Acknowledgements

A life spent making mistakes is not only more honorable, but more useful than a life spent doing nothing.

I express my most sincere gratitude and deep appreciation to my supervisor, Prof. Sheela Srivastava for her generous support, immense help and contribution, inner strength, inspiration, encouragement in distress, untiring patience and kindness without which this endeavour would never have accomplished. In my pursuit to attain perfection, she always inspired me to perform better, still better and still far better by showering her blessings of encouragement and positive criticism. Her diligent advice has always beckoned me to move ahead. She has been a constant source of strength and energy to me during this entire period. I owe my entire allegiance to Prof. Sheela Srivastava. I shall always remain indebted to her.

I wish to thank Prof. Anil Tyagi, Prof. P. C. Ghosh from Department of Biochemistry, UDSC and Dr. Rajni Gaind, Safdarjung Hospital, Dr. Sudipta Basu, IARI and Dr. Surajit Sarkar, Deptt. of Genetics for allowing me to work in their lab and use their facilities. Also, for their valuable contributions and suggestions that has resulted in the outcome of new and innovative results. I would also like to extend my sincere thanks to all the faculty members of the department, Prof. D. Pental, Prof. A. K. Pradhan, Prof. M. V. Rajam, Prof. B. K. Thelma, Dr. P. K. Burma, Dr. Jagreet Kaur, Dr. Tapasya Srivastava, Dr. Aruna Devi and Dr. Kaustav Dutta for their positive criticism, valuable suggestions, and guidance whenever needed.

I would like to thank the office staff, Neelam ma’am, Antram Sir, Bharat and Vandana for providing the administrative co-operation during the entire tenure of Ph.D. A special thanks to Meena ma’am for fluorescence microscopy and fungal strains.

Thanks to Vinoth and Rupangi for helping me during Plasmodium falciparum and Mycobacterium experiments.

Thanks to my seniors, Drs. Manoj, Santosh, Charu, Mandira, Ashutosh, Nitika ma’am and Bhupinder ma’am for guiding me through my initial days of joining the lab. A special thanks to Mandira, Nitika ma’am and Bhupinder ma’am for being an escort through my rough times. I also wish to thank my labmates, Anamika, Anuradha, Arpana, Gargi, Gunjan, Namrata, Reetu and Soumya for help and making my stay in the lab, a memorable one.

Last but certainly not the least, my parents, who have always been my backbone in times of either distress or happiness. They have been my physical, emotional, moral and financial support. I am gifted and blessed to have such parents.

Vivek, my husband, has been very co-operative throughout this venture and I cannot forget the support extended by him.

I also wish to thank all the people who have come my way but somehow missed a mention. Thank you everyone for making this work a success.

“Thank You God Almighty”.

Ruchi