|  |  |  |
| --- | --- | --- |
| ACEC No: | Cage No~~.~~ | Animal ID: |
| CI/Researcher: | Species / Strain:  | Sex: |
| Phone: | Date of Birth: |
| Email: | Procedure and Date performed (if applicable): |
| Age of animal |  |  |  |  |  |  |  |  |
| Date of monitoring |  |  |  |  |  |  |  |  |
| **CLINICAL OBSERVATION - UNDISTURBED** |
| **Activity:** normal = **0**; isolated = **1**; huddled/inactive = **2**; moribund/fitting/unresponsive = **3** |  |  |  |  |  |  |  |  |
| **Posture:** moderately hunched = **0**;markedly hunched = **2**; trembling = **3** |  |  |  |  |  |  |  |  |
| **Movement/Gait:** normal = **0**; slight incoordination = **1**; tiptoe walking or reluctance to move = **2**; staggering/limb dragging/paralysis = **3**  |  |  |  |  |  |  |  |  |
| **Coat condition:** grey hair, slightly unkept, bald patches, mild piloerection = **0**; extensive alopecia unkempt, piloerection, staining around penis/vagina = **1**; whole body alopecia, very unkempt, marked piloerection, incontinence = **3** |  |  |  |  |  |  |  |  |
| **Eating/drinking:** normal = **0**; decreased intake 1st day = **1**; decreased intake more than 1 day = **2**; decreased intake over 2 days = **3** |  |  |  |  |  |  |  |  |
| **Respiration:** normal = **0**; rapid shallow = **1**;rapid abdominal breathing = **2**; laboured, irregular, skin blue = **3** |  |  |  |  |  |  |  |  |
| **CLINICAL OBSERVATION - ON HANDLING** |
| **Alertness:** normal = **0**; dull, depressed = **1**; reduced response = **2**; unconscious = **3** |  |  |  |  |  |  |  |  |
| **Body weight** (grams and score): normal weight & growth rate = **0**; reduced growth weight =**1**; chronic weight loss>15% = **2**; weight loss equal to or >20% = **3** |  g |  |  |  |  |  |  |  |
| **Dehydration:** none = **0**; skin less elastic = **1** mild skin tenting = **2;** severe skin tenting, sunken eyes, not responding to treatment = **3** |  |  |  |  |  |  |  |  |
| **Eyes, Nose:** normal = **0**; wetness/ dull eyes = **1**;discharge/squinty eyes = **2**; coagulated nasal discharge/matted eyes = **3** |  |  |  |  |  |  |  |  |
| **Faeces:** normal = **0**; soft but formed = **1**; loose, soiled peri-anal area or mucoid = **2**; watery or no faeces for 48hrs or blood = **3** |  |  |  |  |  |  |  |  |
| **Other abnormalities:** External tumours, (e.g. subcutaneous, mammary) (**T**); Rectal prolapse(**RP**); **Females:** Vaginal Prolapse (**VP**)**Males:** Distended urinary bladder (**DUB**); Enlarged preputial gland (**EPG**); Penile prolapse (**PP**) |  |  |  |  |  |  |  |  |
| **Body Temperature** (basal t0 measured at 15mos & 24mos) **\*\***Basal t0 = **0**; 10C ↓= **1**; 20C ↓ = **2**; >30C ↓ = **3** |  |  |  |  |  |  |  |  |
| ***Treatment/support:*** *(e.g. fluids, antibiotics, mushy food, hydrating gels, etc.)* |  |  |  |  |  |  |  |  |
| **Other Comments:** |  |  |  |  |  |  |  |  |
| **Monitored by:** |  |  |  |  |  |  |  |  |

***\**** *Aged mice from 15 months of age*

***\*\**** *Body temperature measurement**optional but useful as an adjunctive tool**for euthanasia.*

**Recommended frequency for enhanced monitoring of aging animals:**

**Increased monitoring and immediate veterinary intervention required** if a score of 2 is recorded for any individual clinical observations listed above or presence of ‘other abnormalities’.

**Immediate euthanasia is required** if a score of 3 is recorded for any individual clinical observation as listed above or animal is not responsive to veterinary intervention.

Based on a score of any criteria as listed above:

* **Score = 0** minimum of every 2 weeks from 15 months of age; weekly from 20 months of age
* **Score = 1** increase frequency to minimum 1x per week regardless of age
* **Score = 2** increase frequency to minimum 2-3x per week or more frequently as per ACEC approval

**REFERENCES**

* <http://www.dpi.vic.gov.au/agriculture/about-agriculture/legislation-regulation/animal-welfare-legislation/codes-of-practice-animal-welfare/care-of-laboratory-mice-rats-guinea-pigs-rabbits>
* Morton D. B. (2000). A systematic approach for establishing humane endpoints. ILAR journal, 41(2), 80–86. <https://doi.org/10.1093/ilar.41.2.80>
* Morton, D. B., & Griffiths, P. H. (1985). Guidelines on the recognition of pain, distress and discomfort in experimental animals and an hypothesis for assessment. The Veterinary record, 116(16), 431–436. <https://doi.org/10.1136/vr.116.16.431>
* Toth L. A. (2018). Identifying and Implementing Endpoints for Geriatric Mice. Comparative medicine, 68(6), 439–451. <https://doi.org/10.30802/AALAS-CM-18-000022>
* Trammell, R. A., Cox, L., & Toth, L. A. (2012). Markers for heightened monitoring, imminent death, and euthanasia in aged inbred mice. Comparative medicine, 62(3), 172–178.
* Wilkinson, M. J., Selman, C., McLaughlin, L., Horan, L., Hamilton, L., Gilbert, C., Chadwick, C., & Flynn, J. N. (2020). Progressing the care, husbandry and management of ageing mice used in scientific studies. Laboratory Animals, 54(3), 225–238. <https://doi.org/10.1177/0023677219865291>
* UNSW Guidelines for Monitoring and Management of Rectal Prolapse in Mice <https://research.unsw.edu.au/document/Guidelines%20for%20Monitoring%20and%20Management%20of%20Rectal%20Prolapse%20in%20Mice_2020_Final.pdf>