Use of Cyclosporine

1.0 Purpose and Scope:

To provide guidance for the use of Cyclosporine in the laboratory and animal facility environment. Cyclosporine is commonly used at UW-Madison in transplant research to reduce the chance of host-graft rejection.

2.0 Definitions:

Gingival hyperplasia: gingival enlargement due to proliferation of fibrous connective tissue.
Pancreatitis: inflammation of the pancreas.
Hypercholesterolemia: an unusually high level of cholesterol in the blood.
Dyspnea: difficulty in breathing.
Pruritus: an intense feeling of itchiness.
Hyperkalemia: An abnormally high concentration of potassium ions in the blood.
Carcinogen: cancer-causing substance or agent

3.0 Guidance:

Cyclosporine 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 the following)
   - Fume Hood

2. **Containment animals** – (Containment equipment required for chemical administration and handling animals after exposure to the chemical): (Select the following)
   - No special containment needed

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

4. **Waste Disposal**: (Select the following)
   - No special precautions needed for waste/dirty bedding

5. **Carcass disposal**: (Select the following)
   - No special precautions needed for disposal use facility standard method.
6. Chemical human risk: *(Add the following)*

- Adverse drug reactions to cyclosporine can include gingival hyperplasia, convulsions, peptic ulcers, pancreatitis, fever, vomiting, diarrhea, confusion, hypercholesterolemia, dyspnea, numbness and tingling particularly of the lips, pruritus, high blood pressure, potassium retention, and possibly hyperkalemia, kidney and liver dysfunction (nephrotoxicity and hepatotoxicity), burning sensations at finger tips and an increased vulnerability to opportunistic fungal and viral infections. Exposure may also cause the following: effect fertility and/or unborn child and breastfed infants; lymphomas; convulsions; seizure or tremors; nutritional & gross metabolic changes; gastrointestinal disturbances; cardiovascular changes; biochemical changes. Exposure may cause irritation to eyes; mucous membranes, upper respiratory tract and skin. Ingestion is the primary route for occupational hazards for cyclosporine. Cyclosporine should not be handled by pregnant or lactating women or by immunocompromised individuals.

5.0 References:


“Cyclosporine SDS”

6.0 Document Revisions:

<table>
<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>11/6/15</td>
<td>Simplified Purpose and Scope; Updated Guidance and Precautions to align with Arrow; Removed Spill information; Updated References.</td>
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