Screening Pups for Fluorescence Standard Operating Procedure

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Pups being used for the fluorescent proteins in their body need to be screened by day three of life, preferably on day two. The screening needs to be done in a dark room, inside a changing station or BioSafety cabinet. Since you are working with new born pups, proper aseptic technique is extremely important so the mother doesn’t abandon the pups. Care should be taken to touch the pups as little as possible.

To Screen:

1. Make sure the changing station or BioSafety cabinet has been cleaned properly.
2. Put the correct goggles and screening light in the changing station or BioSafety cabinet.

* If you are unsure if you have the right goggles, you can ask the vivarium manager.

1. Put the housing cage that you are screening side-by-side with an empty cage.
2. Put on the goggles, turn on the screening light, and turn off the changing station or BioSafety cabinet light.
3. Wet your hands with Oxivir and dry them off with paper towels.
   * Since you are working with pups, your gloved hands need to be scent free and dry.
4. Look for brightly glowing spots in the brain (two towards the front and two towards the back). If a pup has these spots, it is positive for the fluorescent proteins. If a pup does not have the spots, it is homozygous negative for the fluorescent protein.

* Be sure to shine the beam of light directly on to the nest of pups.

1. Separate the homozygous negative pups into the empty cage. Take care while handling them and avoid touching the nest as much as possible.
2. Screen through the whole cage to check for any stranded pups.
3. Record the number of positive pups and negative pups on the cage card.
4. Put the mother and positive pups back on the rack.
5. Euthanize the negative pups following the CO2 Euthanasia SOP.

Vivarium Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Russ Matheson

University Veterinarian: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sandy Garrett