ACKNOWLEDGEMENTS

I wish to express my deep sense of gratitude and sincere thanks to my guide Dr. D. Channe Gowda, Professor of Chemistry, Department of Studies in Chemistry, University of Mysore, Manasagangotri, Mysuru, for his inspiring guidance and valuable suggestions throughout the research work. To say it in few words, he has been my teacher apart from being my supervisor to this thesis work. My association with him helped me to transform myself into a researcher and as an individual.

I thank Prof. Y. B. Basavaraju, Chairman, DOS and BOS in Chemistry, University of Mysore, Manasagangotri, Mysuru for providing necessary facilities required for my research work.

I owe my special thanks to doctoral committee members Prof. Nagaraja Naik, Dr. K. Mantelingu and other teaching faculty members of the department for their useful suggestions during my research studies.

I owe my special thanks to Department of Science and Technology (DST) New Delhi, India for providing DST-INSPIRE Fellowship. I also thank Center with Potential for Excellence in a Particular Area (CPEPA), University with Potential of Excellence (UPE), Department of Science and Technology - Promotion of University Research and Scientific Excellence (DST-PURSE) and Institution of Excellence (IOE), UGC, New Delhi, India for providing necessary instruments for carry out my research. I acknowledge HPC Lab, Department of Studies in Computer Science, University of Mysore, Manasagangotri,
Mysuru, for providing Schrodinger software to carry out molecular docking studies.

I thank Prof. S. Kabilan, Department of Chemistry, Annamalai University, for assisting to learn molecular docking studies.

I am grateful to Dr. R. Suhas for much desired support, care and guidance throughout my research work and made my dreams come true.

I am thankful to Dr. C. S. Shantharam, Dr. D. M. Suyoga Vardhan, Dr. Anamika Sharma, Dr. B. J. Ullas, Dr. K. P. Rakesha and Dr. J. Shivakumar for much desired help when I was novice in the lab.

I was very fortunate to have Ramesha, S. M. Anil and H. Pavan Kumar as my lab mates.

I have no words to express my gratitude to my beloved mother Gowramma, father Late Kongalappa, brothers Nanda and Vinod and Sister Sowmya who have been a constant source of inspiration throughout my work.

I'm lucky to have friends M. Shobha, K. S. Shilphashri, S. H. Yogesh, B. R. Kumar, G. S. Jagadeesh, D. A. Manasa, H. G. Ragavendra, Geetha, J. Arun Kumar, Umashankar, Mahesh Bhat, H. P. Veerabasappa, Shivakumar, Tejas, Santhosh and Parikshith. I came across wonderful friends, as my colleagues who have taught me many of their specialities in chemistry. I am also grateful to all my friends for being a constant support all through my life.

H. K. Kumara