Acknowledgement

"There are no such things as applied sciences, only application of science."

Louis Pasteur, 1872

I can still remember the day when my "Sir", Prof. Dhrubajyoti Chattopadhyay asked me about working on a project that was aimed to develop some industrially important enzymes as a part of Industry-University partnership programme (IUPP). It was middle of July 2003 when I joined in a collaborative project between our department, Biochemistry and a Kolkata based company, Sun Biotechnology limited. It has been almost five years since I have been working in Chattopadhyay's group. Many ups and downs throughout this tenure have provided me with countless memories.

Many names and faces are coming in my mind right now. I would like to acknowledge every single person associated with me during my studies from smallest to biggest ways.

This thesis was only possible because of the support and guidance from my "Sir" and guide Prof. Dhrubajyoti Chattopadhyay, Guha Professor, University of Calcutta. His continuous encouragement and affection to explore the unexplored precincts has provided me with an opportunity to pave my way towards the completion of this thesis. I would like to express my sincere and heartfelt gratitude towards him. Sir I belive that,

"In science the credit goes to the man who convinces the world not to the man whom the idea first occurs."

Francis Darwin, 1928

I have learnt how to inculcate knowledge from observations. There have been so many occasions I may have disagreed with you and finally realized that you were correct in most of those confrontations. I hope to maintain the ability to handle problems that you taught me during the course of this study. Your affectionate interaction is what I will cherish forever.

I would like to acknowledge my co supervisor, Prof. Krishanu Chakrabarti, Centenary Professor, Department of Biochemistry, CU for his continuous support, interactions and suggestions throughout the course of this study. I would like to thank him for providing me with an opportunity to work with him and the valuable guidance that inspired me to go further.
My heartiest regards goes to our senior most "Boro Sir", Prof. I B Chatterjee for being an example to all of us for his affection and dedication towards science.

I would like to thank Prof. Anjan Dasgupta, the present Head of the Department of Biochemistry and Prof. K. Chakraborty, Prof. M.K. Poddar, the former heads of the department of Biochemistry for providing me all the facilities and support. I also thank all the faculty and staff members of the Department of Biochemistry and Dr. B.C. Guha Centre for Genetic Engineering and Biotechnology (GCGEB) for their constant help during the course of this study.

I would like to thank my past and present lab mates, Soumenda, Amitavada, Rahulda, Santanuda, Smarajitda, Subhrada, Snehasishda, Rajada, Nimalyada, Shuvojita, Amit, Geetanjali, Palash, Hirak, Shubhendu, Nimalya, Arindam, Tridibda, Arunava, Arunava (Boro), Neekkan, Rudra, Shubhasis, Niranjan for their constant support and interactions.

No words are enough to express my sincere gratitude to my family for their patience and unquestioning support. My parents and my sister were just too cooperative and very compromising throughout all these years for only helping me to achieve my goals. I felt to have Jethu (Sj. Nanda Dulal Chakrabortty) and Jathaima's (Late Bandana Chakrabortty) blessings throughout my journey in making this work complete. I also like to thank my wife, Anupama for being cooperative and supportive throughout the journey. Last but not the least I would like to acknowledge my school teacher Utpal babu for inspiring me to go for research. I would like to thank all my friends and well wishers who helped me to reach my goal.

Finally I extend my thanks to Sun Biotechnology Limited (specially Dr. Alok Sen), Guha Endowment Fund and DBT for the financial assistance.

Abhrajyoti Ghosh
Department of Biochemistry
University of Calcutta
India
June 2008