### Chemical Safety Practices Recommendations

**Dasatinib** (Sprycel, BMS-354825)

#### Exposure Hazards (1, 2)

<table>
<thead>
<tr>
<th>Category 1B</th>
<th>Category 2</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td>Warning</td>
<td>Warning</td>
</tr>
<tr>
<td>Toxic to Reproduction</td>
<td>Toxic</td>
<td>Toxic</td>
</tr>
<tr>
<td>May Damage Fertility or the Unborn Child</td>
<td>May Cause Damage to Uterus, Testicles, Ovaries</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category 3</th>
<th>Category 3</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warning</td>
<td>Danger</td>
<td>Warning</td>
</tr>
<tr>
<td>Toxic</td>
<td>Toxic</td>
<td>Irritant</td>
</tr>
<tr>
<td>May Cause Respiratory Irritation</td>
<td>Toxic if Swallowed</td>
<td>Causes Serious Eye Irritation and Skin Irritation</td>
</tr>
</tbody>
</table>

#### Response to Exposure

**Oral**
- Rinse mouth; do not induce vomiting.
- Report to OHS.

**Dermal**
- Wash skin with soap and water for 15 minutes.
- Rinse skin for 15 minutes.
- Report to OHS.

**Inhalation**
- Leave area; go to clean air.
- Report to OHS.

**Injection**
- Report to OHS.

#### Special Precautions
- **Pregnant women should be extra cautious when working with Dasatinib.** (3)
- Discard garments as hazardous if contaminated with Dasatinib.
- CYP3A4 inhibitors (e.g. Grapefruit juice) may increase the effects of Dasatinib exposure. (4)

#### Personal Protective Equipment
- Gloves (Double glove) (Latex or Nitrile)
- Skin Protection (Suit or Scrubs or Lab Coat)
- Eye Protection (Safety-glasses or Goggles)
- Closed-toe shoes
- Use N100 respirator if engineering controls are not available.

#### Engineering Controls
- Dasatinib powder – Chemical Fume Hood (CFH) (5)
- Dasatinib solution – CFH or Biosafety Cabinet (Class II, B2 BSC if aerosolized)
- Animal waste and bedding until 10 days after last treatment – CFH or Class II, B2 BSC

#### Animal Handling
- Avoid exposure to animal feces until 10 days after last treatment. (6)

#### Bedding Disposal
- Dispose of bedding as hazardous material until 10 days after last treatment.

#### Work Practices
- Empty Dasatinib containers and unused Dasatinib must be disposed of as hazardous.
- Follow [LASP SOP 4.003F](#) for preparation, handling, dosing, and disposal of Dasatinib.

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Questions or concerns: Please contact EHS, Ted Witte, theodore.witte@nih.gov or 301-846-5860
Reviewed 03/16/2015  These recommendations are not final and may be updated.
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Dasatinib (Sprycel, BMS-354825)

References:


Dasatinib is an antineoplastic drug of the Tyrosine Kinase Inhibitor family and is used to prevent the proliferation of cancers such as Chronic Myelogenous Leukemia. Tyrosine Kinase Inhibitors function by inhibiting the activation of growth receptors in malignant cells. Unfortunately, these growth receptors are also present in healthy cells and their inhibition can harm tissues which normally regenerate rapidly.

Dasatinib is metabolized by CYP 3A4 and the consumption of CYP 3A4 inhibitors will prolong the presence of Dasatinib in the body. ~90% of Dasatinib will be cleared from the body within a week, primarily in the feces but also in the urine. A significant portion of the drug will be excreted unchanged and therefore the animal waste should be treated as hazardous.

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