

Document Number: ANP042	Title: GLUCOSE TOLERANCE TEST IN RATS AND MICE <i>CONFIDENTIAL INFORMATION</i> MOLECULAR MEDICINE RESEARCH INSTITUTE	Effective Date: July 2007
Section: Animal Research		Supersedes Date: NA
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1.0 OBJECTIVE

- 1.1 The objective of this procedure is to describe the procedure for conducting glucose tolerance tests in rats and mice.

2.0 SCOPE

- 2.1 This procedure applies to animals used for experimentation.

3.0 POLICY

- 3.1 It is the policy of MMRI to establish written and approved procedures to assure that the animals are treated in a humane manner according to the Guide for the Care and Use of Laboratory Animals and educating personnel utilizing animals in their research.

4.0 RESPONSIBILITIES

- 4.1 It is the responsibility of Manager of Animal Research or designated alternate to implement this procedure and revise it when necessary.

5.0 REFERENCES

- 5.1 SOP# ANP006, Animal Handling, Restraint and Transfer
5.2 SOP# ANP012, Collection of Blood, Urine and Fecal Samples

6.0 SAFETY PRECAUTIONS

- 6.1 It is the responsibility of all personnel to use good judgment and safe practices in the laboratories. Protective clothing (e.g., laboratory coats, coveralls, boots, face masks, aprons, rubber gloves and safety glasses) are provided by the company.

7.0 EQUIPMENT AND MATERIALS

Animal clippers and blade #40
70% Isopropyl Alcohol
Gauze Sponges
Syringes (1.0 mL)
Heating Pads
Magnifying loop or dissecting scope.
Broome restrainers
Petroleum jelly or any topical ointment
d-glucose
0.9% sterile saline or sterile water
Hypodermic needles, gauge 20-23
Micro-hematocrit capillary tubes (heparinized)

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Glucometer (e.g. Lifescan)

8.0 PROCEDURE

- 8.1 Fast animals overnight (12-16 hours)
- 8.2 Prepare glucose solution by dissolving d-glucose in 0.95 saline or sterile water
- 8.3 Administer 1-3 g/kg body weight glucose solution either orally, intravenously (IV) or intraperitoneally (IP)
- 8.4 Collect blood from the tail or saphenous vein (SOP # ANP012) at the following time points: 0, 30, 60, 90 and 120 minutes after glucose loading. Earlier time points may be collected after IV or IP glucose administration.
- 8.5 Apply a drop of blood to the glucose strip and read blood glucose levels from the glucometer.
- 8.6 Record glucose readings