ACKNOWLEDGEMENT

I express my profound and sincere gratitude to Dr. N. S. Nagarajan, Research Supervisor and Former Professor of Chemistry, Gandhigram Rural Institute - Deemed University, Gandhigram, Tamil Nadu. This work has been completed due to his invigorating guidance, felicitous advice, punctilious and valuable suggestions with energizing criticism throughout the course of this work and without his persuasive encouragement and moral support, this work would not have been completed.

I thank Dr. S. Meenakshi, Professor and Head, Department of Chemistry, Gandhigram Rural Institute, Prof. M. Sundaravadivelu and Prof. M.G. Sethuraman Former Heads, Department of Chemistry, Gandhigram Rural Institute, for their constant encouragement throughout my course of work.

I thank the authorities of Gandhigram Rural Institute, for their administrative help throughout my course of work.

I wish to express my sincere gratitude to my doctoral committee member Prof. S. Gopalakrishnan, Department of Chemistry, Annamalai University for his continued support at various stages of this research work.

I also extend my thanks to all teaching and non-teaching staff of the Department of Chemistry, GRI, Gandhigram for their timely help during my research work.

I thank the UGC for giving me the privilege of being a recipient of UGC - Senior Research Fellow under Research Fellowship in Science for Meritorious Students during the course of my research.

I sincerely thank Dr. P. Thirupathy Kumaresan, Professor of Pharmacology, Arulmigu Kalasalingam College of Pharmacy, Krishnan Kovil, Tamil Nadu for his meticulous help in assessing the pharmacological activities of all my samples.
I sincerely thank Dr. R. Ramasubbu, Asst. Professor, Department of Biology, Gandhigram Rural Institute, Gandhigram for his help in the identification and collection of plants for my research.

I am extremely thankful to all the research scholars of Department of Chemistry, Gandhigram Rural Institute - Deemed University, Gandhigram, especially, Dr. N. Muniyappan, Dr. A. Amal Raj, Mr. R. Manivannan, Dr. R. Srinivasan, Dr. M. Jayaraj, Dr. D. Sugumaran, C. Umamaheswari, P. Rajesh Kanna and Mrs. A. Rajeswari for their valuable help and constant support during my research work.

Finally, I take this opportunity to thank all the Research Scholars (present and past) from Dr. S. Radhakrishnan Research Scholar hostel, GRI-DU for their constant encouragement, moral support, lively company and timely help whenever required.

I owe a lot to my parents and my brother Dr. A. Ramachandran, M.V.Sc, who encouraged and helped me at every stage of my personal and academic life and longed to see this achievement coming true.

Above all, I owe it all to the Almighty for giving me the courage, wisdom, health and strength to undertake this research task and enabling me for its completion.

(A. LAKSHMANAN)