ACKNOWLEDGEMENT

It gives me an immense pleasure to express my heart-felt indebtedness to my Research Supervisor Prof. (Mrs.) V. Padmavathi, Department of Chemistry, Sri Venkateswara University, Tirupati, for her meticulous guidance, encouragement, affectionate care, inspiring discussions and valuable suggestions to complete this work with confidence. I will ever remain grateful for her timely decisions, wise counsel and unfailing attention.

I would like to express my deep appreciation and my cordial gratitude to **Dr. (Mrs.)** A. **Padmaja**, Associate Professor, Department of Chemistry, Sri Venkateswara University, Tirupati, for her constant help, active involvement, timely interaction and fruitful discussions at all stages of this work.

I consider it as a great pleasure to express my gratitude to **Prof. D. Bhaskar Reddy**, Retd. Professor, Department of Chemistry, Sri Venkateswara University, Tirupati, for his generous affection and concrete suggestions.

With deep sense of gratitude I express my sincere thanks to late **Prof. A.**Srikrishna, Department of Organic Chemistry, Indian Institute of Science, Bangalore, for his help in providing spectra for some of the samples and **Prof. P. Kondalah**, Department of Molecular Reproduction, Development and Genetics, Indian Institute of Science, Bangalore for evaluating the cytotoxic activity for some of the compounds.

Lalso express my sincere thanks to **Prof. Ch. Apparao**, Dept. of Biochemistry, S.V. University for evaluating antioxidant activity for some of the compounds and **Prof. D.V.R. Sai Gopal**, Dept. of Virology, S.V. University for evaluating antimicrobial activity for some of the compounds.

I wish to express my thanks to successive Heads of our Department Prof. A. Varada Reddy, Prof. A. Krishnalah, Prof. P. Venkateswarlu and Prof. K. Seshalah for providing laboratory facilities to carry out the research work.

With all happiness I acknowledge the cheerful assistance rendered by my senior research colleagues Dr. A.V. Nagendra Mohan, Dr. G. Sudhakar Reddy, Dr. K. Mahesh, Dr. (Mrs.) T. Radha Lakshmi, Dr. G. Dinneswara Reddy, Dr. (Mrs.) D. Deepti, Dr. T. Payani, Dr. S. Nagi Reddy, Dr. K. Sudheer, Dr. B.C. Venkatesh, Dr. A. Muralikrishna, Dr. C. Rajasekhar, Dr. (Mrs.) C. Premakumari and my fellow research scholars Mr. S.S. Basha, Mr. K. Syamaiah, Mr. D. Seenaiah, Mr. N. Mahaboob Basha, Mr. T. Bhanu Prakash, Mr. G. Mallikarjuna Reddy, Mrs. S. Durgamma, Ms. G. Lavanya, Mr. P. Ramachandra Reddy, Mr. L. Mallikarjuna Rao, Mrs. G. Sravya, K. Divya and M. Madhusekhar for their unstinted co-operation throughout my research programme.

My vocabulary fails to express my gratitude to my mother Smt. M. Subbanarasamma, father Sri M. Venkata Rami Reddy, Sisters Mrs. M. Sreevani, M. Sowjanya, M. Swarna Latha and M. Sneha for their unmitigated encouragement, unflinching support, love and affection, which enabled me to pursue my goal.

Finally, I take this opportunity to express my profound gratitude to my mother in law Smt. S. Chennamma, father in law Sri S. Gurivi Reddy, Brother-in-law Dr. S. Subba Reddy, Co-Sister Smt. M. Vara Lakshmi, husband Dr. S. Nagi Reddy and daughter Chi. S. Hanshritha Sree Reddy (Minnu) for their inspiration, moral support.

It is also an appropriate time to remember all my teachers and professors who at various stages of my educational carrier encouraged me to reach this level and it all is the fruit of their teaching and blessings.

I always remember and cherish the encouragement and inspiration provided by all my friends and well wishers during the course of my research work.

(M. SWAPNA)