I bow down to the Blessed Lord, of the nature of Supreme bliss, whose grace makes the dumb a fluent speaker and the lame cross the mountains.

I am indebted to my teacher and guide Prof. G.P. Talwar who has patiently borne with this 'Learner' throughout the experimental study without which this manuscript could never have found its present shape. Prof. Talwar's vast experience, intellect, clarity of thought and amazing strive for success has been a constant source of inspiration.

I am also thankful to my guide Dr. Mushtir Ali for his guidance from time to time enabling me to meet my deadlines.

I would like to thank Prof. K.K. Pillai, Ex-Dean and Prof. Mohd. Ali, Dean, Faculty of Pharmacy, Jamia Hamdard for allowing me to utilize the infrastructure and the laboratory facilities.

I would like to express my gratitude to the scientists of the National Institute of Immunology with whom I was associated for part of my studies, especially I am deeply indebted to Dr. A.K. Panda who permitted me to use various facilities in his laboratory and without whose help I would not have reached even the first base!

I am grateful to Prof. R.K. Khar, Head, Department of Pharmaceutics, Faculty of Pharmacy for his invaluable words of advice and encouragement.

I also thank Dr. Ashok Patra and Dr. Manish Diwan for their help in the initial part of my PhD.

A word of special thanks to Dr. Jagdish Gupta for offering me advice from time to time and having patiently borne my never ending demands "for more protein/DNA".

This study was indeed not possible without the collaborative effort of all the persons involved with it. Whether it was my Colleagues, Seniors and Juniors, all of them have always come forward with their
ever ready help. Also it is impossible to forget the help and cooperation extended to me by Mr. Upinder Kale, Mr. Ranbir, Mr. Vijay Pal, Mr. Kumud, Mr. Roshan Lal, and Mr. Santosh.

I extend my thanks to Mr. Diwedi of Akriti Systems for the compilation and general appearance of this manuscript.

I am indebted to my friends for their healthy criticism, doses of encouragement and for patiently hearing me out throughout the course of this study. Especially I want to record my thanks and heartfelt feelings for my family who encouraged me with unconditional emotional support and stood by me throughout the ups and downs. Thanks a tonne! Everybody.

Komal Raina

Komal Raina