AKNOWLEDGEMENTS

A Thank You from Neha

"A journey of a thousand miles begins with a single step"......going down the memory lane, some six years back in 2003 my journey began at IMTECH with finding a ‘PhD mentor’ and a research lab wherein I was to spend the next 5-6 years, most important years of my life. As I reflect upon this journey, I feel a sense of gratitude towards people who have in their own special way made an impression on me. I wish to acknowledge all of them.

At the outset, I wish to express my sincere gratitude towards my mentor Dr. Anand Kumar Bachhawat. I feel I am ‘God’s chosen child’ to have a mentor like him. It’s his balanced approach in training students wherein he perfectly blends the right amount of strictness to ‘pull strings’ and bring us ‘on track’ together with giving us the freedom to explore new horizons, which makes it an ‘absolute delight’ to work under his supervision. With his tremendous scientific insight and expertise, he has patiently trained my mind over this period of six years towards logical and rational thinking. I have imbibed from him qualities like thorough reading, meticulous planning of experiments, multitasking to manage different experiments at the same time and the importance of scientific discussions. I have overcome my hesitation of giving seminars and participating in them during lab meetings due to his constant push and encouragement in this direction. I have particularly enjoyed analyzing and writing my data as part of this thesis with him. Thank you Sir for accepting me as your ‘Shishya’, for your guidance which kept the ‘sails aflutter’ and for your immense contribution towards my understanding and perception of science.

I am obliged to the former director Dr. Amit Ghosh and to the present director Dr. Girish Sahni for providing excellent institutional infrastructure and an ambient atmosphere for research work.

A significant portion of my thesis work involved attempts towards purification of the functional protein and protein modeling. Since no previous study in the lab has dealt with this aspect, I have heavily sought help from scientists and students in other labs of the institute for which I wish to place on record my sincere thanks to all of them. First and foremost, I would like to thank Dr. S. Karthikeyan for prediction of residues in the putative cysteine-binding pocket of S.cerevisiae gamma-glutamyl-cysteine synthetase and for his attempts to model this protein. Discussions with him have immensely contributed towards my understanding of protein biochemistry and structural biology.

I owe a ‘Big Thank You’ to Manish Datt for having taken up the challenge of modeling the S.cerevisiae gamma-glutamyl-cysteine synthetase protein. His sincere efforts towards structural interpretation of the genetic data on S.cerevisiae and E.coli gamma-glutamyl-cysteine synthetase have given the much needed insight into this study. My long discussions with him have broadened my perspective towards structure functional aspects of proteins. Besides, I would like to thank Dr. Ashish Ganguly for having been forthcoming in his desire towards building a model of the protein and his willingness to determine its 3D structure using SAXS.

My sincere thanks to Dr. Pradip Sen for his advice and suggestions on western blotting which has formed a significant part of this study.
My sincere thanks to Dr. K. Ganesan, Dr. Jagmohan Singh, Dr. Alok Mondal and Deepak for their help in DNA sequencing.

A special word of thanks to Nandita maam for usually inquiring about our welfare with a ‘Kaise Ho?’ and for the lab get-togethers over home-made food which made us all feel at home.

A token of thanks to my lab seniors Dr. C.V. Srikanth, Dr. Dwaipayen Ganguli, Dr. Sanjoy Paul and Jaspreet Kaur for teaching me the basics of yeast molecular biology. Special thanks to Jaspreet for her help in the western blot experiments and the critical scientific evaluation of my work during lab meetings.

I have had the privilege of working with a senior like Dr. Amit Sharma who has been eager to share his knowledge and experience with me. My sincere thanks to him for his contribution towards the study of native cysteines in E.coli gamma-glutamyl-cysteine synthetase and for his attempts to model the S.cerevisiae gamma-glutamyl-cysteine synthetase during his brief stay in the lab.

I would like to take this opportunity to thank Rajkumarji for pitching in to lend a helping hand with his technical expertise in my experiments when it seemed ‘too much to handle’.

A note of thanks to all my lab juniors Anil, Hardeep, Akhilesh, Amit, Prashant, Shailesh and Anup for the fun-filled laughter sessions in the lab and their scientific suggestions during lab meetings. I would like to especially acknowledge the help given by all of them during my thesis writing. Prashant, Anil and Shailesh have been extremely patient and helpful during the final stages of putting together this thesis.

Shailesh joined the lab when I was just on the verge of completing by bench work. He has been extremely cooperative and receptive, full of energy and with an eagerness to learn new things. It has been an ‘absolute delight’ working him. I thank him for his help in winding up my experiments for thesis.

I had the privilege of orienting two MSc students Ranu and Hiten to bench work as part of their summer training programme. Interacting and working with them has been a learning experience for me. Besides both of them, Tanu, Romi and Bhavin were also transiently a part of the lab as Msc trainees. Although I did not directly work with them, their company was especially cheerful and we have enjoyed sharing our common passions for photography, music and art in-between experiments.

Dr. K. Ganesan’s lab has been more like a ‘sister lab’ to Dr. Anand Bachhawat’s lab. Mannan, Sushma, Yashpal and Awani have all been supportive and cooperative.

A special note of thanks to Vandani Di, Meghna Di, Akesh, Archna, Shweta Bhutani and Sagar Sir for familiarizing me with the techniques of protein expression and purification. My sincere thanks to Mirage, Pankaj Chauhan, Sankalp, Anuj, Arijit, Jesse, Renu, Rajni, Payal, Haider, Arvind, Eshu, Shubbir Sir, Mitesh, Neeraj, Sanjeev, Amit, Divya and Shekar for their cooperation.

The IMTECH Library staff, BIC and Administration are duly acknowledged for their help and support whenever required. The financial support given by CSIR is duly acknowledged.
My stay at IMTECH would have been in black and white had it not been for the colours of friendship added by many vibrant and loving people. I have thoroughly enjoyed the company of Ruchi, Vijaya, Soniya, Archana, Richa, Swati Haldar and Pankaj Arora. Our light-hearted chats over lunch and dinner were like the much needed whiff of fresh air. Watching movies, dance/music shows on television was an activity eagerly looked forward to every Friday and Saturday evening. Shopping excursions and dance parties with all of them added the much needed 'Zing' to everyday routine. Friendship with Ruchi took a deeper meaning when we became room-mates at the end of my tenure. Both of us, along with Mary and Sunit enjoyed a cosy, homely atmosphere in our hostel room. These colours of friendship would be incomplete without my ‘Rainbow friend’ Anuj who has sprinkled my life with ‘sunshine’ and made the bud bloom into a flower.

Last but not the least, I dedicate this thesis to my parents and my younger sister, nidhi for having believed in me and my dreams. Inspite of all their personal/professional limitations they have always stood by me and been a strong guiding force. Mama has been an inspiration who inspire of her ill-health has brought me up and made sure that I get the best, Papa with his stable, practical advice has always been there for me like an anchor during some of the roughest patches of my life. I will always look up to my younger sister nidhi for having been ‘my most treasured’ friend.

I consider myself extremely fortunate to have my Dada, Dadi and Nana, Nani always encouraging me in my academic pursuits. Till today, they have all been extremely supportive of my professional endeavors. Besides my immediate family, on a personal level I would like to thank Dr. Sandhya, my family homeopathic physician for all her support and guidance. I could have never completed this thesis work without all of you!

Above all, I would like to thank this cosmos for bestowing me with abundance and positivity, for having given me the opportunity to meet some of the ‘most angelic’ people and at the same time throwing up at me some of the most challenging and trying people during this journey. Today I believe that all these put together have greatly refined me as an individual and most importantly, has allowed the essence of humility seep in me.

April' 09.

Neha Kasturia