Acknowledgements

At the outset I bow before merciful “Almighty Allah” Omnipotent, Omniscient and Omnipresent for enshowering His blessings upon me and making me able to complete this task.

It is a moment of benign benediction for me, an ecstasy to express my deep sense of gratitude and indebtedness to my research advisor Dr. Hisamuddin for suggesting a problem of vital interest, extending his guidance, continuous assistance, uneasing encouragement throughout this work and constantly endeavouring me to do better and work meticulously.

Thanks are also due to Prof. Ainul Haq Khan, Chairman, Deptt. of Botany, Aligarh Muslim University, Aligarh for providing me necessary facilities.

The completion of this degree was a cherished dream of my uncle Peerzada Atigullah Shah who recently left for his heavenly abode. So I would like to offer my humble tributes to this mentor whose life continues to be a constant source of inspiration to me. His legacy and principles are the guiding light that shape my present and will definitely inspire my future. May God enshower endless blessings to his soul.

Just the thought of expressing my gratitude to my bosom friend Farah plunges me in a deluge of emotions where I feel shortage of words to communicate my feelings for her care, affection and sisterly love and above all for being there with me even at the worst of my times.

The completion of this work owes much to my dearest friends Abid and Nudra for their wholehearted succour, invigorating suggestions and for the help they extended me by whatever means and whatever ways they could. My regards and affection are due to my friends Ruby, Shagufia, Rubhsana, Shahnaz, Dr. Asmat, Dr. Nuzhat, Subhana, Arshy, Shazia; my cousin Saadat; my colleagues Tariq and Nazir; my juniors
Tabassum, Janveer, Askar, Swarn and Meraj and my roommates Shehla, Zakia, and Rubina as they all deserve special appreciation for their friendly accompaniment and wise counsel.

I have nothing to offer my family members but this small piece of work as a token of love and respect. My vocabulary fails to express my sincere feelings to my adorable Mummy and Papa; revered Uncle and Ajay who sacrificed everything to give me the most and best education possible; to my sisters, Jeeji, Sister, Didi and Nazu who were there for me forever and who also sacrificed some of their interests for my benefit; to my brothers Sarlaj and Salar whose care, encouragement and fervent support helped me in every facet of this course and above all the beloved kids Sumaya, Muneeb, Asma, Yawar and Nasheen for their loving and stimulating backup.

Finally it's a pleasure to acknowledge my Mamu (Peerzada Mohd. Syed Chister) my paramount support and my brothers-in-law Mr. Nisar and Mr. Mushtaq and all my relatives for their constant encouragement, guidance and forebearance and above all their invaluable prayers.

Last but not least I am highly thankful to great visionary Sir Syed Ahmad Khan for laying the foundation of this great seat of learning, Aligarh Muslim University and I feel proud to be the part of this institution.

Lastly, my sincere thanks to Mr. Abdul Irfan (All-In-One Computers, Rafiq Complex, Aligarh) for patiently typing and formatting my thesis.

Rasheeda Parveen