DEWORMING WITH FENBENDAZOLE

A deworming rodent food is used to treat pinworms in mice by mixing a drug, Fenbendazole, at a dose of 150 ppm (parts per million) into a rodent chow that is formed into 1/2 inch diameter pellets. Some concern has been raised regarding the occupational safety and health consequences of this product to campus employees.

According to the scientific reference REPROTOX, there does not seem to be any indication that Fenbendazole is associated with adverse reproductive effects in animals or humans. Another reference, Shepard’s Catalog of Teratogenic Agents, listed an article entitled the Behavioral Teratogenic Potential of Fenbendazole: A Medication for Pinworm Infestation, in Neurotoxicology and Teratology (22:871-877, 2001) stated that there were no ill effects on reproduction when this pinworm medicine was used in pregnant rats employing a diet of treated food.

There are no Cal-OSHA or Fed-OSHA regulations directed specifically at this product. Employees should, however, incorporate good hygiene into their work practices wherever they handle animals. This includes washing hands, use of aprons or gowns and wearing gloves. If employees are mixing or dispensing medicated feed they should wear a disposable N95 mask or use an appropriate hood to protect them from inhaling any medicated feed dust that may be generated. As an extra measure of precaution, pregnant women may want to consider reassignment during medicated feed use. This should be done, however, in consultation with their health care practitioner.

Carbon dioxide exposure is a standard and widespread, but also controversial technique for rodent euthanasia. Research to assess the humaneness of any euthanasia technique can combine behavioral observation of animals (including learned aversion to low doses of an agent), measurement of corticosterone or other physiological parameters, and even reports of human volunteers (again responding to low doses of an agent), measurement of corticosterone or other physiological parameters, and even reports of human volunteers (again responding to low doses of an agent). The Humane Society of the United States has urged the NIH Office of Laboratory Animal Welfare to move campuses away from its use in animals. You can see their review article online at http://www.hsus.org/ace/12633. Though the HSUS makes a strong case that the use of carbon dioxide may cause some animals pain or distress, their alternatives may not be ideal. Argon has not been adequately studied, rodent guillotines require a very high level of operator skill, and over-anesthetization with halothane entails some degree of environmental contamination and human health concerns.

While active research on the humaneness of carbon dioxide continues, the NIH has issued a statement on its current uses (http://grants1.nih.gov/grants/guide/notice-files/not-od-02-062.html), including its reliance on the guidance of the American Veterinary Medical Association (http://www.avma.org/resources/euthanasia.pdf). The UCSF Committee on Animal Research has appointed a subcommittee to continue reviewing the available information on carbon dioxide use. At this point, laboratory workers are reminded of these principles when using carbon dioxide for rodent euthanasia:

- Carbon dioxide is delivered from a regulated pressurized tank, not from dry ice.
- Animals are best euthanized in their home cage, when possible, or in an uncrowded chamber with familiar individuals.
- Whether to pre-fill the chamber with CO2 is an open question; AWAP staff generally advise slowly adding CO2 after animals are in.
- CO2 is generally not appropriate for rodents less than 8 days old.
- CO2 euthanasia must be followed by a physical technique such as cervical dislocation, decapitation, or bilateral thoracotomy (http://www.larc.ucsf.edu/docs/private/guidesop/segr.cfm).
Cage Card Project, continued

from everyone. To manage animal research projects and the business of research, investigators and LARC use cage cards. Both investigators and LARC use the cards to collect and maintain valuable study information. LARC also uses the cards to track cage populations, create census reports, maintain regulatory compliance, and prepare recharges.

Why a new cage card system?
The goal of the new system is to provide the best possible service to the research community, including:

- Fast and accurate service
- Regulatory compliance
- Improvement in space inventory & management
- Errorless invoices and recharge data

Built-in Functionality
The new cards were created with functionality in mind. They have been designed to provide more room for researchers to record data and make notations, and are sized to match the card holder on existing cages so no new cage equipment is required.

The barcode at the top of each card contains information on:

- Principal Investigator
- Protocol number
- Billing and purchasing information
- Room number
- Animal types and categories

The following are questions that are sometimes asked about the new system. If you have a question that is not addressed below, please call the LARC husbandry office at 502-1751.

I can't see my new LARC cards from other PI's cards. How can LARC?
LARC will use new color-coded rectangular labels to distinguish between investigators’ cages. Rectangles will be used so there is no confusion with the circular dots used by some researchers.

Why isn’t there enough room on the cards to record the data I need?
Although the required system elements (barcode, PI, billing & animal information) competes with space for researchers’ notes, we provided as much room as possible for PIs by:

- Printing with smaller fonts
- Printing information as close together as possible
- Inclusion of only essential information on the cards

The large left portion of the card is for the PI and researchers’ use, and is kept by the PI. Notes can be placed on the front and back of this part of the card as needed. The only thing LARC requests is that the PI or research staff not write on the barcode or on top of the required system elements noted above.

What if I need service beyond regular business hours?
LARC wants to accommodate all service requests, so if you need to get or deactivate cards after hours:

- You can request pre-printed cards
- You can drop the deactivation tabs in the “Deactivation Tabs” boxes at all sites

How do I get pre-printed cards?
LARC will pre-print cards if requested, but requests for pre-printed cards must be made in writing.

What about breeding cards?
Breeding cards are on the horizon. The cage card project has been separated into two components:

- Project 1: Acquired animals
- Project 2: Bred animals

Once Project 1 is complete with all input incorporated from researchers and LARC staff, Project 2 will commence.

Implementation of the new system has already taken place at researchers and LARC staff, Project 2 will commence. Once Project 1 is complete with all input incorporated from researchers and LARC staff, Project 2 will commence. The change permits funding components to require verification review.

Note:
- At this time “Just-In-Time” procedures for IACUC review apply accordingly.

CAR CORNER

Visit the LARC website at www.larc.ucsf.edu and the AWAP website at www.ors.ucsf.edu/awap/awap.cfm

SHIPPING RODENTS TO OTHER INSTITUTIONS

Are you shipping rodents to another institution? Do you need a serology report? The volume of rodent shipping has grown and is so large that a tracking system is needed. In order for LARC to track requests, they need your help and complete information. Here is how to submit your requests:

Step #1: You must submit the request on the form entitled Request to Export Animals From UCSF and Obtain Health Reports.

Where do you find the form? Go to the Laboratory Animal Resource Center website at www.larc.ucsf.edu.

The form is entitled Request to Export Animals From UCSF and Obtain Health Reports. You will see it directly under the Sentinel Program Link and on the Forms page. The link to the Sentinel program looks like a microscope.

Step #2: Do you need additional tests before shipping? The receiving institution must tell you what they need in order to answer that question. Please ask them.

Information on our standard serology panel is available under the Sentinel Program Link. Once you know if there are added tests, you simply indicate what you need on the request form.

Step #3: Submit the Request Form. Where? Send the form via email to rodentship@larc.ucsf.edu.

Step #4: Once the Request Form is received, the shipping/health reports coordinator (typically one of the LARC veterinary technicians) does any needed physical examinations, collects the serum samples, and does the tests as needed.

The shipping coordinator will send a summary letter and the accompanying serology report to you and to the receiving institution.

Time needed: A minimum of 5-10 working days after receipt of the request.

While a LARC veterinarian is not the primary shipping and serology request contact, a LARC veterinarian does review serology reports and test results.

Please bring any unusual findings to the LARC veterinarian’s attention, as well as any questions regarding diseases in the colonies.

Questions? Contact us at rodentship@larc.ucsf.edu.