Acknowledgement

It is the lavish and boundless blessing of the almighty that I have been able to complete my studies successfully hitherto, and present this humble piece of work, for which I am eternally indebted.

It is my pride and honor to express my profound sense of gratitude for providing me an opportunity to undertake this research project work at International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). I express my deep sense of gratitude to Dr. M. S. Kachole, Professor and Head, Department of Biochemistry, Dr. B. A. M. University, Aurangabad, and Chairman of the Advisory committee for his stimulating guidance, keen interest, constructive suggestions, constant encouragement, and unceasing support during my study giving the final shape of my thesis at ICRISAT. I shall gratefully memorise the invaluable suggestions, crisp criticism, and scholarly advises offered by him. His constructive logics and ideas made me to complete my thesis satisfactorily.

Words seem inadequate in expressing the respect, veneration and thankfulness to Dr. H.C. Sharma, Principal Scientist, Department of Entomology, ICRISAT and Co-chairman of the advisory committee. It is a great privilege to have been his student and be benefited by his sagacious guidance. His continuous involvement, throughout this dissertation and his meticulous efforts have gone a long way, without which completion of this research would not have been possible. I am greatly indebted to him for his inspiration, suggestion, help, keen interest, encouragement and guidance during this study and bringing up the thesis to this presentable form.

I am thankful to Dr. Navin Sharma, Director, ITC R & D, Hyderabad for allowing me to use the facilities of two-dimensional gel electrophoresis. I would like to thank Dr. Ravi Sirdeshmukh, Senior Scientist and Head, Proteomics lab, CCMB, Hyderabad for his kind help, suggestions, and encouragement. I would like to thank Dr. K. K. Sharma, Principal Scientist, for allowing me to avail the facilities in GTL at ICRISAT.
I am very thankful to Dr. Bindu Balakrishanan, Scientist, ITC R & D, Hyderabad for her untiring support, valuable guidance, critical suggestion and co-operation. I value her concerns and motivation and discussion with her has been very stimulating and helped to make most logical plan of action for work. I am also grateful to Dr. Vandana Hivrale, Reader, Department of Biochemistry, Dr. B. A. M. University for her timely help, support, and encouragement. My special thanks to Dr. Susanne Preiß, Scientist, Entomology, Max-Planck Institute for Chemical Ecology, Jena for her valuable suggestions and discussion, and providing research literature during my study.

I acknowledge the help provided by Dr. M. K. Dhillon during my research work. A special thanks goes to Peter and Pravin for their help in experiment work and during the data analysis. My sincere thanks to Ajith Radhakrishnan and Bindu for their help in reviewing the thesis drafts.

I am thankful to our Entomology staff members Mr. S. R. Venkateswarlu, Mr. K. Harindranath, Mr. SVN Chandra, Mr. V. Venketeswar Rao, Mr. J. Rajarao, Mr. S. Vittal Reddy, Mr. Madhusudhan Reddy, Mr. J. Ramalu, Ms. B. Vimala, Ms. P. Ponamma for the help rendered during the course of this work, and the library staff for excellent facilities.

I thank to my labmates Siva, Surekha, Paramsiva, Mangesh, Bhargavi, Akbar, Hugar, Vinod B, Balaji, Ashok, Keshav, Ajit, Faiz, Jaiwal, Purushottam, Prashant for helping me in their capacities.

My special thanks to Mohan Bhagwat, Rahul, Vijay D, Santosh, Deepak, Girish, Bhaskaran, Marimuthu, Velu, Vikram, Vikas, Vivek, Brijesh, Raju, Rachit, Mehraj, Roby, Girijashankar, Datta, Bhagwan, Ajith, Dadya, Shivram, Rajshekhar, Avinash, Premal, Mahesh, Ravi J, Kishor, Sachin, Pravin C, Rahul P, Madhav, Shardul, Chandrakant, Prabhakar, Manohar, Hiren, Hari with whom I shared many delightful moments. I am grateful to them for their valuable help offered at all times, inspiration and encouragement during the course of this work.
I owe a special work of heartfelt thanks to my esteemed parents Dadarao and Dwarkai, without whose inspiration, support, love and affection, I would have never achieved this level.

I extend my sincere thanks to my sister, brother-in-law, brothers, sister-in-laws, nephew, niece, uncle and aunty, friends, well wishers, and others, whose contribution behind the scene has enabled the successful completion of my investigation.

Vinod D Parde