SUMMARY
SUMMARY

The present study is a comparative pharmacognostical, phytochemical and pharmacological study of two related Indian medicinal plants viz. *Pedalium murex* and *Martinia annua*. *P. murex* is widely used in Indian System of Medicines including Folk Medicine for many diseases. In the present scenario of dwindling natural resources especially medicinal plant species, it is necessary to document and validate existing medicinal plant species and to find out alternate or substitute for endangered or rare medicinal plants.

In the present work macroscopic, microscopic, physiochemical, phytochemical and pharmacological studies of the two species were carried out and the results compared. Whole plants of the two species were taken for the study since in Traditional Medicine whole plants are used as medicine. Pharmacopaeal standards for the two medicinal plants have been evolved. Identity of authentic samples from whole plant to extracts of the two species could be made possible by the present study. Physiochemical and microscopical study would help to identify the whole and powder samples. Anatomical studies of the leaf, stem, root and fruits of *P. murex* and *M. annua* would be of use in authentication of powders as well as whole parts. Phytochemical profiles of the extracts of the two species differentiate
and aid in the authentication and standardization of drugs prepared from these species. Pharmacological experiments on anti-inflammatory, diuretic and antimicrobial activities have proved their efficacy and validated their use in Indian System of Medicine and Traditional Medicine. *P. murex* has more anti-inflammatory and diuretic activities than *M. annua*.

Further isolation, characterization and structural elucidation of active principles and clinical studies on the isolated compounds would through more lights on their therapeutic usefulness and application and to pave the way for development of new therapeutic biological compounds.