ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to:

Prof. Dr. V. S. Ghole, Ex-Head, Department of Environmental Sciences, University of Pune and my research guide, for his constant guidance, mentorship, constructive criticism, and cheerful encouragement throughout the tenure of my research work. Sir, you would always remain a source of inspiration in my life.

Prof. Dr. B. P. Kapadnis, Department of Microbiology, University of Pune and my co-guide, for his incisive comments and unconditional support during my research work. Sir, I consider myself privileged for having you as my teacher.

Department of Environmental Sciences, University of Pune, Pune, for providing excellent facilities and infrastructure during the completion of this research work.

Dr. P. G. Saptarshi, Head, Department of Environmental Science, University of Pune, for his guidance, help, encouragement and support during this work.

Board of College and University Development (BCUD), University of Pune, for providing Financial Assistance for this research project.

Dr. A. D. Patwardhan, Ex-Professor of Engineering at VJTI, Mumbai for his thought provoking discussions, suggestions, incessant encouragement and unconditional support throughout my research work.

Dr. D. R. Ranade and Dr. P. D. Dhakephalkar, Scientists of Agharkar Research Institute, Pune, for their kind co-operation and suggestions in our research activities.

Mr. Bhosale, Head, Govt. Fisheries, Hadapsar, Pune, for providing us the samples of Cyprinus carp fish required for toxicity study.

All staff of INTOX (P) Ltd., Pirangut, Pune, for providing us the facility for toxicity analysis.

Dr. Anita Shetye-Aich and GENEOM Biotech, Pashan, Pune, for providing 16S rDNA technique facility; and Department of Physics, University of Pune, for providing the SEM facility.
Dr. Kharat, Head, Dept of Zoology, Modern College, Ganeshkhind, Pune for his keen interest, valuable guidance and generous help during the course of toxicity study

Mr. Jagtap, Dept of Chemistry, University of Pune, for his help during the construction of UASB reactor

All my friends and colleagues, including Abdur Rehman Quaff, Dr Bhushan Pachpande, Nitin Deshmukh, Kaushal Lapsiya, Dr Vrushali Gadekar, Dr Gautam Nagda, Mr Dilip Sathe, Dr Jayant Doke, Dr Snehal Agnihotri, Mrs Hemalata Sonawane, Sanjay Kale, Samarpita, Shital, Ajay, Aparna, Swapnil, Sharad, Dhara Sachdev, Sanjay More, Nita Zatakia and Neetu, for their helpfulness, pleasant company and creating a good working atmosphere in the lab

I ask my forgiveness to them, who helped me selflessly and my memory fails to mention all of them presently in this piece of work. Please pardon me

My parents, Mr. P.S. Lokhande and Mrs. Pratibha Lokhande, and my brother Rohit, for their endless support, blessings, love, and encouragement throughout my life

Dr. Sandeep and Jayashree, Mr. Kishor and Yogita, for constant motivation

Dipali and Pankaj, special thanks to you for standing by me in all odds and evens

Pramod and Suvarna, both of you need a special mention here. Thanks for all the timely help and encouragement

Mr. R. G. Patil and Mrs. Vijaya Patil, my in-laws, for their trust in me and warm support. I am indeed short of words to express gratitude to them

Nihar, our lovely son (for me, the most beautiful gift, blessing of God), for making me realize, with his ever-smiling face, what is the most important thing in life

Dr. Pradeep, my husband, for his faith in me, unconditional support, understanding and making me comfortable always. Thanks Pradeep, for being always there for me really without you, it could not have been possible for me

And, The Almighty, for His blessings and making good things happen to me in life

Mrs. Vandana P. Patil