# INDEX

1 **Introduction** 1

1.1 Etiology of bronchial asthma 4
1.2 Pathophysiology of bronchial asthma 8
1.3 Signs and symptoms of asthma 26
1.4 Classification of anti asthmatic drugs 29
1.5 Ayurvedic concept of asthma 30
1.6 Holistic approaches for asthma 33

2 **Review of literature of plants** 41

2.1 *Albizia lebbeck* 41
2.2 *Euphorbia hirta* 55
2.3 *Sphaeranthus indicus* 66

3 **Aim of present work** 75

4 **Materials and methods** 78

4.1 Authentication of plant materials by morphological characters 78
4.2 Microscopical study of the plant materials 78
4.3 Collection and preparation of plant materials 78
4.4 Quality parameters 79
4.5 Preparation of successive solvent extracts 81
4.6 Qualitative analysis of extracts 81
4.7 Separation and analysis of phytomarkers 87
4.8 Pharmacological activity 101

5 **Results** 111

5.1 Pharmacognostical studies of the plant materials 111
5.2 Physico-chemical evaluation 129