ACKNOWLEDGEMENTS

It gives me a great pleasure to express my deep sense of gratitude to place on record my humble gratefulness to my supervisor Dr. M.U. Siddiqui, J.N. Medical College, Aligarh Muslim University, Aligarh and Co-supervisor Dr. Vinod Bhakuni, Scientist, Membrane Biology Division, Central Drug Research Institute, Lucknow, for their astute guidance, constructive criticism, keen interest and encouragement throughout the present work, as without them the work would not have been possible. I have no words to explain their cooperation. I am extremely thankful to them for introducing me to a new field of my life.

I am deeply indebted and grateful to Prof. A. Salahuddin and Prof. Rashid Ali, former and present Chairman, Department of Biochemistry, J.N. Medical College, Aligarh Muslim University, Aligarh for their keen interest and invaluable help during the tenure of this work.

My sincere thanks are also due to Dr. V.P. Kamboj and Prof. B.N. Dhawan, present and former Directors, of CDRI, Lucknow for their interest in the work and for kindly providing the necessary laboratory facilities.

I pay my sincere regards to Dr. C.M. Gupta, Director, I.M.T., Chandigarh, Dr. R.C. Srimal, Director, I.T.R.C., Lucknow and Dr. G.K. Patnaik, Head of the Division of Membrane Biology, C.D.R.I., Lucknow for their active support and personal guidance.

I wish to express my deep sense of gratitude to Dr. Raja Roy, Scientist, Medicinal Chemistry Division, Dr. Sudhir Sinha and Dr. P.R. Maulik, Scientist, Membrane Biology Division, C.D.R.I., Lucknow for their constructive suggestions and indespensible guidance and fruitful discussion during the study.

I would like to thank Prof. Sohail Ahmad, Dr. M.A. Qasim, Dr. Ashif Ali, Dr. Najmul Islam, Dr. A.F. Faizy, Dr. (Mrs.) Khushtar Anwar and Dr. Khaurshid Alam, Department of Biochemistry, J.N. Medical College, A.M.U., Aligarh for their cooperation.

It has been previlege to carry out this work in an environment full of smart, intelligent and cooperative colleagues with whom I shared my joys, sorrow and friendly discussions. In naming them I am likely to miss many of those who contributed in different ways. Never the less to name few Dr. Deepa Bisht, Dr. Jyoti Mahrotra, Dr. Owais, Sheetij, Savita, Shashi, Sonia, Anjana, Sanjay, Ritu, Soni need to be mentioned.

My special thanks to Dr. U.K. Singha, Vaqar Mustafa Adami and Sangeeta Kulkarni for their intiring cooperation, time to time help and valuable discussion.

Thanks are due to Mr. B.L. Srivastava and R.S. Bharti for their skillful technical assistance.

There are a galaxy of friends, whose support needs a special mention, especially Dr.
I would like to gratefully acknowledge the receipt of financial support in the form of a Fellowship from the Council of Scientific and Industrial Research, New Delhi, during the entire period of work.

My deepest sense of gratitude to my family members, Mummi, Papa, all brothers and brother-in-laws and kids which encourage me throughout the course of time particularly when the going became tough.

Words fail to come to express my sincere regards and appreciation to my elder brother Habib Shah, who as a matter of fact have been a real source to complete this piece of research.

I wish to thanks Mrs. Ratna Kanal who has taken great pains in typing this thesis. At last, but not least a word of my loving thanks to the dearest Zeenu, Zeba, Adeeba for their love and affection. My expression of thanks is only a frail of my indebtedness to all of them.

(VAHAB ALI)