ACKNOWLEDGEMENTS

I am beholden to Dr. Sher Ali for his valuable guidance instituted, whole-hearted support and constant encouragement at every stage of my endeavor in this research program. This thesis, I believe, is the result of his meticulous scanning of the manuscript, patiently going through the same over and over again, effecting improvement every time. Words are inadequate to express my gratitude to Dr. Sher Ali.

To the Doctoral Committee members Dr. Seyed E. Hasnain, Dr. Lalit Garg, Dr. R. P. Roy and Dr. Ramesh Banezai, I owe a deep debt of gratitude for their critical evaluation of work and constructive suggestions. I would also like to thank Dr. Sandip K. Basu, Director, NII for his support.

I am thankful to Dr. Ayub Qadri, Dr. S. M. Totey, Dr. Chandrima Shaha, Dr. K. V. Bhat, Dr. Dinkar Sahal and Dr. Shakti Upadhyay for their spontaneous and generous help. A special word of thanks is due to Dr. Rajesh Anand for unhesitatingly extending use of animal house facility and to Dr. Ranjit Roy Chaudhury for his gracious support to use his laboratory facilities for histological sections.

Without technical support from Mr. Khem Singh Negi and Mr. Virendar Nath Rai, my task would have been rendered very difficult and I express my thanks to them.

My grateful thanks are also due to Mr. Akhilesh Kumar Agarwal, the Administrative Officer (A&I) for all the help and support extended to me. To Council for Scientific and Industrial Research (CSIR), my thanks are due for the fellowship that was offered to me to enable me to undertake this Doctoral Research. My thanks to Babulal for the photocopying, to Satish for binding and to all the people in the stores and administration for their invaluable help.

I will be failing in my duty if I do not acknowledge the ever willing support and generous help I received from all my lab colleagues and also members of RSN.

No words can adequately express my deep sense of gratitude to my family members and my fiancé Prasanth, who had been patiently putting up with not infrequent tantrums thrown by me during the period of my research, especially when satisfactory results eluded during my experiments.