Acknowledgement

It gives me an immense debt of gratitude to express my sincere thank to my supervisor Prof Sudhir K. Jopory, for his excellent guidance, constant encouragement, patience and care during the entire course of Ph.D. I feel very fortunate to have an opportunity work under his patient supervision.

I wish to acknowledge my co-supervisor Dr. Sudip Chattopadhyay with high respect and deep sense of appreciation for his expert and unvaluable guidance. He was actively involved in each and every aspect of all the experiments, explaining things clearly and simply, providing facilities to carry out research at NCPGR, he has really helped me a lot in making things work. I do not have any hesitation in addressing him as my scientific mentor.

I am thankful to Prof A. Falaschi, Director ICGEB, trieste, Italy, Prof V.S Chauhan, Director, Mrs H.S Narayanan, chief administrative officer, ICGEB, New Delhi for providing me an opportunity to carry out my research at ICGEB.

I wish to thank Prof Asis Datta, Director, NCPGR, New Delhi for giving me an opportunity to conduct my research at NCPGR.

A special thank with respect to Dr. M.K Reddy, providing clone of pea DNA topoisomerase II promoter, Dr. Debasish Chattopadhyay, NCPGR, helping me in transcript analysis experiments, Dr. B.C. Tripathy, School of Life Sciences, JNU, for providing with the facility of colour light sources and Drs. Veena and Yashwanthi guiding me in BY2 cell transformation.

I deeply appreciate and acknowledge Director, Chairman and Board of Management CISIR, Sri Lanka, approving me three and half years study leave to conduct my Ph.D.

It`s really a great opportunity to express my heartiest and most sincere thank to Dr. Jaanaki Gooneratne, immediate supervisor, CISIR, Sri Lanka. Words can not express
my appreciation for her continuous encouragement, concern, unfailing directions and support for my professional carrier.

I would like to acknowledge Prof S.C Maheshwari, Nirmala Maheshwari, Drs, Sunil Mukherjee, N. Tuteja, Nirupam, R. Choudhury, Pradeep Agarwal, Sneha Lata Singhla, Neeti sanan Mishra Suresh Nair, Raj Bhatnagar, Siva Reddy, Leelawathi Nirupama Bhatnagar, and Madan Mohan, for their valuable suggestions and help in various ways.

This work would not have been possible without help and enthusiasm of many people at ICGEB, NCPGR and JNU. I thank everybody in plant molecular biology group including Chandan, Ramesh and Surinder, Insect resistance and Plant transformation groups for their cheerful support during this three and half years of my stay at ICGEB. Also I thank Vandy, kundu, Chandru, Ritu, Selvakumar, Negi and all other members of lab number seventeen at NCPGR and all my friends at JNU for their help in various ways.

I can not forget good times spent with Wricha, Vineetha, Punjab, Dasaradhi, Suman, Sidharth, Mintu, B.N Singh and Preeti. Their presence here and vital moral boosting made my stay at ICGEB, easy and enjoyable.

I would like to thank Mr. R.N. Saini for his excellent photography and cooperation and also the financial support provided by the ICGEB, triest, Italy is duly acknowledged.

I am thankful to all my SriLankan friends in Delhi and Special thanks to Seetha, Shanika and Janaka for their concern, encouragement and moral support throughout.

Above and beyond all, my heartfelt gratitude to my parents, brothers, Thisara and Bandura, cousin Danusha and my husband, having difficult time looking after my daughter in my absence and also my indebtedness towards my husband. He has given me more than I can say. Their endless love, priceless & untiring support, patience, inspiration, understanding and encouragement made all this possible.

Chamari Hettiarachchi