7. SUMMARY AND CONCLUSION

Nature is always been a major source of medicinal plants since long ago and plethora modern drugs have been taken from them. Lots of medicinal plant species used in treatment of diseases and disorders which affects number of people globally. Medicinal plants generate commercial demand of drugs and their products worldwide. Continue efforts made in recent years for introduction of drugs obtained from these plants, to common people. The agronomical practices for growing of medicinal plants have been developed. Herbal medicines are widely used by all community, either directly as folk remedies or medicaments. It are evident that many viable herbal drugs have been identified, evaluated and validated by their ancient folk healers for treatment of particular illness. It is the most prominent way for treating several illnesses, mostly in tribal and rural societies.

The need of hour is the development of action plan for escalates awareness about importance and values of plants as their healing effects. We should link indigenous traditional knowledge with modern technology. The presence of active chemical ingredients showed that they have a great biological activity. Indeed, these plants are much capable to cure some incurable illness from genesis. Currently, people suffering from chronic illness, turn their eyes towards herbal medicine. The advantage is that the medicinal plants are easily and abundantly available, cheaper, without any side effects. Health giving plants are our national heritage and wealth. Thus, primary requirement is to make uses of medicinal plants for health problems and major illness.

Furthermore, the word herbal is the symbol of safety as compare to the synthetic drugs, which have adverse effects on human body. The plant extracts segment has been generated revenue of  27.1 billion US dollar in 2016 and it will be expected to reach 44.6 US dollar up to 2024.

Present research work comprises of Pharmacological screening of *Hemidesmus indicus* L. (Stem & Leaves) and *Lantana camara* L. (Stem & Flowers) aqueous & ethanolic extracts.

Work indicates the usage of plants for treatment of allied illness and also validated scientifically by divergent pharmacological screenings.
The pharmacognostical study such as macroscopic examination and microscopic features of plant parts i.e., *H. indicus* (Stem & Leaves) and *L. camara* (Stem & Flowers) were studied out. The plant parts powder were also treated with various chemical reagents, changes in colour were observed and reported to study the Fluorescence analysis. The air-dried powders of plant parts were subjected to study the micromeric parameters. In this study various parameters such as angle of repose, bulk density and tapped density was calculated.

The physicochemical evaluation of plant parts were carried out. The shade dried coarsely powder of plant parts were extracted with ethanol and water in a soxhlet apparatus. The percentage yields of all four extracts along with their color, nature, and pH were presented. The extracts obtained after extraction were subjected to phytochemical screenings which revealed the presence of various active phytoconstituents.

Acute toxicity study carried out by OECD guideline 423 for determination of LD$_{50}$. Result indicates 200 mg/kg is effective dose (ED$_{50}$), for *H. indicus* & *L. camara*.

The aqueous and ethanolic extracts of the plants viz., *H. indicus* (Stem & Leaves) and *L. camara* (Stem & Flowers) were evaluated for various CNS activity viz., anti-inflammatory activity, analgesic activity, antipyretic activity, central muscle relaxant property, anti-convulsant activity, CNS stimulant or depressant activity, anxiolytic activity and sedative-hypnotics activity in different animal models. The results obtained indicate that the extracts found to have significant (P < 0.05). Aqueous extracts at test doses 400 mg/kg body weight was found to be more effective in all most all of the biological activity screened in compared to other extracts at different dose and standard drug.

Furthermore, all these activities of CNS are due to the presence of alkaloids, terpenoids and tannins which was also confirmed in preliminary phytochemical screening of the extracts of both plants.

Hence, it was proved and concluded from the present research work that Both Plant extracts were found satisfactory potent for CNS activities viz. to viz., analgesic effect, antipyretic effect, anti-inflammatory effect, central muscle relaxant property, anti-convulsant effect,
CNS depressant effect, anxiolytic effect and sedative-hypnotics effect in proper respective animal models.

Moreover, the test dose of 400 mg/kg has promising effects than other test doses in aqueous and ethanolic extracts of both plant parts.