Research and Innovation Division

Research Animal Standard Operating Procedure

SOP# 119

Research Animal Standard Operating Procedures (SOP) must meet the following criteria:

1. Describe procedures or activities involving research animal(s) common to more than one research project.

2. Support the handling and or performance or undertaking of a procedure(s), involving an animal, in the same way on each occasion it is performed.

3. Describe a procedure or activity involving a research animal(s) undertaken by more than one person; and

4. Describe a procedure or activity involving a research animal(s) that will be undertaken in more than one location.

Name of Procedure	Oral Gavage	
Species	Mouse and rat	
ACEC	**Reference**	SOP#119-Mar22-Oral Gavage- Mouse and rat
	Author	Phil Hansbro
	Version	1.2
	Date approved	31 March 2022
	Date for review	31 March 2025
	Procedure classification 1. Observation involving minor interference 2. Animal unconscious without recovery 3. Minor conscious intervention 4. Minor surgery with recovery 5. Major surgery with recovery 6. Minor physiological challenge 7. Major physiological challenge	6
Ethical considerations	1. Respect for animals must underpin all decisions and actions involving the care and use of animals for scientific purposes. 2. The procedure must be performed according to current best practice to support the wellbeing of the animal. 3. Persons performing this procedure must be competent in the procedure or be under the direct supervision of someone who is competent.	

Details

1. Purpose

Administration of substance by Oral Gavage – Mice and rats

2. Description of procedure

1. Equipment:

1.1 Sterile (autoclaved) gavage needles (rounded bulb tip to prevent injury to GI tract.
1.2 1ml syringes
1.3 Isoflurane + anaesthesia machine (see appropriate SOP for operation)
1.4 Inoculant

2. Method:

2.1 Prepare inoculant material so that the concentration required is in a volume of up to 200µl.
2.2 Lightly anaesthetise each animal following SOP#6 – Mar20 - Isoflurane anaesthesia of the rat and mouse.
2.3 Pick the animal up by grasping the skin on the back of the neck firmly with your thumb and pointer finger. Gently turn the animal over so it faces the operator in vertical position.
2.4 The animal's mouth should be slightly open when held correctly.
2.5 Measure the distance from the last rib to the mouth and note this distance on the gavage needle. This is the length of needle that should be inserted (grasping the needle between forefinger and thumb in the correct position ensures you will not go too far).
2.6 The round-bottomed gavage needle (which is connected to a 1ml syringe containing substance of choice) is gently inserted into the oesophagus, starting at a diagonal angle and straightening up as the needle is advanced to the measured length. This is to minimise the risk of entering the trachea with the needle. Passing the needle should be smooth and encounter no resistance.
2.7 Inject the substance.
2.8 Gently withdraw the gavage needle and lie the animal it on its back in the bottom of its cage and watch that its breathing is normal and it rights itself (this should occur in the next 5-10 seconds).
2.9 Mice are continuously observed by the researcher during and after operation.

3. Substances administered

Drug name (**generic** name, not trade name)	Dose rate (**mg/kg body weight**)	**Route**	Timing of administration, and frequency *(e.g. 30 minutes pre-operative, to induce anaesthesia, during procedure, at specific intervals during the procedure)*
Isoflurane	Varies from 1-5% in oxygen (1-3 l/min)	inhalation	Immediately prior to procedure requiring anaesthetised animal.
Substance to be administered	10 mls/kg maximum volume (200UL in a 20g mouse)	Oral gavage	During procedure

ACEC Chair