CHAPTER - V

CONCLUSION
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Chlorophytum borivilianum is an important immunomodulatory and aphrodisiac drug used in Traditional System of Medicine. Mainly steroidal saponins are present in the plant which plays a vital role in the treatment of disease. This fact has been confirmed in the present investigation. Tissue culture work so far reported and the present investigations has given a clear understanding of the basal media and the different combination and concentration of the plant growth hormones for developing static, suspension culture and regeneration of plantlets.

As stated in the results and discussion, “the present study is an attempt in the direction for the useful utilization of biomass (regenerated leaves) developed from Chlorophytum borivilianum”. This attempt has been justified by carrying out: (i) Anti-inflammatory (ii) Analgesic (iii) Immunomodulatory Activity and (iv) Antimictobial Activity. These activities have been carried out for the first time in the extracts of regenerated leaves of Chlorophytum borivilianum. The results were subsequently compared with the activity of extracts of natural plant.

In the present investigation an attempt has been made for the first time to compare the different activities in the methanolic extract. It was significant to note that these activities were potent and statistically significant when they were compared with the standard drugs used for the study.

This is the first report on the efficacy of the methanolic extract of the biomass (regenerated leaves) obtained from in vitro culture. The results were very encouraging at the laboratory level. Further studies can be done to make these extracts in the clinical practice for the betterment of mankind.

Another significant work which has been reported in the present investigation is the standardization of the drug, quantitative analysis (Sarsasapogenin) and also the initiation of callus from the leaf explants. This study has been carried out in a systemic manner which has not been reported earlier.

In conclusion the present investigations are significant from the point of view of the development of a protocol for the regeneration of shoots from the callus and different
explants of the plant. However it is suggested that further work is necessary in order to develop the biomass in bioreactors for the production of active constituents. The biomass may also be subjected to immobilized cell technique which may facilitate the biotransformation of some important plant constituents or by genetically manipulating the cells in culture so that the technique may be useful at industrial level for the production of biological active constituent in tissue culture of *Chlorophylum borivilianum*. 