Acknowledgements

A journey is easier when you travel together. As a team one can certainly go farther than doing it solo. After the successful completion of the present research endeavour, wherein, I have been accompanied, supported and guided by many people. It is gratifying aspect that I have now the opportunity to express my undying appreciation to all of them.

At the very onset, I am deeply indebted to my supervisor Prof. B. S. Srivastava, Scientist Emeritus, Division of Microbiology, Central drug research Institute, for his important support throughout this work and for his detailed and constructive comments, moral support and the freedom I needed to move on. He has supported me not only by providing understanding and encouraging guidance but also academically and emotionally through the rough road to finish this thesis. His wide knowledge and logical way of thinking have been of great value for me.

From the formative stages of this thesis to the final draft, I owe an immense debt of gratitude to Dr. Ranjana Srivastava, Deputy Director and Head, Division of Microbiology, Central drug research Institute, for her constant support, encouragement and stimulating suggestions in my entire research work.

My warm thanks are due to Professor Raja Roy and A. R. Subramaniam, for their help in NMR studies. Their extensive discussions and suggestions, have been very helpful for this study.

I thank Dr. C. M. Gupta Director, CDRJ, for providing me the necessary research facilities. Financial assistance of Council of Scientific and Industrial Research, New Delhi, is gratefully acknowledged.

I attribute my sincere thanks to Dr. K. K. Srivastava and Dr. B. N. Singh for their valuable advices and friendly help. Their kind support and guidance have been of great value in this study.

I acknowledge Dr Anil Srivastava, Dr. V. Chaturvedi, Ms. Manju, Mr. D. K. Tripathi, Mr. P. D. Mishra for their helping attitude and encouragement and late Mr M. U. Khan, Ms. Savitri, Ms. Kamal, Mr. S. S. Yadav, Mr. Jeevan, Hirendra, and Raju for their prompt help and cooperation.

I am fortunate to have nice, generous seniors, Dr. Prachi, Dr. Arunima, Dr. Rajinder, Mr. Arun with whom I spent small but fruitful time and Dr. Parvez and Dr. Manish, who helped me initiate my journey in to research.

I recollect with pleasure the invaluable support from my colleagues, Rahul, Vikas, Sandeep, Antima, Amita, Satinder, Vinayak and Ravi as they are the persons, I could look up for any kind of help that I needed and who ensured a pleasurable working atmosphere.
My sincere thanks to my labmates and friends Anamika, Darpan, Neeta, Anirudh, Sudipti, Shubhra, Rajesh, Minarbha, Swati and Shivendra for their help and cooperation.

I express my deep sense of gratitude to all my teachers whose academic guidance and inspiration during the years of my studentship have enabled me to reach so far.

I owe my loving thanks to my husband Anurag, who showed enormous patience and confidence in me and helped me overcome the anxieties associated with work. Without his encouragement and understanding it would have been impossible for me to finish this work.

Words are not enough to express my gratitude to my late Father, the most basic source of my life energy. The happy memories of my father still provides a persistent inspiration for my journey in life. The gratitude for my Mother can not be dressed in words, for they are well beyond the reach of any script. Whatever, I am today is due to their painstaking efforts and unconditional support.

It's the faith, love, constant encouragement and uncomplaining cooperation of my brother Gaurav and sisters Rashmi di, Rakhi and Mini that helped me see through the thick and thin of life.

I am immensely thankful to my in-laws and brother Arpan for their love, care and support.

No task can be accomplished without the help and blessings of God; it is the grace of Almighty that I have successfully completed the work.

Alka