CHAPTER 7

Conclusion
7. CONCLUSION

Phytochemical study of leaves and seeds of *Cassia occidentalis* Linn have shown that the presences of carbohydrate, flavanoid, alkaloid, tannin, coumarin, steroid, phenol are of great importance in the field of ayurvedic drug research. Presence of these constituents was observed in significant amount in polar solvents like water and alcohol. Moreover maximum extractive values were found with polar solvents, so 80% hydroalcoholic solvent was selected for extraction of leaves and roasted seeds of *Cassia occidentalis* Linn. In conclusion our data suggests that hydroalcoholic extract of leaves and seeds of *Cassia occidentalis* Linn. has potential anti-asthmatic activity that may be due to its bronchodilator, mast cell stabilization, anti-inflammatory and reduction of neutrophil adhesion property. It can be concluded that, instead of taking *Cassia occidentalis* seeds, it is far more convenient and effective to take *Cassia occidentalis* fast disintegrating tablet. There by patient compliance can be increased and percent of adulteration can be decreased and most importantly it is possible to fix the dose of this drug and dosage regimen by administering tablet of the *Cassia occidentalis*. On the basis of disintegration and wetting time results, it can be concluded that the formulation F1 was best compared to all other formulations. The prepared herbal fast dissolving tablets shows good disintegration property. The comparative study of several concentration range of super disintegrant yielded a conclusion that Kollidone at 5% concentration are suitable for the preparation of Herbal fast disintegrating tablets which will satisfy all the criteria and official limits. FTIR analysis of drug extract and final formulation showed no cases of drug extract incompatibility with excipients. From the HPTLC studies, it has been found that Hydroalcoholic extract of seed contain not a single compound but a mixture of compounds and so it is established that the pharmacological activity shown by them are due to the cumulative effect of all the compounds in composite. HPTLC peak profile of formulation of seeds showed same position of spot, which give idea about compatibility of excepients with drug extract. Further HPTLC study of non roasted seeds showed some same RF value as that of roasted seeds which indicates that there some constituents in seed retain after roasting which is responsible for activity. Analysis of seeds and leaves extract of *Cassia occidentalis* Linn UV-Visible spectroscopic technique showed that the presence of phenolic compound and
flavonoid which can be isolated and further screened for different kind of biological activities depending their therapeutic uses. Further research will be needed to find out the structural analysis of flavonoid compound by use of different analytical methods such as NMR and Mass spectrophotometer.

Hypothesis was given that By carrying out systematic pharmacognostic, phytochemical and phytopharmacological study of leaves and seeds of *Cassia occidentalis*, it’s possible to explore and put plant in more beneficial therapeutic use.

Finally, it can be concluded that by carrying out systematic pharmacognostic, phytochemical and phytopharmacological study of *Cassia occidentalis* Linn and incorporating the extract into fast dissolving tablet will definitely be efficient, convenient to patient and also shall increase compliance to therapy of asthma.