I am grateful to Dr. Prosenjit Saha, Department of Oncogene Regulation, CNCI for his valuable advice and guidance. My sincere thanks also go to Dr. Abhijit Rakshit, Head, Animal Care and Maintenance Department, CNCI and all the members of this department; Dr. Syamsundar Mandal, Department of Epidemiology and Biostatistics, CNCI; Dr. Smarjit Paul, Department of Biochemistry, CNCI; Dr. Karabi Datta, Department of Epidemiology and Biostatistics, CNCI; and other respected present and ex-faculties of CNCI: Dr. Sukta Das, Dr. Parthasarathi Das Gupta, Dr. Rathindranath Boral, Dr. Manas Ranjan Ray, Dr. Utpal Sanyal. I express my gratitude to Dr. Sandip Majumder, ex- Academic Coordinator and Dr. Sutapa Mukherjee, Academic Coordinator, CNCI for their immense help all throughout my tenure. I would like to thank all members of Central Research Instrumentation Facility (CRIF), the Library, the Director office and Account office of CNCI for their constant cooperation during the course of my study.
I am indebted to Dr. Anup Roy for his generous help and guidance on histopathological analysis. I would like to thank Dr. Parimal Karmakar and Dr. Ratan Gachhui, Department of Life Science and Biotechnology, Jadavpur University; Dr. Asit Kumar Sarkar, Head, Department of Microbiology, Ramakrishna Mission Vidyamandira for their valuable advice and motivation.

It is my pleasure to acknowledge all my present and ex-lab members and friends for their kind cooperation, advice and help, for the stimulating discussions, for all the fun we have had in the research work. Firstly, I want to express my heartiest gratitude to Debolina di (Dr. Debolina Pal) and Kaustav (Mr. Kaustav Banerjee) for their co-operation, help and scientific assistance whenever needed. Rituparna (Ms. Rituparna Roy) and Atish (Mr. Atish Barua), I must appreciate your selfless co-operation and help. I am very much grateful to Sankha da (Dr. Sankhadeep Dutta) and Shreya (Ms. Shreya Sarkar) for their support, help and well wishes during my research work especially during my tough times. It is also a pleasure to express my warmest gratitude to other lab-mates: Saimul (Md. Saimul Islam), Anirban (Mr. Anirban Roy Choudhary), Chandra (Mr. Chandraditya Chakraborty), Hemantika (Ms. Hemantika Dasgupta), Santu (Dr. Santu Kumar Saha), Debalina (Ms. Debalina Mukhopadhyay), Mukta (Ms. Mukta Basu), Ms. Pritha Choudhury, Mr. Balarko Chakroborty as well as to my helpful seniors Guru da (Dr. Guru Prasad Maity), Sraboni di (Dr. Sraboni mitra), Dipanjana di (Dr. Dipanjana Indra), Rittwika di (Dr. Rittwika Bhattacharya), Nupur di (Dr. Nupur Mukherjee), Nilanjana di (Dr. Nilanjana Bhattacharya), Sudeshna di (Dr. Sudeshna Mukherjee) and Arup da (Mr. Arup Kumar Dutta). Of all, Sudip (Mr. Sudip Samadder) deserves a special mention for his wholehearted help, criticisms, scientific assistance whenever needed and thanks for making such a great friendship in the Institute. Besides I want to acknowledge Satyajit, Arup and Saswati di of CNCI also. Moreover, I would like to acknowledge my good friends Mr. Anirban Mukherjee, Mr. Riddhi Pratim Lahiri, Mr. Atanu De, Mr. Trisanu De, Mr. Sudip Banerjee, Mr. Sabyasachi Chatterjee, Mr. Pijush Paul, Mr. Gourav Chakraborti and Ms. Nashrin Parvin for their motivation and support.
I am also sincerely thankful to the National Tea Research Foundation (NTRF), Kolkata, India; Anupama Mallick Trust Fellowship, CNCI, Kolkata; Institute Fellowship, CNCI; Council of Scientific and Industrial Research (CSIR), New Delhi, India for financial assistance to complete this work.

It’s very much tough to acknowledge my beloved parents and brother (Mr. Dipayan Sur), without their selfless contributions, inspiration, care, financial support and everything, it was very much impossible to complete my Ph.D work.

Last but not the least; I would also like to acknowledge the CNCI staff Canteen, the Cafe Restaurant, Hazra and Bhola da’s tea stall.

I am deeply grateful to all of them and my best wishes to all.

Subhayan Sur