THIS THESIS IS DEDICATED TO

MY GRANDFATHER

LATE

SRI RAM CHANDRA VAISH
ACKNOWLEDGEMENTS

I would like to thank my Ph.D. supervisor, Dr. Pradeep Kumar Agarwal for providing me the opportunity to pursue this work. I admire him for his excellent supervision, he allowed me to develop my research interests, but at the same time wisely guided me throughout my work. He stimulated my interest in the area of Transcription Factors. I am most thankful to him not only as a research supervisor but also as a guardian.

I am extremely thankful to Dr. P. K. Ghosh, Director, CSMCRI, for providing infrastructure facilities of CSMCRI during my work. I am thankful to Prof. Bhavanath Jha for providing research facilities in Marine Biotechnology and Ecology discipline during my Ph. D. work. I am also thankful to Dr. M. K. Reddy, senior scientist, ICGEB for suggestion and research facilities at ICGEB, New Delhi. I thank Dr. Parinita Agarwal for her scientific help and support throughout my Ph. D. work. I express my sincere thanks to Dr. C. R. K. Reddy and Dr. K. H. Mody, for their continuous encouragement and support during the work. I would like to thank Dr. Avinash Misra, Dr. Vaibhav Mantri and Dr. Asish Parida for their help. I also thank to Dr. Jitendra Chikara, Dr. Arup Ghosh, Dr. Mangal Singh Rathore and Mr. K. G. Vijayanand for their help and valuable suggestions.

I would like to thank colleagues of Marine Biotechnology & Ecology and Wasteland Research Disciplines: Manoj, Namvedra, Vishal, Sanjay, Mukul, Dinkar, Basit, Payal, Amish, Navya, Puja, Vivekanand, Barkha, Pawan, Jasmin, Mudassar, Mastan and Khanjan. I express special thanks to Pushpheel and Sweta for their help throughout the work. I would also thank Manoj Kesharwani and Manish Kumar for their help.

This work would not have taken shape as it is now, without involvement of my wife Shubhra. She helped me at each and every step during this work and actively participated in compilation of results and thesis.
I wish to acknowledge DST (New Delhi) and CSIR (New Delhi) for the financial assistance. I am also thankful to whole technical staff of CSMCRI for their help that influence me in the completion of my research.

Finally, I would like to express the deepest gratefulness to my parents for their support, understanding and love. I would never have been able to be at this level without their education. Their support, constant encouragement and guidance made me to believe in myself. I also thank my brother Kandarp and sister Deepa for their help, love and care for me.

I thank almighty God for the energy and strength to conquer the difficulties in the way and completion of the work

Kapil Gupta