
POLICY ON USE OF DEATH AS AN ENDPOINT IN ANIMAL EXPERIMENTS

The earliest endpoint of an experiment must be chosen when animals are used and the animals should be euthanized promptly when they are experiencing unrelieved pain or distress prior to the defined experimental endpoint, if experimental validity will not be compromised.

The use of death as an endpoint in animal experiments is strongly discouraged. However, in some cases, death may be a necessary component of the study. Investigators conducting such a study must provide strong scientific justification to the IACUC for using death of animals as the experimental endpoint.

IACUC Guidelines on using death as an endpoint

An Investigator using death of animals as an endpoint must provide justifications and monitor the animals closely.

Justifications of using death as an endpoint:

Scientific justification for using death as an endpoint must be provided in writing as part of the animal care and use protocol and must be approved by the IACUC. The following points must be discussed/explained in the justification:

- 1 What alternative end points have been considered, and why death as an endpoint was selected.
- 2 Has the LAC veterinarian been consulted on alternatives to death as an endpoint? If not, please do so.
- 3 Why morbidity (i.e. affected with disease and illness) as an endpoint cannot be used.
- 4 Whether animals will be euthanized when moribund (i.e. in the state of dying or clinically irreversible condition leading inevitably to death) and if not, what scientific information is to be gained in the interval between moribundity and death, or how it would jeopardize the scientific validity of the study.
- 5 Why pain relieving measures cannot be utilized.
- 6 Number of animals to be used and why this is the minimal number of animals required (e.g., reduction of animal number by replacing the conventional LD₅₀ method with alternatives such as Up and Down Procedure (UDP) for determination of acute oral toxicity of chemicals).

Monitoring animals in studies using death as an endpoint

Full approval from the IACUC has to be obtained before starting the experiment. An Investigator should comply with the following while carrying out the experiments:

- 1 The LAC veterinarian must be informed of the animals involved and instruction on the cage card indicating death as an endpoint must be placed on every cage at the onset of experiments.
- 2 Animals should be **monitored daily by personnel experienced in recognizing signs of pain, distress and morbidity** (illness, injury, or abnormal behaviour) as given in [Attachment B](#).
- 3 The frequency of observation should be increased to at least twice daily (in the early morning and the late afternoon including weekends and holidays) when animals exhibit the above or other signs of pain and distress. Designated personnel, including a veterinarian, should be notified promptly to assess the animals' condition and establish a plan of action. It is good practice to determine, in advance of an emergency, what procedures should be used.
- 4 Consideration should be given to moving animals from group housing situations to individual cages when their condition deteriorates to the point that injury from other animals is likely, and/or access to food and water becomes difficult. Dead animals must be promptly removed.
- 5 Written records must be made of all monitoring sessions indicating the time and date of the observation, the person performing the observation, and any findings (such as number of animals demonstrating clinically abnormal behaviour, number of animals found dead, etc). These records must be kept on file and made available to the LAC/IACUC.