

Glucose Tolerance Test (GTT)

Background and Service Details: Glucose tolerance test (GTT) measures the clearance rate of high glucose load from animal body. GTT can be used for rapid pharmacological screening of anti-diabetic drug candidates in rodents by assessing hypoglycemic activity of test substances following acute or chronic administration. This method is highly convenient for quick investigation of various routes and time schedules for compound and glucose administration (PO, IP, IV, SC or IM). In a typical oral glucose tolerance test (OGTT) experiment, a single dose of test compound is administered to a group of six C57BL mice by gavage, followed by oral dosing with glucose solution (2 g/kg) 30 minutes later. Glucose levels in blood are monitored using strip glucometer before compound administration (-30 min), before glucose challenge (0 minute) and at 15, 30, 60, 90 and 120 minutes. Two control animal groups of the same size are treated with blank vehicle or Metformin.

Deliverable: Report including description of the study design, methodology, raw experimental data, graphs and interpretation.

Sample Submission: Dry compound or compound in a pre-made dosing formulation. The amount required depends on the dosing levels. For example, to treat 6 mice at 10 mg/kg, single dose of about 2 mg of compound is needed.