ACKNOWLEDGEMENTS

It gives me an immense pleasure and pride to express my deep sense of gratitude and respect for my teacher and guide Dr. S. Chandrasekhar, FNASc, FASc, Chief Scientist and Head Natural products division, Indian Institute of Chemical Technology for his evergreen expertise and inspiring guidance throughout the period of my research carrier. I am indebted to him enlightening me on the finer skills of dealing with synthetic problems. I consider myself fortunate to be associated with him who gave a decisive turn, a significant boost to my career.

My sincere thanks to Bhatnagar Laureate Dr. J. S. Yadav, FNA, Director, IICT for his constant encouragement, which enabled me in bringing this thesis to the present form.

I pay rich tribute to Prof. B. Kesava Rao, Head, Board of Studies, and other faculty of Department of chemistry, Acharya Nagarjuna University, Guntur for giving opportunity of my Ph.D programme in the university. I thank Principal, University College of Sciences for giving the opportunity of my Ph.D programme in the university.

It is a great privilege for me to be associated with Dr. J. M. Rao, Former Head, Natural products division, for his kind help and encouragement. I take this opportunity to thank Dr. Prathama S Mainkar, Dr. Ch. Raji Reddy, Dr. P. Srihari, Dr. B. V Rao and Dr. T. Prabahakar Rao, Dr. K. V Reddy for their help and encouragement during my Ph.D tenure.

My heartiest thanks to Mrs. Bharathi Chandrasekhar, and Bhargava who showered family affection on me. Her support and encouragement all throughout of my Ph.D is gratefully acknowledged.

I take this opportunity to thank all my senior colleagues, Dr. C.N.Goud Dr. Saritha, Dr. Jagadeshwar, Dr.Nagendra babu, Dr.Vijendar, Dr.Rambabu, Dr. Srinivas Rao, Dr.Lohitha Rao, Dr.Debjit basu, Dr.Tiwari, Dr.Pavan kumar, Dr.Bibuthi, , Dr.Rajender, Y.Gangdahar Dr. Sudhakar, Dr. Kiranmai, Dr. Shyam Kiran, Dr.T.Pavan, Dr. Phani Madhavi, for their unreserved help and suggestions.
I thank all my colleagues Vijaykumar, Nagesh, Chetan, Sreedhar, Mahipal, Rajesh, Mallikarjun, Murali, Syamprasad, Chandrashekhar, Sateesh, Seenaiah, Praveen, Sreelaxmi, P. Mallesham, Sanjida, Mrunal, Keshav, Sailu, Radhika, Abdul Sattar, N. Kavitha, M. Kavitha, Wasim, Abhishek, Naresh, Vidyavathi, Sriram, Nagaraju, Mayank, Srujana, Pallavi, Venkat raju, Raghu, Raghunath for their help and support. I thank all my colleagues belonging to NPL, DOSL, DRL-III, Discovery Lab, FCL, BOL, GCL, Mass and NMR divisions of IICT for their help and support.

I am thankful to Sharma, Rekha, Manjula, Haribabu, B. Raju, Madhuri, Sukumar, Rajendra prasad, Ramesh kumar, Murali, Srilatha, Laxma Reddy and Rammohan for their excellent technical support.

It gives me immense pleasure to express my heartfelt thanks to my friends, Ramesh, Narayana.

At this moment of submission of my thesis, I invariably feel short of words to express my sincere thanks to my father sri Saida, and mother smt. Fatimun whose efforts have brought me to this stage. My thanks are also due to my Fathar in-law Sri Naik Basha, mother in-law Mahaboob Begam and my Uncle Sri Rasool for their constant encouragement and support.

I am thankful to my wife Reshma and my kids Wafiqua Tasmeen, Tahmid Abrar for their cooperation and being a source of relief while I am away from the work.

The assistance rendered by NMR, Mass, IR, X-ray, other analytical divisions, administration and library is gratefully acknowledged. Financial assistance from the Council of Scientific and Industrial Research (CSIR), New Delhi and IICT, Hyderabad in the form of fellowship is gratefully acknowledged.

Finally, I thank Director, IICT, for allowing me to submit my work in the form of thesis.

K. Johny