ACKNOWLEDGEMENT

Milestones of life are achieved, not only by individual efforts but with blessing, guidance and help of teachers, friends, elders, parents and our mighty Lord. Many people have contributed directly and indirectly to my education and to this thesis. Therefore this is the best opportunity to thanks all of them.

First of all I would like to express my immense gratitude to my supervisor Dr. Rama P. Tripathi who encouraged and supported my efforts, knowledgeable guidance throughout the present study. His scholarly suggestions, immense interest, constant help and affectionate behaviour have been a beacon of light for me. His suggestions will remain with me as an infinite source of scientific learning throughout my life.

I wish to convey my profound thank to Dr. T. K. Chakraborty Director, and Dr. C. M. Gupta, former Director CDRJ-Lucknow, for providing the best facilities in the institute to carry the work smoothly. I would also like to thank Dr. A. K. Saxena, Head, and Dr. Chandan Singh, former Head, Medicinal and Process Chemistry Division, CDRJ, for providing the necessary facilities and suggestions during the entire period of my work.

I am thankful to Dr. V. Chaturvedi, Dr. S. Sinha, Scientist, Drug Target Discovery and Development Division and Dr. A. K. Srivastava, Dr. A. Tamarkar, Scientist, Biochemistry Division for providing biological data.

I am grateful to all the staff of Medicinal and Process Chemistry Division, SAIF division, Library, Administrative staff, Workshop and Glass blowing sections at CDRJ, for their help during my research period.

I heartily acknowledge my seniors Dr. V. K. Tiwari, Dr. R. C. Mishra, Dr. N. Tiwari, Dr. D. Katiyar, Dr. S. S. Verma, Dr. N. Dwivedi, Dr. B. K. Singh, Dr. N. Saxena and Dr J. Pandey. I am also grateful to my lab colleagues Dr. Sarvesh K. Pandey, Nimisha, Mridul, Amit, Vivek, Anindra, Ajay, Seerat, Namrata, Munna, Rahul, Ankur, Abha, Beni, Rajendra, Pranav and Pooja for their support and constructive research environment. My whole-hearted gratitude goes to Mr. V. K. Maurya, for his cooperation and sincere help.

My profound thanks to my friends Mukesh, Pradeep, Reddy, Sumit, Amit, Ravi, Vikas, Vijay, Manmeet, Vishal, Niraj, Somnath, Naresh, Manoj, Shidhartha, Shahnawaz, Abdhesh, Srinivas, Virender, Lalit, Shrikant, S. P. Singh, Rajendra, Vankat, for their cheerful and entertaining attitude. I also would like to thank my lab attendant Sushil for providing ever possible help.
I would like to thank Dr D. S. Bhakuni and Dr C. S. Negi for their motivation and suggestions. Many more have helped me in this endeavour and I would like to thank all of them with an excuse of not able to accommodate their names.

I would like to admire my parents, bha, uncle, aunt, cousins for their blessings, love, and courage. Last but not the least, financial assistance in terms of junior and senior research fellowship by CSIR, New Delhi is gratefully acknowledged.

(Surendra Singh Bisht)