NTU-IACUC Policies for Special Procedures

Before submitting an IACUC application, applicants should refer and adhere to the NTU-IACUC Policies for Special Procedures. For any exemptions from the following, there must be convincing scientific justification provided to the IACUC.

1. **Tumor Size**
   Tumour sizes must not be greater than 1.5cm (at largest dimension) or 2000mm³ in total volume.

2. **Physical Restraint**
   Rodents can be restrained but at the minimum period required to accomplish the research objective. No more than 6 hours of physical restraint, without opportunity to exercise for at least 1 hour.

3. **Tail Clip (mice)**
   A single tail clip of up to 1cm is allowed. No anesthesia required for mice up to 2 weeks of age.

4. **Toe Clip (mice)**
   Generally discouraged, but allowed with justification. No anesthesia required for mice up to 12 days of age.

5. **Blood Collection**
   No more than 10% of blood volume in a single bleed and no more than 20% in a two week period.

6. **Food and/or Water Restriction**
   Overnight fasting is generally allowed for a period up to 16 hours. Behavioral projects must consider alternative methods of motivation.

7. **Multiple Survival Surgeries**
   Generally discouraged, but can be considered if required to achieve the desired physical or physiological effect and there is no alternative available. Sufficient time between surgeries must be allowed for proper recovery, as advised by Attending Veterinarian.

8. **Weight Loss**
   No more than 20% weight loss over an extended period or no more than 10% weight loss over a short period (e.g. 5 days) Weight of growing animals should be compared to age matched cohorts.
9. **Death as an endpoint**

Death as an endpoint is not approved. Investigators must humanely euthanize all moribund animals rather than allowing them to die spontaneously.

10. **Humane Endpoints**

Investigators must propose humane endpoints based on potential complications of the specific study. If unexpected adverse outcomes occur during the conduct of a study resulting in death, euthanasia or therapeutic intervention, this should be reported to the IACUC in an amendment. The humane endpoints of the study should be revised in the amendment to reflect the potential for these adverse outcomes recurring, describing therapeutic intervention.

11. **Physical Methods of Euthanasia**

Decapitation of mice and rats using a guillotine and cervical dislocation should be done under anesthesia. In rare cases, with acceptable scientific justification, the IACUC may approve these methods without anesthesia, but must assure that they are performed by a skilled individual.

12. **Rodent Surgeries**

Sterile technique should be applied to survival surgeries in rodents. This includes removal of fur from and scrubbing of the incision, use of sterile instruments and some form of drape. A dedicated operating room is not required, but the area where surgery is performed (e.g., investigator’s lab) should be clean and dedicated for that purpose while surgery is performed. Other activities in the surrounding areas should be minimized to prevent contamination of the surgical site.

13. **Non-compliance**

Reports of non-compliance and/or animal welfare concerns will be investigated by the IACUC. The immediate welfare of the animals will be the first priority during the investigation. Corrective actions may range from amending procedures and re-training individuals to suspension of the protocol activities. In cases of chronic, willful non-compliance the individual’s privileges to conduct animal research may be withdrawn.

14. **Footpad injections**

Footpad injections in rabbits are prohibited. Where scientific justification is provided, footpad injections may be permitted in rodents, but only in one hind foot, and with the animals housed on soft bedding. Suggested maximum injection volumes can range from 0.01 to 0.05 for mice and 0.10 ml for rats. The need for footpad injections must be critically evaluated by the IACUC.