

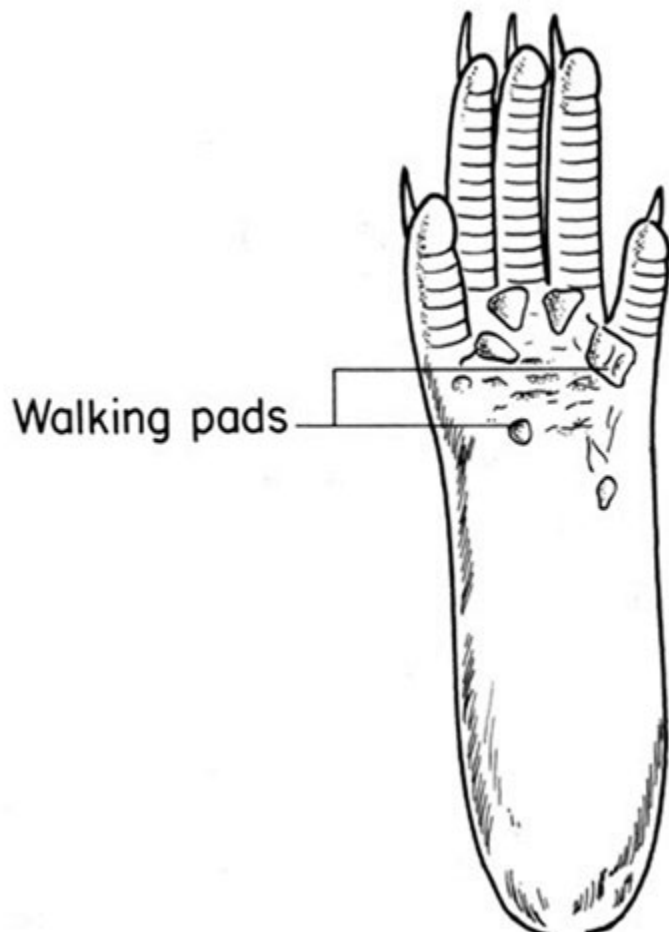
## Standard Operating Procedures (SOP) for Administered Agents – Supplement to University Standard for Administered Agents

### *Foot Pad Injection Standard Operating Procedure*

- Recommend disinfect the injection site with an approved skin disinfectant<sup>4</sup>
- Use a 25G needle or smaller<sup>5</sup>
- Inject with the bevel facing the skin while going in with the needle
- Push the needle into the skin past the bevel before injecting
- Withdraw the needle slowly from the injection site while pressing down lightly on top of the injection site
- Keep firm pressure on the injection site for a few seconds once the needle is removed. No injected material should be leaking from the injection site



Dorsal aspect



Ventral aspect

## Administration Volume Standard Operating Procedure

Route	Mouse		Rat	
	Recommended	Maximum (in ~25g mouse)	Recommended	Maximum (in ~300g rat)
SC	10 ml/kg	40 ml/kg (1 ml)	5.0-10 ml/kg	10 ml/kg/site (3.0 ml)
IP	20 ml/kg	40 ml/kg (1 ml)	10 ml/kg	10 ml/kg/site (3.0 ml)
IM	0.025 ml/site*	0.05 ml total	0.1 ml/site	0.2 ml/site (200 µl)
Oral (gavage)	≤ 5 ml/kg	5 ml/kg (125 µl) *With scientific justification, this may be increased to 10 ml/kg in mice fasted 1-2 hours <sup>10</sup>	≤ 5 ml/kg	5 ml/kg (1.5 ml) *With scientific justification, this can be increased to 10 ml/kg in rats fasted 1-2 hours <sup>10</sup>
IV (bolus)	5.0 ml/kg	5.0 ml/kg (125 µl)	5.0 ml/kg	5.0 ml/kg (1.5 ml)
IV (continuous)	2.0-4.0 ml/kg/hr	4.0 ml/kg/hr (100 µl)	2.0-4.0 ml/kg/hr	4.0 ml/kg/hr (1.2 ml)
ICV		4.0 µl		4.0 µl
Brain site specific	0.1-5.0 µl	5.0 µl	0.1-5.0 µl	5.0 µl
Intranasal	35-50 µl	50 µl	35-50 µl	50 µl
Intratracheal		50 µl		100 µl
Intradermal		0.1ml/site		0.1ml/site
Retro-orbital	5.0-30 µl	150 µl	N/A	N/A

\* Site for IM injection must be quadriceps muscle or equivalent size muscle.

## Needle Gauge

Species	Injection Site and Needle Gauge			
	SC	IM	IP	IV
Feline	Scruff, Back 18-22 Gauge	Quadriceps 20-25 Gauge	21-25 Gauge	Cephalic Vein 20-25 Gauge
Canine	Scruff, Back 18-25 Gauge	Quadriceps 20-25 Gauge	21-22 Gauge	Cephalic Vein 18-25 Gauge
Ferret	Scruff, Back 20-25 Gauge	Quadriceps 21-25 Gauge	21-25 Gauge	Cephalic Vein 20-25 Gauge
Guinea Pig	Scruff, Back 20-25 Gauge	Quadriceps 25 Gauge	22-25 Gauge	Ear Vein or Saphenous Vein 25-27 Gauge
Hamster	Scruff, Back 22-25 Gauge	Quadriceps 25-30 Gauge	22-25 Gauge	Femoral Vein or Jugular Vein 25-27 Gauge
Mouse	Scruff, Back 25-30 Gauge	Quadriceps 27-30 Gauge	25-27 Gauge	Lateral Tail Vein 25-28 Gauge
Primate (Small)	Scruff, Back 20-25 Gauge	Quadriceps 22-25 Gauge	22-25 Gauge	20-25 Gauge
Primate (Large)	Scruff, Back 18-25 Gauge	Quadriceps, Triceps 22-25 Gauge	20-22 Gauge	20-25 Gauge
Rabbit	Scruff, Flank 20-25 Gauge	Quadriceps, Lumbar Muscles 22-25 Gauge	22-25 Gauge	Marginal Ear Vein 20-25 Gauge
Rat	Scruff 22-25 Gauge	Quadriceps 25 Gauge	22-25 Gauge	Lateral Tail Vein 22-25 Gauge