Acknowledgement

First and foremost I would like to express my deepest gratitude to my mentor, Prof. S. Karutha Pandian for his constant guidance and support throughout my Ph.D. programme. His eminent guidance, patience and knowledge whilst allowing me the room to work in my own way gave me confidence in completing my work successfully.

It is an honor for me to thank Dr. K. Balamurugan, Dr. A. Veera Ravi, Dr. M. Ramesh, Dr. K. Pandima Devi and Ms. N. Suganthy for their valuable suggestions during the progress of my work.

My heartfelt thanks go to my senior Dr. P. Nithyanand for teaching me all the molecular techniques and encouraging me. My special thanks go to Ms. C. Nithya who has been a good friend and moral supporter throughout my research. My heartfelt thanks go to Mr. K. Syed Musthafa for his constant support throughout my research.

I specially wish to thank Ms. P. Kesika, Mr. B. Sivamaruthi, Mr. D. Bakkiyaraj, Mr. B. Vignesh Kumar and Mr. S. Durai, for making my research days very memorable. Their constant support and companionship, I will forever cherish.

I would like to extend my thanks to the project students Mr. M. Ponnuswamy, Mr. A. Murugadass and Mr. C. Ashish for their unconditional help to complete this research work.

My sincere thanks go to Dr. T. Ganesh Babu, Dr. J. Muniyandi, Dr. R. Thenmozhhi, Ms. R. Beema Shafreen, Ms. B. Jancy Kalpana, Mr. K. Balaji and all other colleagues for their timely help.

I would like to thank Ms. V.P. Malathi, Mr. SP. Muthukrishnan and Mr. G. Seenivasan for their constant support throughout my research work.

I thankfully acknowledge the pleasant companionship of the M.Sc and ADMD students at the Department of Biotechnology, Alagappa University.

I gratefully acknowledge the computational and bioinformatics facilities provided by the Alagappa University Bioinformatics Infrastructure Facility (funded by DBT, Govt. of India; No. BT/BI/04/055/2001)
I would like to express my sincere thanks to the Council of Scientific and Industrial Research (CSIR), India, for providing financial support for carrying out this work through the New Millennium Indian Technology Leadership Initiative (NMITLI) Project “Biotechnology for Leather: Towards Cleaner Processing” (No.5/258/13/2002-NMITLI; P6131105).

Finally I would like to take this opportunity to thank my parents and loved ones for all their love and concern which they gave without measure.

Syed Ibrahim. K