ACKNOWLEDGEMENTS

I sincerely acknowledge with deep sense of gratitude,

My esteemed Supervisor Prof. Kailash C. Upadhyaya, School of Life Sciences, Jawaharlal Nehru University, New Delhi, for suggesting me the topic for this study, for giving me the necessary guidelines and for providing me all the facilities for research, for being a source of constant encouragement and support, for giving me freedom of work and his readiness to help at all times of need irrespective of it being academic or personal.

Prof. P.C.Kesavan and Prof. Sipra Guha Mukherjee, previous Deans of the School and Prof. Najma Z. Baquer the present Dean of the School of Life Sciences, for providing all the necessary facilities for the research.

Prof. Asis Datta, Prof. Sudhir K. Sopory, Prof. Sipra Guha Mukherjee, Prof. Rajendra Prasad, Prof. Alok Bhattacharya, Dr. Ramesh Bamezai, Dr. P.K.Yadava and Dr. P.C.Rath for generously allowing me to use their lab facilities and for useful suggestions I have received from them.

My dear colleagues IP, Reema, Fatima, Praveen, Tiwari, Ranjan, Amita, Kanchan, Nikhat and Vaishali for wonderful cooperation and help, for excellent interactive and very conducive atmoshpere in the lab. A special mention of thanks to Kanchan for her excellent help and support. My thanks to Praveen, Ranjan, IP and Vincent for helping me out during the preparation of thesis with a special mention of thanks to Praveen and Viswaranjan.

My close friends Rajesh, Praveen, Kiran, JP, Prabhakar and Vinay for standing by my side at all the times of need and necessity.

Dr. Amaresh Chandra, Dr. Thungapathra, Dr. Natarajan, Dr. Ganesan, Dr. Vivek Mittal, Dr. Malathi and Dr. Jayendra Prasad for innumerable help and excellent suggestions.

Mr. R.N. Saini for photography and Alexander, Ahmed, Khan and Sharma for their technical assistance. Ajit Singh, Radheysham, Pushpendra Mishra and Ramdhani for their excellent laboratory assistance.

University Grants Comission for the financial support in the form of JRF AND SRF.
E.M. Meyerowitz (Caltech) for the genomic library of Arabidopsis thaliana. Prof. Sorbhoy (I.A.R.I., N Delhi) for Pythium species.

Every other friend and colleague who had helped me directly or indirectly and from whom I have received useful suggestions. Mrs. and Mr. G.V. Raghunathan for being my main moral support and to have stood by side at all times of need.

Finally my parents and loving sister without whose constant encouragement, moral support and help the thesis would not have come out in this form.

S.V. NAGA PRASAD