Title: Husbandry Care for Salamanders

I. Purpose:

The purpose of this policy is to outline the minimum standards of care for salamanders (species of the suborder Salamandroidea).

II. Policy:

All units providing animal care for salamanders must meet or exceed these minimum requirements based on the ILAR Guide for the Care and Use of Laboratory Animals (Guide), and Public Health Service Policy (PHS). Deviations or exceptions must be approved by the Attending Veterinarian and the IACUC.

III. Procedure:

Daily (365 days a year without exception):

- Observe each animal and check for health concerns (Guide pg. 112).
- Ensure adequate water is available (Guide pg. 65-68).
- Record sick and dead animals, and report them to Campus Veterinary Services (CVS) or designated clinical veterinarian per standard operating procedure for reporting sick or dead animals.
- Record minimum and maximum temperatures and humidity.
  - Temperature range for salamanders is species-dependent.
  - Humidity range for salamanders is species-dependent.
- Change any excessively soiled tanks (Guide pg. 70).
- Clean and organize room, anterooms, and surrounding premises (Guide pg. 72).
- Record daily completion of tasks, initial, and date log sheet.

Weekly:

- Provide clean tanks (Guide pg. 70).
  - The use of certain disinfectants may be contraindicated for some aquatic species, as residues may be highly deleterious (Guide pg. 71).
- Check that water quality parameters are appropriate for the species (Guide pg. 78).

As needed:
• Feed animals as often as necessary based on species and life-stage (*Guide* pg. 65-68).
• Disinfect the animal room including walls, floors, and ceilings (if possible) (*Guide* pg. 72).
• Remove and replace worn or damaged equipment from primary enclosures and surrounding facility (*Guide* pg. 72).
• Pelleted feed must be discarded after 6 months of the milling date unless manufacturer guidelines recommend a shorter or longer expiration date (*Guide* pg. 66).
• Clean and sanitize feed storage containers (*Guide* pg. 67).

**Environmental Enrichment:**
• Refer to the Environmental Enrichment policy.
• Salamanders should be provided the opportunity to demonstrate species typical behavior. Examples of enrichment for salamanders include faux plants or hiding places (*Guide* pg. 53).
• Devices must be checked regularly for wear and discarded when safety hazards are observed.

**Facilities:**
• Temperature alarms must be installed in all rooms housing salamanders (*Guide* pg. 143).
• Facilities housing certain salamander species (ex: *Necturus*) must follow the conditions specified in the University of California, Davis’ California Department of Fish and Wildlife Permit (#537) to import, transport, and possess Restricted Species for Research. A copy of this permit must be posted on the animal room door.
• Adequate ventilation must be provided for the health and comfort of the animal at all times.
  • A minimum of 10-15 fresh room air exchanges per hour shall be provided in animal housing areas (*Guide* pg. 46).
• Floors shall be moisture-resistant, non-absorbent, impact-resistant, and relatively smooth (*Guide* pg. 137). Refer to Physical Plant and Facilities Maintenance policy.

**Housing:**
•Whenever possible, salamanders should be socially housed in compatible groups (*Guide* pg. 51).
• Housing density is species-dependent.

*When housing this species, please also refer to the Animal Care Program’s Standards of Care Policy on Pest Control, Identification and Labeling of Cages, Environmental Enrichment, Food Storage, House-Keeping in Facilities Housing Biomedical Research Animals, Physical Plant Facilities Maintenance, as well as the IACUC's Policy on Social Housing of Social Species.*