DCM policy on monitoring of animals included in LD_{50} studies

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The Department of Comparative Medicine has an obligation to reduce pain and distress in the animals under its care. Because the animals cannot communicate pain and distress to the veterinary staff, we must rely on the careful observations of animal care technicians and research personnel. In protocols proposing LD_{50} (lethal dose 50: the dose which kills 50% of the sample population) studies, the DCM will need the cooperation of investigators to ensure humane endpoints. The DCM will require the following in an effort to minimize pain and distress in animals assigned to LD_{50} studies:

1. Cages must be clearly marked by the investigator to indicate those animals currently assigned to the LD_{50} experiments. If "blinding" is necessary, a key to study assignments must be provided to DCM personnel PRIOR TO INITIATION OF THE STUDIES.
2. DCM personnel must be notified by the investigator at the time of inoculation of study animals with experimental compounds or disease agents.
3. Whenever possible, dosing should be titrated up (rather than down). That is, the smallest number of animals should be given the lowest projected LD_{25}- LD_{50} dose (usually based on prior LD_{50} studies in other rodent species or on prior LD_{50} studies using alternate routes of administration) and monitored for signs of morbidity/mortality. Depending on the results of theses initial studies, the dose can be titrated. *DOSING ACROSS THE ENTIRE POTENTIAL DOSE RANGE WITH LARGE NUMBERS OF ANIMALS IS DISCOURAGED.*
4. Records will be maintained in the animal room containing clinical observations of the inoculated animals. These observations will be made twice daily (including weekends and holidays) and will be maintained by DCM staff. The investigator and his/her associates are encouraged to make observations in this record as well. In addition, these records will be made available to the investigator as a means for study observations.
5. A DCM veterinarian will consult regularly with DCM Laboratory Animal Technicians to discuss the clinical status of the animals on study. Regular consultations with the investigator and/or his/her associates may also be necessary.

As is standard for any study requiring additional husbandry or veterinary staff, the per diem rate will be 200% of the regular per diem rate.

References:

Interagency Research Animal Committee: Recommendation on LD_{50} testing. Revised 1993, reapproved 1996.

National Research Council, Institute for Laboratory Animal Research: Humane endpoints for animals used in biomedical research and testing. Volume 41, 2000.