Acknowledgements

I express deep sense of gratitude to my most respectful guide Dr. S. B. Dandin, Director, Central Sericultural Research and Training Institute (CSRTI), Mysore under whose able guidance the research work was carried out successfully. His constant encouragement and support during the entire course enabled me to complete the work to the best of my ability and satisfaction.

I thank Dr. A. Sarkar, Director (retired), CSRTI, Berhampore who during his tenure as Joint Director, Mulberry Breeding & Genetics (MBG) section, CSRTI, Mysore extended all the necessary facilities in terms of materials and consumables to successfully accomplish the research work.

I am grateful to the Member Secretary, Central Silk Board, Bangalore for providing me an opportunity to carry out my doctoral work at CSRTI, Mysore.

I am immensely thankful to Department of Biotechnology, New Delhi for establishing the equipment facilities under different DBT sponsored programs in the Molecular Biology Laboratory of the Institute and enabling me also to utilize the same to undertake my doctoral research work.

I am grateful to the Director, Centre for Cellular and Molecular Biology, Hyderabad and Dr. Ramesh K. Aggarwal, Scientist – ElI of the same Centre for providing formal training in “DNA markers - Development and Applications” during the course of the study.

I am thankful to the Director, Central Sericultural Germplasm Resources Centre (CSGRC), Hosur and Dr. A. Tikader, Scientist – C of the same Centre for providing the required mulberry germplasm materials for the study.

I profusely thank Dr. R. Balakrishna, Scientist – D and Dr. T. Mogili, Scientist – C of MBG Section of the Institute for their constant help in providing necessary information and encouragement during the course of my research work.

I extend sincere thanks to my DBT project(s) Research Fellows – Dr. N. Sathyanarayana, Ms. R. Mamatha, Mr. Mathi Thumilan, Mrs. A. H. Sneha Rani, Mr. M. Sukumar, Mr. Sidhartha Mishra and Mr. Guruprasd who were of constant support and help during the period of my doctoral research work.

My special thanks to Mrs. Jula S. Nair for her help in critically checking the manuscript.

Last but not the least; affectionate thanks to my wife, Satya and sweet daughter, Monisha for helping me the most, during demanding times and adjusting to my late hours of research work.