Acknowledgements

Working under the guidance of Dr M. I. Khan has been a pleasure thanks to his kind and considerate attitude. I wish to express my heartfelt gratitude to him for his valuable guidance and excellent supervision. He has given me the freedom to think, work and I shall cherish my learning experience under him.

I cannot find words to express my gratitude to Dr Sushama Gaikwad, who has been my friend, philosopher and guide through the ups and downs of life at and outside NCL. I will always remember the encouragement and co-operation she has extended.

I take this opportunity to say thank you to Dr Khire for showing me the right direction at a time when I was unsure about the future. Were it not for him, I would not have taken up this project. I thank Dr Suresh for the supply of seeds, without which this work would not have been possible. I am grateful to Dr Pant for the keen interest she has shown in my work and Dr Shankar for his valuable time and effort in putting this thesis to shape.

I deeply appreciate the permission granted by Dr Ganesh and Dr Natu for carrying out experiments in their laboratory. I wish to thank Dr R.P. Roy and Dr Maurya for the support they have rendered. The smiling faces of Dr Keskar, Dr Amita, Dr Deshmukh, Dr Prabhune, Dr Pundle, Ushabai and Indira will remain with me.

My lab-mates Veena, Amutha, Shamin and Hegde kept the atmosphere in our room cheerful, healthy and I thank them for their friendly assistance. The lively discussions I have had with Vaishali, Sarita, Smita, Narsimha, Shashikala, Kanchan and Suresh at lunchtime will be forever etched in my memory. I shall also remember the fun times I have shared with Vaishali, Bhagyashree, Farhana, Sneha, Urmila, Devyani, Mohini, Rao, Manoj and Sattivel. Special thanks are due to Rangarajan who went out of his way to help me. I shall look back on my years at NCL as a beautiful dream thanks to all these friends.

I am deeply indebted to my sister Mina, brother Sanjay and parents for the emotional and financial support they have rendered at all times. Their comforting words in times of stress and patience in putting up with my odd hours made life a lot easier. Their love and encouragement gave me the push I needed.

I thank Dr Ranjekar, Head, Biochemical Sciences and Dr Ratnaswamy, Director, National Chemical Laboratory for permitting me to submit this work in the form of a thesis. I also acknowledge the Council for Scientific and Industrial Research, India for the financial support given.

Madhura M. Gurjar