Acknowledgement

It is a pleasure to tell you the tales of my thesis by acknowledging the contributions of several people.

I would like to thank my thesis advisor, Professor Samir K. Brahmachari for his support, encouragement and faith in me and introducing me to a challenging problem of brain-like polyglutamine diseases. He has always motivated me to ask questions, come up with new ideas and work hard. He taught me how to read a scientific paper, in such a way so that it can improve the thinking ability of the reader and simultaneously help to put a constructive criticism on the work. Practicing that trick eventually helped to grasp a paper very fast. I greatly admire his ability to judge the worth of an idea and his willingness to provide enthusiastic support for boosting student's scientific capabilities. I saw him as a passionate scientist as well as the Director General of CSIR and his talent, energy and enthusiasm has inspired me throughout.

My foremost gratitude goes to Dr. Beena Pillai for her guidance throughout the journey of my PhD. Her patience, support and faith in my capabilities made my journey successful. As her first graduate student, I am very fortunate to learn scientific acumen of performing experiments from her. I greatly appreciate her intelligent and analytical approach for microarray as well as other statistical data and tricks to use 'excel' for data analysis; and thank her for providing me a better conceptual understanding and implementation of statistics. Her passion about science fascinates me. She has helped me a lot through scientific writing and always encouraged me to read good scientific books, other than text books. I am thankful to her for providing me a ground to learn independently, which is in fact a self process, and facilitates me to express my own ideas. She never likes micromanagement which not only helped us to get some freedom to learn but also made us more responsible about our work. She constantly urged us to set up and running a lab, co-operatively works and develop good lab culture, create scientific interaction in lab, and bequeath it to new colleagues. I am thankful to her for introducing miRNA mediated regulation and transcription related mechanism to me and providing me critical suggestions. On many occasion I went to her with fearful and depressed mind to inform about my experimental failure but came out with optimistic enthusiasm to solve the problem. She made me realize that PhD is not a competition like holding first position in class or win a match rather a different exploration.
I would like to thank Neeraj for providing me different polyglutamine repeat containing TBP clones that he made during his PhD, and always replied quickly to my queries. Many thanks go to Kartik and Sheel. Both of them during their training period in our lab worked with me and put their efforts in some of my experiments. I thank Sheel for Xbp1 related experiment. I acknowledge Kartik’s help during UTR cloning and LNA mediated transfection experiment. I thank him for providing me pre-mmu-miR-34b-5p clone that he made. I thank Vinod for doing and explaining me 3’EST end analysis.

I would like to thank Prof. Vani Bharmachari for providing her time in explaining, making corrections and giving valuable suggestions during manuscript preparation. Her scientific look on experimental results is thrilling. Once she told me “any criticism is a step to perfection”… these words inspired me to find the way to improve rather than feeling deterred in any situation.

For several biophysics related queries my solution- X was Dr. Souvik Maiti. I am grateful to Souvik da to be very caring and helpful for my scientific carrier. I thank him for giving his time to review our manuscripts and providing valued suggestions to improve it. I would also like to thank Prof. D.J. Chattopadhay for always be a supportive, helpful and energetic teacher to me.

I am thankful to Dr. Arindam Maitra for teaching me real time PCR, without his help those experiments would not have been possible to such a fantastic fashion. He always made his time available for me as a teacher and as a friend and provided valuable practical suggestions regarding several molecular biology experiments.

I would like to thank Dr Balram Ghosh to be very supportive to me and provide resources from his lab whenever required. I thank for his suggestion to use quantikine kit for Cyt c release assay and providing me the kit. I am thankful to Dr. Sridhar Sivasubbu for generously providing me in situ hybridization kit, TOPO cloning Kit in very crucial time during my PhD. His suggestions on RACE experiments helped me a lot. I acknowledge Dr Neeru Saini’s supportive help during Flow cytometry experiments.

I would like to thank Dr Taruna Madan, Dr. Malabika Dutta, Dr. Shantanu Sengupta, Dr. Dwaipayan Bharadwaj, Dr. Mitali Mukerji, Dr. Shantanu Chowdhury, Dr. Abhay Sharma, Dr. R.H Das, Dr. Y Sing, Dr. Munia Ganguli and Dr. Vibha Taneja for their help and co-operation.
My special thanks to Chitra, Uma, Amitabh, Rajan, Anita, Indrajit, Vinod and Manoj. I could borrow (non-returnable basis!) stuffs during the very beginning phase of my PhD from Chitra and Uma without inhibition. Amitabh initially taught me basic cell culture protocol. I thank Rajan to give me bench protocol regarding mitochondria isolation, Anita for helping me doing flow cytometry experiments. Indrajit as a friend always made himself available in the lab whenever I needed and very urgently needed to use instruments in his lab. I thank my friend Anuja, NIH, for telling me valuable tips during ChIP experiments. Thanks Vinod and Manoj for providing bioinformatics related help.

I am thankful to my lab mates, Jasmine, Kartik, Nadeem, Roshikesh, Reema, Mohantesh, Roshni, Subhomoy, Abdul, Liza; previous lab mates Inder, Gayatri, Rashi, Venkatesh, Lijo, Saijo, Ankit, Urvashi, Mamta, Jeneeth, Jancie, Ashley, Mayatree, Sachin, Rahul. I am really fortunate to get such co-operative and helpful colleagues with whom I spent several years. I am grateful to Kartik and Jasmine to be with me as trustful friends in several happy and sad moments. Jasmine has a good writing skill and she helped me several times to correct and improve sentences. Thanks Rishikesh for running ‘R’ script to generate box plots. I am thankful to my other friends at different labs: Niti, Jiten, Arun, Preveen, Ram, Nambi, Vaibhav, Harleen, Jameel, Ganamani, Bala, Tani, Amit, Nirmal, Senthil, Jenoy, Kangkan, Anjali, Gaurav, Priyanka, Shadab, Poonam, Ajit, Aki, Raj, Ananya, Anirban, Ashok, Ravindresh. All of their nice company made my stay enjoyable here.

The assistance provided by Mr. Sukh Pal is highly acknowledged. Research fellowship from Council of Scientific and Industrial Research (CSIR) is greatly acknowledged.

I thank Dr. K C Gupta, the director at IGIB. Along with him I thank scientists and official staff at IGIB.

I want to thank my aunty, mom, sisters and brother-in-laws, my loving nephews and niece, who are very special to me, for their enormous faith and unconditional love. I owe my sisters, as without their endless support and love for me nothing in my life could come successful.

Tanay Ghosh