ACKNOWLEDGEMENTS

After all those years, I’ve got quite a lot of people who contributed in some way to this thesis, and it could not have been possible without the guidance and support of following individuals and organizations. I would like to express thanks and acknowledge the help of many people during my study.

To my guide and supervisor Prof. P. Rajendran, M.Sc., M.Phil., Ph.D., D.Sc., D.M.V., D. H.Ed., D.D.E., D.H.Ad., F.I.M.S.A., F.I.C.S., F.A.B.M.S., M.I.S.L., M.Ny.Ac.Sc., Professor, Department of Microbiology & Dean (University Industrial Consultancy, UICIC), Dr.ALM PGIBMS, University of Madras, Taramani, Chennai - 600 113, for his meticulous guidance, enthusiasm and inspiration, which was always there when I needed it. And for providing invaluable insights, timely encouragement as well as guidance balanced by the freedom to express myself through this work. I am forever grateful to him for his timely input and advice and for giving me the opportunity to pursue this work and most of all sharing his precious time with me. I would have been lost without him.

I am forever indebted to Prof. S.P. Thyagarajan, M.Sc., M.D., Ph.D., D.Sc., F.A.M.S., F.A.B.M.S., F.I.M.S.A., Former Vice-Chancellor, University of Madras, Chennai, for guiding in my research work during the initial stages of the study and shaping my personality. Inspite of his extremely busy schedule and his workload, I was fortunate to get enriched by his indepth wealth of knowledge. I am grateful to him for inculcating in me a positive frame of mind in whatever I did.

My profound thanks are due to my doctoral committee members, Prof. T. Sundararaj, Professor and Head, Department of Microbiology, Dr. ALM PGIBMS, University of Madras, Chennai and Dr. P. Balakrishnan,
Laboratory Manager for NIH funded projects, Associate Professor of Microbiology, YRG care for AIDS research, VHS – Hospital Campus, Taramani, Chennai – 600 113, for all help and suggestions rendered during the course of my work.

It is my pleasant duty to thank Dr. Subramanian, Emeritus Professor, Department of Microbiology, Dr. ALM PGIBMS, University of Madras, for his constant encouragement, blessings and valuable suggestions.

My sincere indebtedness to my teachers Prof. S. Ananthan, Prof. Usha Anand Rao, Prof. Thangam Menon, Prof. Elanchezhian, Dr. Padma Krishnan and Dr. Srivani for building me as a microbiologist.

I thank our Director, Prof. Michael Aruldhas, for all the support and permitting me to use the common facilities of the institute.

I express my sincere thanks to Dr. B. Ramathilagam, Professor and Head, Department of Gastroenterology and Dr. Basumani, Government General Hospital, Chennai; Dr. V. Jeyanthi, Professor and Head, Department of Gastroenterology, Government Stanley Medical college, Chennai and Dr. Malathy, Department of Digestive health and Diseases, Anna Nagar Peripheral Hospital, Chennai for all their support in obtaining patient material and expert opinion during the review meetings.

Thanks are due to several researchers and staff at other organizations Dr. Shoba Broor, Professor, Department of Microbiology, AIIMS, New Delhi and Dr. K. Thangaraj, Scientist-B, CCMB, Hyderabad, for sharing their expertise in the field of molecular biology, in most amicable manner during the training period.
My heartfelt thanks are to my seniors Dr. K.V.K. Mohan, Dr. Hari, Dr. K.G. Murugavel and Dr. Pramod for all their help and support at various stages of my work.

I must acknowledge the invaluable contribution by my senior research colleague Dr. A.G. Joyee, who deserves a special mention for his expert technical knowledge and for all the good times we had together during our stay in the department. He will ever be etched in my heart for his kindness and considerate attitude towards me.

My special thanks are due to Dr. B.M. Kanthesh, Dr. Sai Kolappan and Dr. R. Parthiban who have been a constant source of encouragement and for helping me get through the difficult times especially in the final stages of my thesis work.

My sincere thanks to my senior research colleagues Dr. Saravanan, Dr. Vijayakumar, Dr. Sripathi, Dr. Dharmalingam, Dr. Girish Kumar, Dr. Subhadra and Abdul Rahim, for their numerous helpful discussions and well wishes. My thanks are due to all the other research scholars in the department for their support and to numerous well wishers who are behind the scene in helping me complete my thesis.

A special mention goes to my friends Dr. Ravi Shankar, Dr. Selva Kumar, Dr. Rajiv Rose, Dr. Sethu, Dr. Karthikeyan, Mr. Gobianand, Mr. Ramesh, Mr. Siva Kumar and Dr. Giridharan who have served as a catalyst in completing this work, as a source of motivation, for the emotional support, entertainment and caring they provided.
I extend my thanks to Dr. Amal Raj, Bio-Statistician, Dr.MGR Medical University, Guindy, Chennai, who helped me in critically analyzing the research data.

I express my whole-hearted gratitude to Prof. Melani Rajendran, Professor and Head, Department of Anatomy, Sri Ramachandra Medical college & Research Institute, Chennai, for continued love and affection showered upon me. My thanks are due to her for the moral and emotional support rendered to me, which has made me possible to successfully complete my research and bring out this thesis.

I am obliged to Dr. Veeramani, not only for his administrative help but also for his well wishes to see me improve in every stage of life. I am also thankful to the technical staff of the department Ms. Kownher, Ms. Geetha and Ms. Ramani for their timely help. I also thank Mr. Suresh and Mr. Ravi for laboratory assistance.

I would like to thank the study subjects (patients and volunteers) who provided me experimental data that I regard as so important. I would also like to thank the University Grants Commission (UGC), New Delhi for their financial assistance during the tenure of my study.

My profound gratitude to my parents and my entire extended family for providing a loving environment and for their inexhaustible patience, tolerance, enormous amount of care and faith in me and lots of wise words.

E. VIKRAM REDDY