Acknowledgements

As I begin to document what the world shall know of as my Ph.D. thesis, a wave of nostalgia hits me. I look back at all the years that passed by me, my first step in the city with a handful of dreams and a hint of hope in my eyes to undertake a journey that I envisioned since few years. The voyage has seemingly reached its final destination, or maybe it’s just the beginning.

Penning down the thesis gives me the opportunity to extend a deep sense of gratitude to my supervisor, Prof. M.V. Rajam, without whose supervision the project wouldn’t have seen the light of the day. His principles instilled in me a sense of responsibility towards my work and always motivated me to march ahead, regardless of all the hurdles that came in the way. Spending Ph.D. years with him will remain one of the most amazing experiences of my life.

At this juncture, I would like to express my sincere thanks to Prof. Sheela Srivastava, Prof. Deepak Pental, Prof. Akshay Pradhan, Prof. B.K. Thelma, Dr. P.K. Burma, Dr. Surajit Sarkar, Dr. Jagreet Kaur, Dr. Aruna, Dr. Tapasya and Dr. Kaustav Dutta for their constant support and their valuable suggestions which helped tremendously in shaping of my doctoral work.

I am extremely thankful to all my seniors Dr. Maneesh, and Dr. Brijesh under whose direction I took my baby steps in research, made mistakes and eventually grew as a researcher that I always wanted to be. I would like to thank Dr. Naveen, Dr. Paritosh, Dr. Satish, Dr. Amarjeet, Dr. Shaveta, Dr. Thenral and Dr. Ashwin for their constant support. Special thanks to Michael, Siva “The little Master”, Sumedha, Nitika and Renu whose company made my stay in the campus a memorable one.

My stay in the lab was made a pleasurable one, courtesy Aarti, Ranjita, Vikas, Sumit, Dr. Sandeepa, Neeru and Enna. I wish to thank Manish, Natraj, Devendra, Bhawna, Anjali, Mamta, Bhawna, Shipra, Asha, Meenakshi, Mahak, Ami, Sneha for being the wonderful friends that they are. Special note of thanks to Kasthuri for managing all the odd jobs in the lab, and Singh Ji and Ilike Ji for carrying out innumerable tasks in the lab as well as in the field so that my work could proceed at a smooth pace. My heartfelt thanks to my roommates- Dinesh, Kannan, Cecil and Sunil for always bringing a smile on my face during the tough times and making my stay in the city an enjoyable experience.

No words in the world can explain how indebted I am to my family- my parents and Sindhu, for their constant support and guidance. Their loving ways have always helped me to look ahead in life and never give up. My family forms the very foundation of the person the world knows as S. Tamilarasan. In the making of this person, special thanks go to my teachers Maheshwaran Sir and Dr. Fathima Benazir. They constantly motivated me to reach out for my dreams and excel in whatever I do in life. I also thank Sunayan and family for their constant support.

Finally, I would wish to acknowledge DBT for supporting RNAi programmes in Prof. Rajam’s lab. I wish to thank Dr. Uma Rao, IARI for helping me with nematode cultures. I would also like to thank Mr. Manish, IGIB and Dr. Anurag Agrawal for helping me with Real time data analysis.

I am thankful to the almighty for always showering his choicest blessings upon me.

Tamilarasan, S