ACKNOWLEDGEMENTS

The work for this thesis has been done under the kind and able supervision of Professor R. Pratap. Prof. Pratap has been my guide, philosopher, friend and more. His bold and optimistic approach to scientific problems had a great impact on me. The success of the work presented in this thesis was possible through his consistent inspiring guidance and constant encouragement. I have also been overwhelmed by his kindness and unassuming nature many a time. I consider it to be a great privilege to have worked with him and am deeply indebted to him for all that he has done for me.

It is a privilege to thank Professor D.Lal, the Director, P.R.L., who had given moral support to my scientific work.

I would like to take this opportunity to express my deep gratitude to Dr.V.B. Sheory, Prof. J.C. Parikh, Prof. R.K. Varma, Prof. B. Buti, Prof. K.H. Bhatt, Dr. A.C. Das, Dr. J.N. Desai, Dr. A.K. Sundaram, Dr. A. Sen, Dr. A.S. Sharma, Dr. D.P. Dewangan, Dr. S.B. Khadkikar, Dr. V. Satyan for many helpful discussions throughout my career in PRL.

Mere words would be insufficient and insincere in expressing my gratitude and heartiest thanks to my good friends Dr. N.M. Ashok and Dr. T. Chandrasekhar. Their company in each sphere of life both academic and non-academic had made my stay pleasant and immemorable in PRL. Their help I can never forget. If at all I can
formally thank them, perhaps it should be for giving company in my very frequent visits to movies, pleasant cycling trips and in the fine game of tennis.

I would like to record my sense of gratitude to my other friends Harish Bhatt, Sekhar Iyanger, Kailash Sahu, Najid Hussain, K.K. Jain, Vishnu Mayya, Minakshi, Subbaraman, Debi Prasad, Kamalesh Kar, Rankanidhi Sahu, Bhimsen Shivamoggi, Dilip Ahalpara, Ashok Ambastha, Rhama Venkataraman, Venkat (Uncle), Aparna (Baudee), Chitra, Usha, C.M. Nautiyal, M. Mohan, Nagesh, Avinash, Ajay Kumar, R. Jha, Shefali, Ranjan Gupta, Kasture for their direct/indirect help during my research career in PRL.

The task of elegantly typing the manuscript has been enthusiastically shouldered by Mr. V. Sahadevan. It is a great pleasure to acknowledge his invaluable help which has been available not only during thesis work but also throughout my career in PRL.

I am grateful to Mrs. Bharucha, Mrs. Ghia, Miss. Swadha and other library staff for their active cooperation on all occasions. I would also like to thank Mr. Ranpura for photographic assistance. Mr. Bhavsar and Mr. Khoja for drafting and photo-stencilling work connected with the thesis.

The painstaking job of cyclostyling the manuscript has been done by Mr. Murlidhar. I will remain grateful to him.

I would like to thank with great pleasure Prof. Raghava Rao, Dr. Suhasini Rao and Mrs. Ammini Pratap for their homely affection and encouragement during my research career.
This is a good opportunity to express my gratitude to Dr. J.K. Shah (Medical Officer) for his kind advice and service during my numerous ailments - both real and imaginary.

Last but not the least I would like to record my deep gratitude to Mr. N.M. Ashok's parents and to my other friends Mr. B.V. Chaubal, Mr. S.P. Tonwar, Mr. Misra (from L.D. College) for their encouragement and cooperation throughout my stay in PRL.