

ACKNOWLEDGMENT

First of all, I thank my Almighty GOD for giving me this life with providing wonderful moments to complete this research work.

Foremost, I wish to express my deepest sincere gratitude to my principle advisor **Dr.T.Malarvili**, Principal and Professor, Department of Biochemistry, Bharathidasan University Constituent College (Women), Orathanadu, Thanjavur. I am thankful for her invaluable support, guidance and generosity throughout these years whilst allowing me the freedom and space to learn and grow as a research student. With the countless space disruptions and every other setback, the effort by her put in to create a workable environment as independently along with her humour and casual approach has given me the spirit to cross the thesis finishing line, for all of which I am extremely grateful. I am ever indebted for her unfailing confidence shown towards me and also for the guidance and training which will remain with me as the most valuable asset.

I wish to express my thanks to **Dr. S. Manemegalai**, Assistant Professor, Head, Department of Biochemistry and one of my Doctoral Committee member, Bharathidasan University constituent College (Women),Orathanadu,Thanjavur for her help, constant support and for providing me all the necessary facilities in the department to carry out the work.

And I wish to acknowledge my sincere gratitude to my Doctoral Committee member **Dr. J. Radhika**, The Principal, Srimad Andavan Arts & Science College (Autonomous), Thiruvanaikoil, Tiruchirappalli for her encouragement, critical comments and suggestions.

My special thanks to **Dr.A.Archunan**, Professor, Department of Animal science, Bharathidasan University, Tiruchirappalli for his kind support and suggestions and providing animal house facility during the course my research work.

My sincere thanks to **Dr. S.Velavan**, Director, Harman institute of Science Education and Research, who permitted me to do research work in his institution with valuable suggestions and technical support in my research work. I would thank him for giving me an opportunity to utilize the facility available in his laboratory during the course of my research work. I thank for other research assistants in his laboratory for their co – operation and support throughout my work.

I also extend my thanks to all the Faculty Members, Department of Biochemistry, Bharathidasan University constituent College (Women) Orathanadu.

I would like to express my sincere thanks to **Dr. N. Narayanan**, Principal, Government Arts & Science College, Hossur, Prof. **M.Muthuraman**, Assistant Professor and **Dr. S. Ravichandran**, Assistant Professor and Head, Department of computer science, H. H. The Rajah's College (Autonomous), Pudukkottai for their constant encouragement and motivation to complete this research work.

I extend my special thanks to **Dr. S. Alagumanian**, Assistant Professor and Head, Department of Botany, H.H.The Rajah's College, Pudukkottai, Tamil Nadu, for providing the knowledge of the plant *Aplotaxis auriculata* rhizome which has anti stress property and also helped in authentication of the rhizome through his department.

Besides my advisors, I would like to thank my fellow Ph.D companions, **Dr. RM.Veerappan, Dr.A.Dominic Amalraj, Dr.B.Ramya, Mrs.S.Mahalakshmi, Mrs. S. Kanitha, Mrs. M. Suganthi, Mr.P. Parthiban and Mrs. R. Sivaranjani.**

Thank you all so much for your friendship and all the fun we have had in the past few years, it would not be the same without all of you who have supported me on this journey from day one. Thank you for all the laughs, advice and offers of timely help.

My special thanks to **Mr. A.T. Panneer Selvam**, Superintendent of Customs and Central Excise, Chennai and **Ms. M. P. Sailatha** and **Ms. A. M. Arathi** for their patience with hospitality and cooperation whenever I went to meet my guide.

My special thanks to **Dr. Banumathi Kannan**, Vice Principal (Rtd), V.V.V College for Women, Virudhunagar, **Dr. Ramalatharani Rajendran** MD,DGO., Associate Professor, K.A.P Viswanatham Medical college, Trichy and **Mrs. Selvam Thangarajan**, Tahsildar (Rtd), Rajapalayam for their support and encouragement to complete my research work.

I owe a huge debt of gratitude to my beloved parents **Mr. S. Chellandi** and **Mrs. M. Arivazhahi** there is no words to describe how much I appreciate your tremendous love, support, patience, perfect assistance with the children and tolerance during years filled with stress and anxiety. To, my beloved brother **Mr. C. Martin Moovendar**, HCL Technology Limited, Chennai, thank you for your infinite support and encouraging me with all your best wishes.

And last, but certainly not the least, I would like to thank my amazing life partner **Dr.R.Pagutharivalan**, Assistant Professor, Department of Chemistry H. H.The Rajah's College (Autonomous), Pudukkottai, who has been one of my biggest supports. Thank you for making me laugh pretty much every day, being there for me on my good days and my bad and for reminding me of how far I have come and of course my loving children **R.P Shree Mahalakshmi**, **R.P.Sri Kiruthiga** and **Master R.P.Arun Senthil** for reminding me that life is also

simple and full of joy. I know my endeavours have made all our lives more difficult for the last few years but you all made it easier for me and I really cannot properly put into words how much I could not have done this if you had not been there for me. Thank you.

I also owe my thanks to all my good friends and especially, **Mrs. S. Nagajothi, Mrs. H. Juliet, S.Charunivethita, Mrs. S. Menaga** and **Mrs. S. Rajeswari**, Associate professor, Department of BioTechnology, P.S.R Engg.College, Sivakasi.

I would like to share my special thanks to my beloved brothers **Dr.T. Nagaraj, Mr.R.Arun Kumar** and **Mr.D.Karthik** for their infinite support and help during the course of my research.

I am deeply indebted to all **animals** whose lives were sacrificed during this project would not be in vain; it would contribute to the development of the science in one way or another.

Finally, I express my heartfelt thanks to a host of others unnamed and not specified here, yet, whose timely help, assistance, support and encouragement have been very useful to me in many ways and means in completing my research work.

C.ARUNMATHI