Establishment of Humane Interventions and Endpoints

A humane endpoint can be defined as: ‘the earliest indicator in an animal experiment of (potential) pain and/or distress that can be used to avoid or limit pain and/or distress by taking actions such as [euthanasia] or terminating or alleviating the pain and distress’ (Hendriksen and Morton, 1999). For more information on how to determine humane endpoints for research animals: [https://www.humane-endpoints.info/en ]

The humane endpoint is in contrast to the “experimental endpoint” of a study, which occurs when the proposed scientific aims and objectives have been reached.

The use of humane interventions/endpoints provides an alternative to experimental endpoints that may otherwise result in unrelieved or severe animal pain and distress including death. The humane intervention and/or endpoint should be relevant to the study and objective.

To best assess proposed humane endpoint considerations in a protocol, the IACUC and veterinary staff will need the following key information to be included in the animal use form (AUF):

- precise definition of the humane endpoint (including assessment criteria)
- consideration of species-specific body condition scoring (BCS) algorithms
- frequency and scheduling of animal observation, to include increased frequency of body weight measurements, appetite, attitude, etc.
- training of personnel responsible for assessment and recognition of described humane endpoints
- actions to be taken for animal health preservation upon reaching a described humane endpoint

Establishment of species-specific study-appropriate humane interventions and endpoints should involve the PI, the CAR or Farms Veterinarian, and the IACUC, are to be defined (when possible) prior to the initiation of the study. Please contact carvets@msu.edu with any questions on humane endpoints.