Use of Tamoxifen

1.0 Purpose and Scope:

To provide guidance for the use of Tamoxifen in the laboratory and animal facility environment. Tamoxifen is used at UW-Madison in animal research for a variety of research applications.

2.0 Definitions:

- **Teratogenic**: a substance or agent that causes developmental malformations
- **Carcinogenic**: cancer-causing substance or agent
- **Genotoxic**: mutagenic or carcinogenic, specifically capable of causing genetic mutation and of contributing to the development of tumors. Genotoxins affecting sperm and eggs can pass genetic changes down to descendants who have never been exposed to the genotoxin.

3.0 Guidance:

Tamoxifen is considered a Reproductive Toxin and/or a Teratogen.

4.0 Precautions:

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

1. **Containment preparation** – (Containment equipment required for the preparation of the chemical): (Select one of the following)
   - Fume Hood
   - Ducted Biosafety Cabinet (BSC)

2. **Containment animals** – (Containment equipment required for chemical administration and handling animals after exposure to the chemical): (Select one of the following)
   - Fume Hood
   - Ducted Biosafety Cabinet (BSC)
   **NOTE**: For Rodents: Microisolators containment caging is recommended.

3. **PPE needed** - (for handling live animals, carcasses or animal waste/dirty bedding): (Select all of the following)
   - Exam gloves – nitrile
   - Safety glasses/goggles
   - Lab coat or disposable gown

4. **Waste Disposal**: (Select the following 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: Signage is required on each individual cage containing the health hazard symbol and “Agent, End date and Disposal method”. *Cage signage available at www.ehs.wisc.edu

5. Carcass disposal: (Select the following)
- No special precautions needed for disposal use facility standard method.

6. Chemical human risk: (Add the following)
   Exposure to tamoxifen or tamoxifen metabolites has been associated with an increased risk of cancer. Tamoxifen is considered a genotoxin also. Prenatal, neonatal, and postnatal exposure to tamoxifen could lead to varying levels of reproductive toxicity. Pregnant and lactating women should avoid exposure to tamoxifen and animals that have been administered tamoxifen. Primary routes of occupational exposure to tamoxifen include: aerosol exposure, ingestion, accidental injection, and tissue/transplacental absorption.

5.0 Additional information:

1. If a respirator is needed University Health Service Occupational Health can also be consulted as to the appropriateness of using an N95 when higher respiratory protection is recommended. Note: personnel must receive medical clearance and fit testing for respirator use.

6.0 References:

“Chemical Safety Practices Recommendations Tamoxifen” NIH November 2014

“Tamoxifen SDS”

7.0 Document Revisions:

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<thead>
<tr>
<th>Revision Number</th>
<th>Revision Date</th>
<th>Description of Revision</th>
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<tbody>
<tr>
<td>1</td>
<td>12/21/11</td>
<td>PPE and waste handling clarification</td>
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<tr>
<td>2</td>
<td>9/25/12</td>
<td>Removed “required” from 3.4 heading</td>
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<tr>
<td>3</td>
<td>2/27/13</td>
<td>Clarified waste handling</td>
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<td>4</td>
<td>11/6/15</td>
<td>Simplified Purpose and Scope; Updated Guidance and Precautions to align with Arrow; Removed 28 day post dose handling requirements; Removed Spill information; Updated References.</td>
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