The successful completion of my PhD project was a result of concerted efforts by many minds and hands. I take this opportunity to thank them all.

It was a pleasure working with Dr. Vineeta Bal and Dr. Satyajit Rath in the immunobiology laboratories of this institute. I found both of them very frank, friendly and full of enthusiasm. The liberty they gave me to execute my experiments is much appreciated. Through them, I learnt the importance of "proper controls" in every experiment, and to compare dose response curves in the right manner; and I fully understood their paranoia for "reproducibility of results". The routine lab meetings on Thursday were a real ordeal; in retrospect I realize that I learnt most of my immunology at these meetings. I thank them both for their guidance, criticism, patience and support.

I thank my doctoral committee members, Drs. Ranjit Ray, Ayub Qadri, Raj Raghupathy, and Prof. G. P. Talwar for their valuable suggestions during my doctoral committee data presentations. I also thank the Director, Dr. S. K. Basu for taking his valuable time out to attend my doctoral committee presentations.

As this work was done in the mouse system, I required a constant supply of mice. Dr. Rajesh Anand and his staff at the small animal facility, NII, unfailingly supplied mice as per my requirements. I am grateful to them for their kind help.

The staff in the library, academic cell, stores, and administration office ensure that the scientific pursuits go on uninterrupted. I thank them all for their help. I thank Mr. Akhilesh Kumar Aggarwal for his kind help in the academic matters. Thank you Babulal, for the superb photocopies of this thesis.

The immunobiology labs have come a long way since their inception about four and a half years ago, and it was a delight to watch them grow and burgeon. It feels great to be the first student of these labs! The working atmosphere in a lab needs to be healthy and conducive for research. I have had the privilege of working in such a lab full of wonderful people. It was great fun working with Sanjeev, Ebby, Pratima, Roshini, Nagu, Achal, Manisha, Shyam, Sangeeta, and Chandu. They were always there to help me out and to share my joys and frustrations. Thank you guys and gals for being there, always. The "chai sessions" and lab dinners will always be cherished by me. Inder, Anupama, Mijan, Deshraj and Biru ensured that there was no problem for us in terms of our daily requirements for the experiments. I thank them for their enthusiasm and help.
The student's residence at NII is unparalleled, and Prof. Takwar has rightly named it the "research scholar's home" instead of a "student's hostel". It is really a 'home away from home'. The student's mess is the place where students don't just go to 'eat' but to 'meet'. It is just the right place to relax with friends after a tough day's work. The RSH is where the extra-curricular talents of the scholars are expressed extensively. I have enjoyed every moment of it, be it the ethnic dress competition, dumb charades, mess birthday, treasure hunt or a jilebi eating competition. It's fun all the way. It is the place where selfless service is seen at its best when someone falls sick. I am indeed very fortunate to have friends like Pawshe, Ayub, Rahul, Umesh, Harini, Anuja, Charu, Abhijit, Amol, Reddy, Manoj, Arunan, Harsh, Suresh, Sumita, Shabnam . . . . the list is endless. Your presence made RSH a 'terrific' place to live in.

The cooks have always been there to serve us hot, clean and good food even at odd hours. I thank them all for their kind service. The security men at the RSH have been extremely efficient at attending phone calls and taking important messages. I thank them all for their 'round the clock' vigil.

I wish to thank Dr. Puri, my homeopath physician for helping me immensely in recovering from a serious illness with his superb medical acumen. By visiting him frequently, I understood the importance of the mind-body relationship. Thank you Dr. Puri, for being there.

Aai, I am what I am today because of your immense sacrifices for your children. You are both my mother as well as my father. This small piece of work, I dedicate to you with great respect and love.

The love and encouragement I got from my brothers, Hemant and Sagar and their wives Aditi and Gauri and children Hameer, Shivangi, Tejas, Shambhavi and Kabir has constantly helped me through my 'highs' and 'lows' and has inculcated in me the 'go for it, man' attitude. I just do not have words to thank you all. Aravinda, your presence gives me immense strength, self-confidence and happiness.

Gurumayi, I am alive today by your Grace. Your teachings that the most important thing in life is inner peace, and that everything happens for the best, will always keep me focussed on my goal. Thank you for EVERYTHING.

Jyant Thatte