Acknowledgement

Research is a never ending process involving a team of persons striving to attain newer horizons in the field of science. This study would have been completed because of the blessings of The Almighty God and the encouragement and cooperation of my family, friends, well-wishers and relatives. I am grateful to one and all, who have directly or indirectly helped me and guided me in the successful completion of this work.

The wise are as gentle as flowers and as strong as trees, this is what I can say about my esteemed guide, Dr Anita A. Mehta, M. Pharm, Ph. D., MAMS, Assisant Professor, Department of Pharmacology, L. M. College of pharmacy. I express my deep sense of gratitude to her for providing unceasing encouragement, constant and untiring guidance. She has been a constant source of inspiration and motivation through out the period of my work. She has always encouraged me to put in my best effort in whatever I did and tried to bring out the best in me. I am very much thankful for her creative and constructive criticism, whole hearted support, informative and critical discussion and friendly attitude during my work.

With deep appreciation and gratitude, I would like to thank Dr. R.K. Goyal, Professor, L.M. College of Pharmacy, Ahmedabad for extending selfless and whole hearted support throughout the research work. His leadership, knowledge, and unending encouragement has always shown new horizons. His critical and valuable suggestion has been a constant source of inspiration to me.

With immense gratitude, I would like to thank Dr. D.D. Santani, B. Pharm, M. Sc. (Med), Ph. D., M.B.A., F.I.C., Prof. and Head, Department of Pharmacology, L .M. College of Pharmacy, Ahmedabad., for his precious advice and valuable suggestions in my research work.

I would like to sincerely thank Dr. M. C. Gohel, Ph D, Principal, L. M. College of pharmacy for providing all infrastructure and resources for my research work.
I express my deep sense of gratitude to Prof. V.N. Lathia, Head of the PG Department, Government Ayurvedic College, Ahmedabad for his valuable guidance and co-operation for performing the clinical studies. I am also indebted to Mrs. Medhaben Jani, Supretendent, Ayurvedic medicinal and herbal garden, licensing authority of Ayurved, Siddha and Unani for helping me in selection of drug and for constant encouragement and moral support. I am also thankful to Dr. A. P. Kaswekar, BSAM; Dr. Nitaben Shah, MD (Ayu); Dr. J. B. Dagaya, BSAM; Mrs. Vibhaben Jani, Mr. E. T. Pancholi and staff members of Government Ayurvedic College Ahmedabd, for the help provided during my clinical studies. Special thanks to Dr. Sekhar Sharma for his valuable suggestions. I wish to thank all MD students, Preeti Shah, Babita Das, Rajlaxmi, Pravin Kumar, Pragna Shah, Hetal Acharya, Mira Sherathia and Kalpesh Joshi of Government Ayurvedic College, Ahmedabad, for their useful and timely help. I am also thankful to all patients who gave their consent and cooperation throughout the study.

I would like to express my sincere thanks to Dr. Naresh Patel, Prof. and Head Department of TB & chest Disease, New chest clinic, Astodia for granting the facility to carry out spirometry. I am also very grateful to Dr. Sanjay Tripathi, Asst. Prof. and Dr Nilesh Dutt, Asst. Prof. of chest clinic and Dr. Harjeetsingh Dumra for performing the pulmonary function tests of all patients.

I also take this opportunity to thank Ms. Bakulaben Shah, HOD, Dept. of Pharmacognosy, L.M. College of Pharmacy, for providing the facility to carry out phytochemical analysis. I am also indebted to Dr. Mamta Shah for constant encouragement and helping me during the course of my work. I am also thankful to Dr. K. N. Patel for his help and advice during my research work.

I am thankful to Mr. Janmejaybhai, Petlad Mahal Pharmacy, Petlad for preparing the Ghanvatis of Achyranthes aspera for clinical studies.

I am highly indebted to my M. Pharm guide, Maltiben Chauhan, Gujarat Ayurveda University, Jamnagar for her valuable guidance and granting me the facilities for microscopic work. Her caring nature and constant advice has helped
me lot during the course of my research work. I am also thankful to Dr. A.K. Pillai for his timely help.

A special thanks to Dr. G.B. Shah, Principal, K.B. Institute of pharmaceutical education and research for providing me the facility to carry out some of my pharmacological work.

I thank Mr. I. S. Rathod, Assistant Professor, Department of Quality Assurance, L. M. College of Pharmacy, for his support and help, as and when required. I am also thankful to Mr. A. Ramkishan, DCGI, for all the help, I ever required.

I will miss my duties if I forget to thank my friends Purvi, Chiluka, Archana and Bhumika for encouraging me and for extending their help whenever needed. With their continuous help and humour I have been able to complete this thesis.

I thank Chetanben, Krishnabhai, Shivabhai and Maheshbhai for their help. I also thank Sanjaybhai, Bharatbhai, Ashwinbhai and Joshi, for helping and co-operating me.

It is very difficult to express my feeling for my husband. He has constantly motivated me for my work. His support and encouragement have led to the successful completion of my research work. All I know is that without his care and faith in me, it was impossible for me to reach at this stage of my life. My level of energy would not have been so high if my children—Hemangi and Keval would have not kept a smile on their faces and patience during long hours of my working.

God is said to be omnipresent, and I have found his presence in my beloved parents who have always encouraged me for aspiring to higher targets. I am also indebted to my in-laws and family members for their love, affection, care and moral support during the entire course of my research studies. The chain of my gratitude would be definitely incomplete if I would forget to thank Yesha for helping me in computer work.

July, 2005

Babita Agrawal