2.2.5 *In vivo* Glucosamine, cimetidine and rifampin effect on propranolol bioavailability

2.2.5.1 Drugs preparation

PRN reference solution, cimetidine, rifampin and GlcN solutions were all prepared by dissolving an accurately weighed amount of PRN, cimetidine, rifampin and GlcN in distilled water to obtain 4, 1, 2 and 40 mg/ml, respectively.

2.2.5.2 Study protocol

All solutions were freshly prepared on the day of experiment and were administered to fasting rats by stainless steel oral gavage needles (Harvard Apparatus, Kent, UK). For all experiments, rats were marked on tail for identification, weighed, and randomized into four groups (n=7). Zero blood samples were pooled from rat's tail for all groups.

Control group received 4 mg/ml of PRN reference solution preceded by water 30 min before the administration of PRN. Rats were divided into 3 groups and received GlcN or cimetidine or rifampin tested solutions at concentration of 40, 1 and 2 mg/ml, respectively. After 30 min all groups received 4 mg/ml of PRN solution. Rats in GlcN group were maintained on drinking water containing 25 g/L GlcN for three days prior to GlcN administration. Rats in rifampin experiment received a daily single dose of rifampin solution (2 mg/ml) for two weeks before the day of experiment. For all groups, blood samples were pooled from rat's tail at different time intervals (0.25, 0.5, 1, 2 3, 6, 8 and 10 hr). Blood was left to clot, centrifuged for 10 min at 14000 rpm. Then, serum was separated, transferred directly into eppendorf tubes, and kept in freezer at -20 °C till HPLC analysis.