Acknowledgement

The completion of my Ph.D. thesis has been a long journey mixed with pure frustration and boundless elation. The questions on my intentions and commitment to the work have actually powered me through it. My successful completion could not have been possible without the support of several people who have helped to get me to where I am today, sanely. The first and foremost factor was the presence of GOD and though it has been a part of my life, these were the situations where you reaffirm the unquestionability of His love and care. Every time I looked to Him I saw and felt a renewed strength and passion to face life’s problems.

I am greatly indebted to my Guide, Dr. Prakash Kumar B. who has given me tremendous help in the completion of my work. He has helped push me through my work with perseverance and has been extremely accommodating to my problems. I would also like to acknowledge the help and timely suggestions from Capt. Sheeba Ravi and her gentle encouragements always.

I am obliged and thankful to the Director, Dr. J. G. Ray, Former Directors Dr. Jyothis Mathew and Dr. M. S. Latha for the support through the work and the facilities provided in the department. I am also grateful to all the teaching staff of the School of Biosciences for their help whenever I have knocked on their doors. The non-teaching staff and the technical officers have provided timely help in the use of the department facilities and have allowed me to complete my work in time. I would like to acknowledge the Principal, Dr. K.K. Jose and Management of St. Thomas College, Pala who were the part of my initial Ph.D. studies for the facilities provided. I am greatly indebted to Rev. Dr. Mathew Maleparambil for his support and guidance during the course of his duty at St. Thomas College, Pala.

I gratefully acknowledge the funding provided by Department of Biotechnology, New Delhi and for the instrumentalational facilities provided by DBT Builder programme. I gratefully acknowledge Dr. T.K. Manoj Kumar, Associate Professor, Indian Institute of Information Technology and
Management, Kerala and Project Assistant Arun P.S., for the help provided in the completion of my project. I am also deeply indebted to Sajan Jose and Cinu Thomas, Senior Lecturers, University College of Pharmacy, Cheruvandoor for their invaluable help in the last chapter of my thesis without which I would not have been able to complete the work in time. My thanks are due to Dr Sreekumar, Chief Medical Officer, Government Ayurveda Hospital, Chengannur for his valuable suggestions and untiring help during the work.

No words can express the help and encouragement provided by Anu, Mohind, Bashi, Rahitha and Merin. Their supports in the lab and in the completion of the paperwork have lightened my burden immensely and have become my second family. I have had the pleasure of having some great friends, Teena, Aju, Manju, Indu, Maya, Raji and Suhyl sir who have supported me personally and cared enough to make me a part of their life.

I have kept my family for the last because they have had to suffer the brunt of my PhD work. I could not have completed my work without their sacrifices. My Mother, Mother-in-law and my Sister-in-law have managed the family in my absences. Throughout my work I have had the balance from the positive energy of Jonath, Johan and Joana, the three stars of my life. My sister and family have cheerfully changed or modulated their schedules to accommodate me with them providing a solid support that I have cherished. Even in his own problems, my brother has kept enquiring of the progress in my work throughout.

I can never bring myself to not thank my partner in life, Jose K George because he has been the most supportive of all. He has been patient and has gently urged me on to complete what I have started out to do. He has inspired me in many ways and has toiled with me in the making of this thesis. Words fall short to describe my feelings for his love and care.

JENNY JACOB