

## **Acknowledgement**

*I take this opportunity to gratefully acknowledge my guide Dr. M.I. Khan for his guidance and keen interest during the course of this investigation. He has given me the freedom to think, and work; and I shall cherish my learning experience under him.*

*I am equally obliged to Dr. Absar Ahmad for helping me with his microbial expertise in the isolation, identification and fermentation of microorganisms.*

*I am grateful to Dr. S. M. Gaikwad for her valuable suggestions and help in learning biophysical techniques.*

*I also thank Dr. V. Shankar for devoting his valuable time and efforts in putting this thesis into shape.*

*I am also grateful Dr. M. V. Krishnasastry, Dr. C. G. Suresh, Dr. Aditi Pant, Dr. Ameeta Ravikumar, Dr. S.S. Deshmukh, Dr. Mala Rao and Dr. A. Prabhune for their valuable suggestions during the course of investigation.*

*I would also like to extend my sincere thanks to :*

*Dr. Arvind Sahoo, National Centre for Cell Sciences, for providing SPR facility and help in data analysis.*

*Dr. K. N. Ganesh, Organic Chemistry (S), NCL, for permission to use CD facilities.*

*Dr. Mahesh Kulkarni, Centre for Material Characterization, NCL, for help in MALDI-ToF facility.*

*I express my deep feelings and love for my labmates and friends Aarohi, Asad, Atul, Anil, Anag, Ansari, Ajit, Anish, Ashutosh, Jeyprakash,*

*Maggie, Manish, Manisha, Nitin, Nagraj, Poorva, Rohtas, Rajashree, Shabab, Sahdab, Siddharath, Shrikantth, Sharmili, Sajid, Shashidhar, Shweta, Sofia, Satya, Senapati, Sharath, Sachin, Uma, Vaishali and Vinod.*

*I find no words for my parents and grandparents who have been a constant inspiration for me. I am also thankful to my wife, brother, sisters, cousins and friends, who have been a moral support to me, standing by me and boosting my morale in times of stress.*

*Finally, I thank Head, Division of Biochemical Sciences and the Director, National Chemical Laboratory, for permitting me to submit this work in the form of the thesis, and Council of Scientific and Industrial Research, India for financial assistance.*

*Feroz Khan*