procedure is to prevent or minimize hazards to personnel handling bromodeoxyuridine and mice or potentially contaminated objects after the animals have been dosed with bromodeoxyuridine.

III. SCOPE

This guideline applies to mice housed in disposable caging.

IV. GENERAL GUIDELINES

Note: Bromodeoxyuridine has potential teratogenic and mutagenic properties, use caution while handling the chemical or potentially contaminated bedding and animals. Refer to the Auburn University Reproductive Health Policy and Procedures at:
https://sites.auburn.edu/admin/universitypolicies/Policies/ReproductiveHealthPolicy.pdf

Review the product label and Safety Data Sheet (SDS) prior to use of bromodeoxyuridine.

Employees may be exposed to bromodeoxyuridine while handling animals and excretions of animals dosed with the drug. The PI or facility manger will review this SOP with animal care personnel prior to the employees working with bromodeoxyuridine dosed animals or their caging.

Bromodeoxyuridine solutions will be prepared in a Chemical Fume Hood and drawn into syringes using a closed (needleless system) to avoid the potential for inhalation of aerosols. The work area will be covered with a disposable, plastic backed absorbent pad/liner. Contact Starr Miller (844-8011), CVM Pharmacist for information and training.

Bromodeoxyuridine will be administered to animals by the PI or those lab personnel designated and trained by the PI to perform the injections.

Used needles and attached syringes will be disposed of in an approved sharps container immediately after use. Used needles will not be set on the bench, sheared, bent, detached, or re-capped.

After receiving bromodeoxyuridine the animals will be housed in disposable caging.

PPE Requirements

Open cuts or irritated skin should be covered will an impervious bandage while working with animals and during animal care.

All personnel will wear appropriate Personal Protective Equipment (PPE). Appropriate PPE consists of:

- Disposable, impervious closed front gown with elastic cuffs
- Nitrile gloves. Gown cuffs should be tucked under gloves to protect skin. Wash hands with soap and water after removing gloves.
- Safety goggles, or face shields. If reused, these items will be washed with soap and water, dried, and then stored in a clean place.
- Disposable, impervious shoe covers. Closed toe shoes will be worn.
- Disposable hair cover

Cage Changing Procedures

Avoid producing aerosols while working with this product or while cleaning up after animals that have been dosed with bromodeoxyuridine.

Don PPE

- Remove animal from dirty cage and place into clean cage.
- Place entire contents of dirty cage, including water bottle, food bowl, and uneaten feed into bag. To prevent aerosolizing particles potentially containing bromodeoxyuridine into the room, do not expel air from the bag. Close the bag by twisting shut, then gooseneck and secure the bag closed with tape.
- Place used PPE, used paper towels, pads, and other disposables in waste to be handled by Risk Management and Safety (RMS).

Cleaning Floors & Other Work Surfaces

- Don PPE
- Mop the floor of the room with a 10% bleach solution.
- Clean countertops and other work surfaces with a 10% bleach solution. Leave the bleach solution in contact with surfaces for 3-5 minutes. Then clean with soap and water. Surfaces to be cleaned include countertops, exam tables, doorknobs, equipment including knobs and handles, light switches, telephones.

Disposal Procedures

- No materials contaminated with bromodeoxyuridine are to be placed in regular waste receptacles (this includes excrement of animals injected with bromodeoxyuridine, disposable towels used for cleaning, PPE of those handling bromodeoxyuridine, bromodeoxyuridine contaminated sharps, and carcasses and tissues of bromodeoxyuridine dosed animals).
- Unused bromodeoxyuridine and resulting spill cleanup waste contaminated with bromodeoxyuridine is a hazardous chemical waste and must be submitted as a waste using CHEMATIX and disposed of by RMS.
- All needles, lances, and scalpels will be managed as regulated medical waste and stored in a YELLOW sharps container. Contact Steven Nolen at 703-3859 to request sharps container pickup.
- All bromodeoxyuridine exposed carcasses and/ or tissues will be double bagged, placed in containers provided by RMS and stored in a cooler to slow down decomposition prior to waste pick up. Schedule carcass waste pickups at **https://aim.auburn.edu/aim**
- All waste potentially contaminated with bromodeoxyuridine such as PPE, towels, excrement, and disposable cages will be double bagged (goose necked and taped) and placed in YELLOW containers provide by RMS. Waste pickup can be scheduled by calling Steven Nolen at 703-3859.

V. SPILL PROCEDURES

For major spills isolate the area, Call 911, and report the spill to RMS 844-4870. Direct contact with the solution will be avoided.

For minor spills contain the spill and clean up material with a paper towel or absorbent pads from the nearest chemical spill kit. It may be helpful to wet the absorbent material for spills of powder. In addition to the required PPE an additional layer of nitrile gloves or equivalent should be used whenever spills are handled. Once cleanup is done wash the area with a 10% bleach solution and then soap and water.

Waste generated from the spill and its cleanup should be double bagged and handled as contaminated waste.

Submit spill cleanup materials as waste through CHEMATIX

References:

Office of Environmental, Health, and Safety Management, Indiana University (n.d.) Laboratory Safety Guideline Bromodeoxyuridine. Retrieved from http://www.ehs.iu.edu/docs/Bromodeoxyuridine.pdf

Occupational Health and Safety, Monash University (May 2011) Working with Bromodeoxyuridine (BRDU) – OHS information sheet. Retrieved from http://www.monash.edu.au/ohs/topics/info-sheets/brdu.html

Risk Management and Safety, Auburn University. (2013) Standard Operating Guideline for Hazardous Drugs in Animal Bedding.

WARNING!

TOXIC CHEMICAL HAZARD

✓ Carcinogen

✓ Reproductive Hazard

Other (Specify):

See Material Safety Data Sheet

Principal Investigator: _____

Agent(s)/Concentration: _____ Dose: _____

Date/Time Administered: _____ Route: _____

Emergency Contact	Name	Work Phone	Afterhours Number
Primary			
Secondary			