ACKNOWLEDGEMENTS

First and foremost, I would like to extend my sincere gratitude to my research guide Dr. H. N. Patel, Head, Microbiology Department, V.P. & R.P.T.P. Science College, who guided me through the challenging path of my doctoral research and for his dedicated help, advice, inspiration, encouragement and continuous support, throughout my Ph.D. I give you all credit for making this thesis possible.

Nothing comes worthwhile in life without struggle. It would not have been possible to write this doctoral thesis without the help and support of the kind people around me who, in their own ways, have helped me to overcome the difficult situations.

I express my heart-felt gratitude to Dr. D. J. Desai (former Principal), His constant guidance, cooperation, motivation and support have always kept me going ahead. I owe a lot of gratitude to him for always being there for me.

I would like to thank Dr. Bhavesh Patel, Principal and Shri K. M. Patel, former I/C Principal of V.P. & R.P.T.P. Science College, for providing me departmental facilities to carry out the research work.

I am thankful to our teaching & non teaching staff of microbiology department and office staff of college for the help rendered during the course of this work.

I will always be gratified to Prof. R. B. Subramanian for giving me an opportunity to carry out part of my work at his research laboratory. I am indebted for his useful advice, encouragement and his support.
I express my sincere thanks to Prof. Datta Madamwar, Dr. Ujjval Trivedi, Dr. Haresh Kaheria, Prof. K. C. Patel, Dr. Vasudev Thakkar and Dr. Akshay Gupte. They were always ready to guide me and supported me from the time I joined the department for my masters. His kind support and sense of humor have been of great help many a times.

I am also thankful to Prof. Kiran Kalia, Head, Department of Biosciences, for her support and kind cooperation.

I wish to thank my colleagues, Shilpamadam & Mayur and all my other colleagues Chandresh, Santosh, Natvar, Satish, Tarosh, Hemal, Hitesh, Ketan, Goldi, Kamani for providing friendly environment and making my stay enjoyable in the department.

I want specially thank to Dhiraj and Vishal for provide me constant support and help during my entire journey of doctoral research.

I am very much thankful to my friends Harsur, Dhaval, Gauravbhai, Ketansir(MS Uni.), Hardik, Nikunj & Jignabhabhi, Amit, Chirayubhai, Pinakinbhai, Ashish, Sanjay, Jasmin, Rushi, Purvesh, Gopal, Bhaumik and specially, Bindesh, Karishma, Jaya and Ankit for their love, affection and constant support to achieve this goal.

Thank you, BTS and all tea-centers of Mota-bazar for offering tea when I desperately needed it. I thank all members of tea-club specially Tarun, Bhavesh, Harshad & all other my colleagues for the moral support and help.

My special gratitude goes to my Papa, Jasvantsinh for giving me the life I ever dreamed and my mother, Manharba, whose unconditional love has been my greatest strength. My brother Vikram, bhabhi Rinkuba and my
nephew Mrityunjay have given me their unequivocal support throughout, as always, for which my mere expression of thanks likewise does not suffice.

Life is miserable without beloved ones. Words fail to express my deepest and most profound gratitude to my loving Rimpal, for her warmth, encouragement and sacrifice.

I am forever thankful to GOD - the Almighty for everything. His kindness toward me is abundant and limitless.

(Chaitanya singh J. Chudasama)