Mice (25-30 g) were put into six groups of five mice each. They were fasted for 3 h and doses of P. muellerianus extract (30,100, 300, and $1000 \mathrm{mg} \mathrm{kg}-1)$ were orally administered. Distilled water was administered to the control group and the mice were observed for 24 h after treatment. Mice were also observed for two weeks for any lethality.

Mice (25-30 g) of both sexes were randomly selected and divided into seven groups of five mice in each group. They were fasted overnight and given ZAE (30, 100, 300, 1000, 3000 and 5000 $\mathrm{mg} / \mathrm{kg}$, p. o.). The control group received $10 \mathrm{ml} / \mathrm{kg}$ p.o. of normal saline. The mice were observed at $0,15,30,60,120$ and 180 min after ZAE administration for for any toxic effects or death. The mice were also observed at 24 h and daily for up to 14 days to detect any possible delayed deaths.

## Results

There was no lethality recorded during this study

The mice did not exhibit any toxic signs such as respiratory distress, decreased mobility and convulsions among others. Also, all the mice survived throughout the 14-day study period.

Results from the acute toxicity study did not show any toxic effect that could be attributed to drug treatment. The $\mathrm{LD}_{50}$ of ZAE after oral administration to mice could be estimated to be above $5000 \mathrm{mg} / \mathrm{kg}$. This indicates that ZAE is relatively non-toxic based on the recommendations of the Organisation for Economic Co-operation and Development (OECD) for chemical labelling and classification of acute systemic toxicity based on oral $\mathrm{LD}_{50}$ values.

Even though, acute toxicity studies provide relevant data, they have limited clinical application as toxic effects of drugs do not only occur with the administration of single large doses and also the cumulative toxic effects at very low doses occur in only multiple dose administration (Hemalatha and Hari, 2014).

| Mortality |  |  |  |
| :---: | :---: | :---: | :---: |
| Dose (mg/kg) | No of death/Total number of animals | Latency (min) | Toxicity Signs |
| 0 | 0/5 | - | None |
| 30 | 0/5 | - | None |
| 100 | 0/5 | - | None |
| 300 | $0 / 5$ | - | None |
| 1000 | $0 / 5$ | - | None |
| 3000 | 0/5 | - | None |
| 5000 | $0 / 5$ | - | None |

