

**Poisonous Plant Class
ADVS and FRWS 5860**

Quiz #2; April 8, 2008

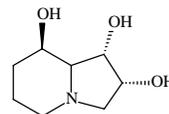
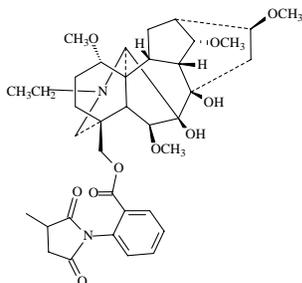
Name (1pt) _____

Score _____ of 20 pts

1. Name and explain the difference in the three different categories of photosensitization. (3 pts)

- Type I** - Primary photosensitization occurs when an **EXOGENOUS** photodynamic agent is absorbed either through the skin or from the GI tract unchanged, reaching the skin in its native form.
- Type II** - photosensitivity is due to aberrant **ENDOGENOUS** pigment metabolism.
- Type III** - Secondary or type III photosensitization is by far the most frequent type of photosensitivity observed in livestock. The photosensitizing agent, phylloerythrin (a porphyrin), accumulates in the plasma due to impaired hepatobiliary excretion as result of **HEPATOTOXICITY**.

2. (6 pts) Fill in blanks below.



Toxin Name **Methyllcaconitine (MLA)**

Swainsonine

Chemical Class **Diterpene alkaloid**

Indolizidine alkaloid

Plant Name **Larkspur**

Locoweed

3. (2 pt) You have just skated in the 2006 Olympic Ice Dancing competition and a pretty bouquet of flowers is thrown on the ice, you pick them up as you skate off the rink. At the “Kiss and Cry” area you get into an argument with your ice dance partner over whether the flowers are monkshood or larkspur. What distinguishing feature do you point out to your partner to convince him/her the flowers are larkspur?

Spur on Flowers

4. (6 pt) Name the three different classes for selenium accumulating plants and provide an example of each.

- Indicator Plants – *Astragalus biculcatus*, *Astragalus prolongus*, woody aster, goldenweed, prince’s plume
- Facultative Accumulators – Aster, saltbrush, siderathus, tansy asters, gumweed
- Passive Accumulators – numerous grasses, cereal grains, numerous weeds

5. (2 pt) Describe how to differentiate between *Astragalus* and *Oxytropis* plants.

- 1-Oxytropis species have a point on their keel petals.
- 2-Oxytropis species do not have a true stem, only flowering stocks.