ACKNOWLEDGEMENT

As I sit to write the acknowledgement for my thesis, the memories of the last four years come rushing back. It has been an eventful journey - a journey of a lifetime. And as I sit down to put this experience in words, it seems both special and difficult.

I am grateful to many individuals for helping me in numerous ways and seeing me through my PhD years and its completion. Your companion not only helped me see its completion but indeed transformed these four years into a life altering and rewarding experience. The space in my acknowledgement is not sufficient to name all of them. It is like counting the stars in a clear night. Yet among these stand few individuals whose profound impact deserves special acknowledgement and to whom I would like to dedicate this thesis.

First of all, it is with deep respect and gratitude that I acknowledge my supervisor Dr. Premashis Kar, Director Professor, Dept of Medicine, Maulana Azad Medical College, New Delhi, for supporting me and providing all the necessary facilities and an apt environment for carrying out my research. Without his support, this thesis would have remained a dream. His valuable suggestions and corrections, constructive criticism and his extensive discussions on the subject right from the beginning to completion of the thesis have enabled me to complete this thesis. His guidance dissolved obstacles and doubts that would have appeared insurmountable without him. I am unable to express in words my gratitude for his unflinching patience and constant encouragement that has motivated me throughout my Ph.D. I am grateful that he picked me up as a Ph.D student.
Acknowledgement

I have been extremely fortunate to have Dr. (Mrs.) Rupjyoti Bharali, Professor & Head, Department of Biotechnology, Gauhati University, Guwahati as my joint supervisor in this thesis. This work would not have been possible without her guidance, support and encouragement. She also provided scientific advice and knowledge and personal attention. I will always cherish her open discussions. Without her, it could never have been possible for me to reach this far in scientific field. I consider it an honour to work with her.

I expand my thanks to Prof. P J Handique, Prof G U Ahmed and Prof M C Kalita, Department of Biotechnology, Gauhati University, Guwahati for their insightful suggestions and discussions. The useful and constructive recommendation has been very helpful and deeply appreciated.

Dr Phani Kumar Gumma, Dr Rajib Kishore Hazam and Dr. Vijay Kymar Karra deserve my sincere appreciation. Primarily for helping me learn the subject, the techniques involved and providing me the environment for carrying out research. I also appreciate their valuable suggestions and expertise particularly in the molecular work for the completion of the thesis.

This thesis has been kept on track and been seen through to completion with the support and encouragement of numerous people including my well wishers, friends, colleagues and various institutions. Special thanks to, Ms Sheetal Sharma for her understanding, and constant support especially during the difficult phases, when desperation knocked on the door.

My special thanks to Dr Avishek Bagchi for his suggestions and immense encouragement.
Special thanks to Mr. Neelkamal who helped me in my lab work, Mr. Varghes, Mr. Manish for their help in carrying out my experiments.

It is difficult to adequately thank my mother and father who provided me the opportunity of an education from the best institutions and support throughout my life. I am forever indebted to them and I thank them for giving me the chance of becoming who I am. They were always beside me during the ups and downs, forever there to push me and motivate me. A journey is easier when you travel together. Interdependence is certainly more valuable than independence.

It would be incomplete if I did not mention all the patients without whom this work could not have been possible. I hope this study brings some newer perspectives in this field and help in understanding and the management of the disease and ultimately in saving the precious lives of all the patients.

Besides this, I owe to several people who have knowingly and unknowingly helped me in the successful completion of this thesis. I doubt that I will ever be able to convey my appreciation fully, but I owe them my eternal gratitude.

Above all I thank God Almighty for bestowing his blessings upon me and giving me the strength and endurance to complete my work successfully. For errors or inadequacies in this work, the responsibility is entirely mine.

Soumya Jyoti Chowdhury