5.0 TOXICITY STUDIES

5.1 Introduction
Acute oral toxicity study was conducted for crude ethanolic extract and its fractions chloroform and hexane of *Asparagus racemosus leaves*, *Aerva lanata leaves* and *Abrus precatorius seeds* as per OECD guidelines 420 (OECD, 2001).

5.2 Experimental work
The albino mice of single sex, weighing between 20 to 25 gm were selected and divided in to 9 groups each consisting of 6 animals. They were maintained under standard conditions (room temperature at 22±3°C, 12 hrs light/dark) and allowed free access to water along with standard pelleted diet for one week before the experiment. The animals were subjected for acute toxicity study using each extract and its fractions at a dose of 2000 mg/kg orally in 9 groups and observed at regular intervals of 1, 2, 4, 8, 12, 24 hours and daily thereafter for a total of 14 days for skin changes, morbidity, aggressiveness, increase oral secretion, sensitivity to the sound and pain as well as respiratory movements and mortality.

5.3 Results
The selected extracts and its fractions showed neither visible sign of toxicity nor mortality at a dose of 2000 mg/kg for *Asparagus racemosus* and *Aerva lanata*. However, for *Abrus precatorius* the ethanolic extract showed abnormal behaviour at 2000 mg/kg dose, hence the experiment was conducted at dose of 500 and 1000 mg/kg for *Abrus precatorius* and showed neither visible sign of toxicity nor mortality upto dose of 1000 mg/kg. The results clearly indicated non toxicity of the extracts at a dose of 2000 mg/kg for *Asparagus racemosus* and *Aerva lanata*;
and 1000 mg/kg for *Abrus precatorius*. Hence there is no LD$_{50}$ as there was no mortality and all the extracts tested are considered safe and nontoxic upto 2000 mg/kg for *Asparagus racemosus* and *Aerva lanata*; and 1000 mg/kg for *Abrus precatorius*.

Based on the above results, the following doses was selected for *in-vivo* studies:

- **Asparagus racemous** - 200, 400 and 800 mg/kg
- **Aerva lanata** - 200, 400 and 800 mg/kg
- **Abrus precatorius** - 50, 100 and 200 mg/kg.