6. SUMMARY AND CONCLUSION

Medicinal plants are widely used in management of diseases all over the world. Historically, the use of medicinal plants is as old as mankind and medicine. The relatively lower incidence of adverse reactions to plant preparations compared to modern conventional pharmaceuticals, coupled with their reduced cost, is encouraging both the consuming public and national health care institutions to consider plant medicines as alternative to synthetic drugs. Now-a-days herbal drugs are prescribed widely even when their biologically active compounds are unknown because of their effectiveness and no side effect in clinical experience. Large number of plants belonging to different families have been studied for their therapeutic properties. However, C. sinensis and T. chebula belonging to Theaceae and Combretaceae family respectively which have many medicinal properties, have not been studied for their antibacterial and pharmacological activities and hence the present study focused on anti inflammatory, hepatoprotective and antibacterial activity of C. sinensis and T. chebula were studied in albino rats by using methanolic extracts of both plants. The results were statistically analysed. From the investigations the following results were obtained.

➤ The phytochemical studies in C. sinensis and T. chebula showed the presence of alkaloids, flavonoids, carbohydrates, protein, phenols saponins, tannins, phytosterols, and terpenoids. Phlobatannins absent in C. sinensis and T. chebula.

➤ GC-MS analysis revealed the occurrence of 20 compounds in leaves of C. sinensis and 26 compounds in fruits of T. chebula.

➤ Antibacterial activity was exhibited methanolic extract of C. sinensis and T. chebula. Among the two plants, fruits extract of T. chebula showed potent antibacterial activity.

➤ Both C. sinensis and T. chebula showed hepatoprotective activity in CCl₄ induced rats. Hepatoprotective parameter such as alanine aminotransferase (ALT) aspartate aminotransferase (AST), alkaline phosphatase (ALP), total bilirubin, total Protein, gamma glutamate transpeptidase (GGTP) levels were significantly reduced in plant extract given CCl₄ induced rats. T. chebula exhibited the high hepatoprotective activity than C. sinensis.
An increase in the levels of antioxidant parameters such as SOD, CAT, GPx Vit-C, GSH Vit-E and Vitamin C in rats administered with plant extracts showed their antioxidant activity. Among the extracts, fruit extracts of T. chebula reported to have maximum antioxidant activity when compared to other extracts.

The identified bioactive compounds such as eugenol, resorcinol and squalene from C. sinensis; Piperidine, resorcinol and phenol from T. chebula were identified and these compounds are very effective against oral pathogens. These compounds can be utilized for the preparation of drugs against oral microorganisms. In addition, these plants possess anti inflammatory and hepatoprotective properties which could be utilized by general public, scientific community and medical practitioners.