**DREXEL UNIVERSITY**

**IACUC**

**DOSING VOLUME POLICY**

The following are appropriate dosing volumes for the various laboratory animal species. Figures represent the maximum volume not to be exceeded for a single once per day administration. The veterinary staff is available to discuss appropriate volumes for species not listed.

All administered substances must be approved by the IACUC. Volumes that exceed those listed must be stated in the IACUC protocol, scientifically justified, and should be discussed with an ULAR veterinarian prior to submission.

MAXIMUM DOSING VOLUMES (ml/kg)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **GAVAGE** | **IV[[1]](#footnote-1)** | **IP** | **SC[[2]](#footnote-2)** | **IM[[3]](#footnote-3)** |
| **MOUSE** | 10 | 5 | 10 | 5 | 3c |
| **RAT** | 10 | 5 | 10 | 5 | 2 |
| **RABBIT** | 10 | 5 | 5**b** | 5 | 0.3 |
| **CAT** | 10 | 5 | 2 | 5 | 0.3 |
| **SWINE** | 10 | 5 | 5b | 5 | 0.3 |

**b**The intraperitoneal route of administration is infrequently used in rabbits and swine.

cThe intramuscular route of administration is infrequently used in mice. **The thigh muscle is the preferred injection site for this species.**

References

1. Harkness, J.E. and Wagner, J.E., The Biology and Medicine of Rabbits and Rodents, 4th ed., Williams & Wilkins, 1995.
2. Foster, H.L., Small, J.D., and Fox, J.G., The Mouse in Biomedical Research, Vol. III, Academic Press, 1983.
3. Gay, W.I., Ed., Methods of Animal Experimentation, Vol. I, Academic Press, 1965.
4. Hull, R.M., Guideline limit volumes for dosing animals in the preclinical stage of safety evaluation, Human and Exptl Tox, 14, 305, 1995.
5. Diehl, et.al.,A Good Practice Guide to the Administration of Substances and

Removal of Blood,Including Routes and Volumes, , Journal of Applied

Toxicology, 21, 15–23 (2001)

1. Hawk, Leary, Morris. Formulary for Laboratory Animals, 3rd Ed., 2005, Blackwell Publishing
2. K. E. Quesenberry and I. W. Carpenter, Ferrets, Rabbits, and Rodents Clinical Medicine and Surgery, 2nd Edition, , Saunders, (Elsevier), St. Louis, Missouri

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1. Volumes near the maximum must be given very slowly; e.g., over a period of a minute or longer.

   [↑](#footnote-ref-1)
2. More than one site should be used when administering larger volumes or frequent administration subcutaneously. The veterinary staff should be consulted in making this decision.

   [↑](#footnote-ref-2)
3. Appropriate volumes for intramuscular administration may vary depending on the irritancy of the solution. If the potential for irritancy exists and/or larger volumes need to be used, injection of smaller volumes into multiple sites is recommended.

   [↑](#footnote-ref-3)