



# Dedication

*This thesis is dedicated to Baba & Ma*

## Few words of heartfelt expression

Firstly, I would like to thank Almighty for His blessings on me, forever.

I take this opportunity in expressing my deepest sense of gratitude to my guide Dr. M. R. Yadav, Professor, Pharmacy Department, Faculty of Technology & Engineering, The M. S. University of Baroda, for sharing his vast knowledge and experience, convivial criticism and constant encouragement. His strong belief in science combined with systematic approach has been of great help and inspiration. He has always been like the star in the sky meticulously signaling the right direction to reach the ultimate goal.

I would also like to thank Prof. A. N. Misra, Head, Pharmacy Department, and Prof. B. S. Parikh, Dean, Faculty of Technology and Engineering, The M. S. University of Baroda, for providing the facilities for research.

I convey my deepest gratitude to Dr. R. Giridhar, Professor, Pharmacy Department, for her support and unbound love during the course of the study.

I heartily appreciate and thank the selfless support and suggestions at the hour of need of Mr. Harikishore Pingali, Scientist, Zydus Research Centre, Ahmedabad.

I would like to take this opportunity to thank Mr. Davinder Tuli, Scientist, Torrent Research Centre, Ahmedabad not only for helping me out in the biological screening but also for his support and constant encouragement throughout the course of the study.

I thank Dr. Shailesh Deshpande, Scientist, Torrent Research Centre, Ahmedabad from the bottom of my heart for helping me out in the preparation of cell lysate.

I am grateful to Dr. Mukul Jain, Vice President, Zydus Research Centre, Ahmedabad for providing the facility of PMR and Mass spectra.

I would also like to thank Dr. T.Rajamannar, Executive Vice President, Sun Pharma Advanced Research Centre and Dr. Vinod Burade, Manager, Sun Pharma Advanced Research Centre, for extending the facility to me to carry out the

enzyme inhibition study and also for providing PMR spectra of some of the compounds.

I would also like to thank my Ph. D. colleagues Anil, Shrikant, Bishram, Ramajayam, Sabale sir, Prashant M., Dhaval, Prashant N., Anand and Vishal for sharing my good as well as bad times with constant support and encouragement.

Friendship is a treasured gift and true friends are few. I am lucky enough to have friends like Florence, Uma and Himanshu who have helped me in innumerable ways in completing the work.

Thanks are due to Mr. Aditya Patel and Mr. Premlal Meher for contributions during their M. Pharm. projects.

I sincerely thank Mr. Amit Kapoor and Mrs. Poonam Kapoor for their help and suggestions at a very difficult time during the course of the study. Their help and suggestions have worked wonders for me.

I express my thanks to all the non-teaching staff of Pharmacy Department for their cooperation during the course of the work.

The financial assistance provided by All India Council for Technical Education, New Delhi in the form of National Doctoral Fellowship is humbly acknowledged.

I would also like to express my sincerest thank to Baba and Ma for always been there for me and always encouraging me to achieve a higher goal.

I would fail in my duties if I do not thank my wife Deepa for her support, love and affection at all times. She may not have been actively involved in the work, but without her cooperation, this work would not have been completed. I would also like to thank Tulus for being a constant source of joy and inspiration.

Shirshendu Das Gupta