CONCLUSIONS

1. The pharmacognostic parameters established for the plant *Amorphophallus paeoniifolius* (Dennst.) Nicolson are very specific to the plant and they can be used for identification and authentication of the plant material. All these parameters are within the limits as prescribed by WHO. Therefore these can be further used for standardization and qualitative assurance of the plant material.

2. The corms of the plant *Amorphophallus paeoniifolius* contain sterols, alkaloids, tannins, flavonoids, carbohydrates, coumarins and triterpenes. Further corm possesses Quercetin and Gallic acid. In addition seven identifiable compounds viz., paracetyl pentaerythritol; 1,2-Benzenedicorboxylic acid- diethyl ether(CAS)Ethyl phthalate; 2-hydroxymethyl-3-methyl-oxirane; Tetradecanoicacid,12-methyl-methyl ester (CAS) methyl-12; Eicosanoic acid; 5-Nonen-1-ol; 7-Hexadecyne and other six compounds could not be identified.

3. Both the Methanolic extract and 70% Hydroalcoholic extract of corm of the plant posses totoal phenolic content to extent of $12.67 \pm 2.1 \text{ mg/gm}$ and $6.25 \pm 1.3 \text{ mg/gm}$ in terms of Catechol equivalent per gram of sample and total flavonoidal content $46.33 \pm 1.2 \text{ mg/gm}$ and $36.88 \pm 1.9 \text{ mg/gm}$ respectively in terms of Rutin equivalent per gram of the sample. Thus the phenolic content and flavonoidal content of methanolic extract was found to be higher than the 70% hydroalcoholic extract. Both the extracts possess significant antioxidant potency. Methanolic extract found to be superior to hydroalcoholic extract in this regard.
► Methanolic extract of corm of the study plant demonstrated significant dose dependent protection of liver against CCl₄, Paracetamol and Thioacetamide challenges.

► Pretreatment with methanolic extract protected the kidneys significantly in dose dependent manner against Cisplatin, Gentamicin and Paracetamol toxicity.

► Similarly the test extract treatment showed significant antiulcerogenic activity against experimentally induced ulcer induced by Indomethacin, Ethanol and Pyloric ligation.

The organ protective property of corms of *Amorphophallus paeoniifolius* (Dennst.) Nicolson can be attributed to the antioxidant potency of the plant. Further it may be concluded that Quercetin and Gallic Acid and other antioxidant principles that are present in the corms of the study plant are major contributors to the antioxidant and organ protective potency of the plant material.

**SCOPE FOR FURTHER STUDIES**

The present study indicated the presence of active secondary metabolites like Queceritin, Gallic Acid and other constituents. Out of nine phenolics only two were characterized and where as seven phenolic compounds could not be characterized. Hence, in the future scope of study isolation and characterization of all phenolics can be undertaken. Further antioxidant and organ protective potency of individual isolated compounds can be carried out so as to ascertain the therapeutic utility of each compound quantitatively. Even an attempt can be made to develop formulation containing these active principles and evaluate them for their efficacy in clinical conditions.