Acknowledgments

I sincerely thank Dr. Apurba K. Sau for giving me an opportunity to carry out this project under his supervision. He has been very helpful and supportive not only on this thesis but on various issues during my Ph.D. I consider myself very fortunate to work under his mentorship and thank him for the strong foundation he has provided me to pursue quality science in future. I would also like to thank my doctoral committee members Dr. D.M. Salunke, Dr. J.K. Batra and Prof Rajiv Bhat (JNU) for their valuable assessment and suggestions.

My thanks to Abhishek, Esha and Nidhi for being wonderful lab members and creating a healthy environment in the lab. My special thanks to Meena and Bharani for helping me with majority of this work. It would have been a lot difficult without you guys. I thank Abhishek, Esha and Nidhi for helping with the proofreading of the thesis. I would like to remember Manjari: you were a sincere researcher and would have made a valuable colleague. Devanand, Pallavi, Parth, Rohit, Venkatesh, Anjana and Richa had been good labmates. My sincere thanks to all IEL lab members Joy, Harshita, Priyanka, Pooja, Anjali, Alpana, Sonia, Suchi, Ruchi and Monika; especially to Dr. Om Singh and Dr. Rahul for help during my Ph.D. Ramesh Ji, Ashok Ji, Suraj and Ratan Ji had been very helpful in the lab.

I would like to thank all my friends for the help they have provided me and for being there in times of disappointment, sorrow and joy. I am not able to write all the names here but wish to express my gratitude to them all. Special thanks to T.K., Bharathi and Atif Bhai: I miss the late night teas and all the fun we used to have. Thanks to TK for helping me with the printing of the thesis. Hamid bhai, Anees, Safdar, Tabish, Asif: you guys had been wonderful friends to hang out with. My thanks to Hybridoma and STL labmembers Dr. Ayub, Divya, Shazia, Debjani, Srikant, Ajay and others for always being ready to help. Thanks to Prateek for helping me with FACS experiments. I am also thankful to Shankar sir, for teaching me more than music and giving a lot of advices on many issues.
I would like to thank my JMI friends Arif and Rizwan for never forgetting me; Shafique for help with the CD experiments. I am thankful to AIIMS guys Utpal sir, Hari sir Srinivasa Reddy sir etc. for being so helpful whenever I needed help.

Above all I am thankful to Allah for the successful completion of this thesis. Last but not the least I would like to thank my family, for being so supportive and understanding in every possible way. It would have been impossible without your support.

Nazish Abdullah

July 12, 2010