ACKNOWLEDGMENT

It is a pleasing part that I have now the opportunity to express my gratefulness to all those who accompanied supported me all these years of my Ph. D. work.

I would like to express gratitude and my appreciation to my supervisor **Prof. Bharat B.** Chattoo, Director, Centre for Genome Research, M. S. University of Baroda. He always showed me the need to be involved and persistent to achieve any goal. His critical evaluations help me generate quality result from the work. He also made the lab a wonderful workplace with a great infrastructure, and a home for us.

I would like to thank **Prof.** Takashi Toda, Cancer Research Centre, UK, for providing me Fission yeast mutant for interspecific gene complementation experiment.

And

Dr. Shubhankar Roy Barman for his guidance in the very early part of my studies, and Dr. Sanjay Jha and Dr. Bishon Deo Prasad for their critical comments and suggestions on the experiments carried out in this work. I would like give my sincere thanks to Prof. J. Manjrekar for their suggestions in the preparation of manuscript.

And

My senior Dr. Harsukh Tank, Dr. Archana Patkar, Dr. Tulika Munshi, Dr. Devesh Suthar, Dr. Rajesh N Patkar, Dr. Kamini Ranka for fruitful and interesting discussion on some of the aspect of my work, and all my seniors and colleagues (Prasant, Vikas, Gaurav, Suhail, Abhik, Avinash, Varsha, Shusma, Jay, Jagat, Hashim, Hiral, Akhil, Rushikesh, Mrinal, Santosh, Divya, Mihir, Sumit, Venky, Khyati, Namarata, Pinal, Shalabh, Mohan) for their help, motivation and cherishable friendship.

To the administrative assistance and regular kind help from Mr. Jaykumar Nair, Mr. Amwillsu Varghese, Mr. Nitesh Bhatt, and Mr. Shirish Nagarkar. My sincere thanks to the working staff Mr. Girish, Mr. Ramesh, Mr. Mukesh, Mr. Ashwin.

This work could not have been completed without the support, patience and encouragement of my family. I am obliged for the constant help, driving force through hard time, and patience from m family. I shall remain indebted to my friends, because of whom I did not miss my home and parents.

The work was supported by Junior Research Fellowship and Senior Research Fellowship from Council of Scientific and Industrial Research and University Grant Commission, India, and grant from Department of Biotechnology, India.

Chandra Prakash