

Use of Antineoplastics (Chemotherapeutic Agents)

Purpose:

To provide guidance for the use of Antineoplastics (chemotherapeutic agents) in the laboratory and animal facility environment. Antineoplastic chemicals are commonly used in cancer research at UW-Madison.

Precautions:

The following information can be used to complete the Safety section of your animal protocol.

1. Chemical hazard agents – (Identify the category of the chemical) :
 - Mutagen
 - Carcinogen
 - Reproductive Hazard/Teratogen
 - Toxicant/Toxic Agent
2. Containment preparation – (Containment equipment required for the preparation of the chemical): (Select other and include the following information)
 - Other - if powder form is used then that preparation will be done in a fume hood and safety glasses will be worn in addition to standard PPE.
3. Containment animals – (Containment equipment required for chemical administration and handling animals after exposure to the chemical): (Select the following)
 - Biosafety Cabinet (BSC)
 - Fume Hood

NOTE: For Rodents: Microisolators or other containment type housing is recommended.
4. PPE needed - (for handling live animals, carcasses or animal waste/dirty bedding):
(*Select the following*)
 - Exam gloves – nitrile
 - Safety glasses/goggles
 - Lab coat or disposable gown
 - Other: During administration activities add double gloves, nonabsorbent gown with a closed front and tight-fitting cuffs.
5. Waste Disposal: (disposal of animal waste/dirty bedding from animals after exposure to the chemical) (*Select both options and include additional information for Other*)

- Bag animal waste/dirty bedding and place sealed bag in secondary container and place secondary container in regular trash.
 - Other: Chemical Hazard Cage Labels are required on each individual cage containing the hazard and must contain the chemical health hazard symbol and “Agent and Disposal method”. Labels are removed or crossed out when the special handling time has ended. *Chemical Hazard Cage Labels are available at www.ehs.wisc.edu/ehs-signage
 - **NOTE:** For Clinical studies include instructions for precautions clients should take while handling waste from their pet.
6. Carcass disposal: *(Select the following)*
- Pick up by EH&S for incineration.
NOTE: For Veterinary Clinical studies, please describe how the carcass is handled if pet is in owner’s care.
7. Chemical human risk: *(Add the following)*
- Most antineoplastic chemotherapeutic agents are potentially toxic as mutagens, teratogens, cytotoxic or carcinogens. Pregnant and lactating women should avoid exposure to antineoplastic chemotherapeutic agents and animals that have been administered antineoplastic chemotherapeutic agents.

References:

“Health and Safety Practices: Antineoplastic Drugs - Administration” Centers for Disease Control and Prevention, March 2017.
<https://www.cdc.gov/niosh/topics/healthcarehsps/antineoadmin.html>

“Antineoplastic (Chemotherapy) Drugs – Reproductive Health” Centers for Disease Control and Prevention, May 2023
<https://www.cdc.gov/niosh/topics/repro/antineoplastic.html>

“NIOSH list of antineoplastic and other hazardous drugs in health care settings 2016” Centers for Disease Control and Prevention, April 2023
<https://www.cdc.gov/niosh/docs/2016-161/>

“NIOSH Alert on preventing occupational exposures to antineoplastic and other hazardous drug” Centers for Disease Control and Prevention, September 2004.
<https://www.cdc.gov/niosh/docs/2004-165/pdfs/2004-165.pdf>