ACKNOWLEDGEMENTS

*The servants of the Most Merciful are those who walk upon the earth in humility.*

*(Surah Al-Furqan 25:63)*

My thesis represents the combined effort of many people and it is my pleasure to acknowledge those involved and who supported and stood by me throughout the duration of my study.

Words may fall in adequate to describe the expression of my humble thanks and a deep sense of gratitude to my respected guide Dr. Mukta N Chowta, Professor and Head, Department of Pharmacology, Kasturba Medical College, Mangalore, Karnataka. I thank her for accepting me as a Ph.D. candidate and providing me the opportunity to undertake this research work. Her vision, knowledge, encouragement and understanding has been a great source of inspiration to me and gave me the energy and confidence to conduct this research work. Her timely suggestions and constructive criticism were really helpful in shaping my work. I owe a lot of gratitude to her for always being there for me and I feel privileged to be associated with a person like her.

I place on record my thankful gratitude to my respected Co-Guide Dr. Ganaraja B, Additional Professor, Department of Physiology, Kasturba Medical College, Mangalore. His constant involvement in my work gave me the confidence to proceed with my research.

I express my sincere gratitude to my respected Subject Experts Dr. Ashok Shenoy K, Professor and Dr. Sheetal Ullal, Associate Professor in the Department of Pharmacology, Kasturba Medical College, Mangalore. Their invaluable suggestions, intellectual discussion and scrutiny of the manuscripts at every stage granted me the capability to proceed successfully.

I humbly acknowledge the involvement of Dr. Ashwin Kamath, Associate professor, Department of Pharmacology, Kasturba Medical College, Mangalore, in my research activity and scrutiny of the manuscripts as well as his valuable suggestions throughout the research work.

I extend my profound thanks and gratitude to Dr. M Venkataraya Prabhu, The Dean, Kasturba Medical College Mangalore and also the Chairman of the Doctoral Advisory Committee for all his invaluable help and suggestions at every stage of my work.
My heartfelt gratitude to Dr. Chakrpani M, Professor of Medicine and Dr. Gopalakrishna Bhat, Research Coordinator and Additional Professor, Department of Microbiology, Kasturba Medical College, Mangalore for their supervision and valuable assessment about the progress of my study.

I also thank Mr. M Shashidhar Kotian, Selection Grade Lecturer, Department of Community Medicine, for helping me out with the statistical analysis of my research data.

I am extremely indebted to all the faculty members of the Department of Pharmacology, Kasturba Medical College, Mangalore: Dr. Sahana DA, Dr. Preeti G Pai, Dr. Rajeshwari S, Dr. Rashmi R, Dr. Priyanka Kamath, Dr. Amrita Parida, Mrs. Rakhshita Maskeri and Mr. Basavaraj P for their help and encouragement.

I am extremely thankful to all the postgraduates of Department of Pharmacology for their timely support and help throughout my research work.

My sincere thanks to Dr. Shyamala Hande, Deputy Registrar (Health Sciences), Manipal Academy of Higher Education for her supervision and support.

My sincere thanks to Dr. Rashmi KS, Assistant Professor, Department of Physiology, Kasturba Medical College Mangalore. I am extremely grateful to her for timely help and cooperation during my thesis work.

I am greatly obliged to the laboratory assistant Mr. Alywin D'Souza for his timely assistance and help.

I thank all the non teaching staff members of my department for providing all necessary and timely assistance.

This thesis would not have been completed without the constant encouragement, continuous support and unconditional love from my Parents, Uncle, Siblings, and my Wife. I owe them a lot for being with me through these arduous moments of my life.

You are the best thing that has ever happened to me.

I owe deep gratitude to my friend Dr. Sourjya Banerjee, Assistant Professor, Department of Radiotherapy and Oncology, Kasturba Medical College, Mangalore for always being there for me through good and bad times. You are like a family to me.

Thank you very much.

I am also thankful to my friends and fellow researches Dr. Manoj R, Fellow in Dermatosurgery, St. John’s Medical College Bangalore, Dr. Sudarshan Reddy, Mr.
Durga Rao, Ms Ramya, Dr. Ravi Raj Singh Chouhan for their support and encouragement.

I extend my thanks to Ms. Shobha, Animal House Supervisor, Kasturba Medical College, Mangalore and other in-house staff members.

I sincerely express my indebtedness to all the animals that were involved and were sacrificed for my study.

I am profoundly obliged to the Manipal Academy of Higher Education for providing me with the opportunity to conduct my Ph.D. research work.

Thank You all.

Zahoor Ahmad Rather