ACKNOWLEDGEMENTS

Ever since the earth has taken birth and men emerged on it, an unending quest to unravel the truth the research is continued. It has widened human vision, opened newer avenues and lightened the dark obscure facets of mysterious universe. Someone has said that “Only Those Who Can See Invisible Can Do Impossible”.

Firstly, I offer my adoration to God almighty who created me, gave me the strength and courage to complete my research work and gave me the opportunity to thank all those people through whom His/Her grace was delivered to me.

I would like to express my appreciation and gratitude to my Major Guide, Dr. B. A. Golakiya, Professor and Head, Department of Biotechnology, College of Agriculture, Junagadh Agricultural University, Junagadh. It’s his resolute guidance, unwavering encouragement, abiding interest, constructive criticism, tremendous enthusiasm and unstinted help throughout the period of my research work that inspired me to search my goal. His knowledge and logical way of thinking for things to be applied and ideas to used it have been of great value for me. It was my pleasure to work under his guidance.

I avail this opportunity to express my deep sense of reverence and everlasting gratitude to the revered members of my Advisory Committee Dr. H. P. Gajera (Minor Guide), Associate Professor, Department of Biotechnology, Dr. S. V. Patel, Professor, Department of Biotechnology, Dr. M. K. Mandavia, Professor, Department of Biochemistry and Dr. L. F. Akbari, Professor and Head, Department of Plant Pathology, College of Agriculture, Junagadh Agricultural University, Junagadh, for their keen interest, ardent support and valuable suggestions during entire period of my study.

I express my sincere and heartfelt thanks to Dr. Rukam Singh Tomar, Mr. M. V. Parakhia, Dr. G. V. Maraviya, Dr. U. K. Kandoliya, Dr. Shradha Bhatt, Mrs. Viraj Rathod, Dr. P. J. Rathod and Dr. Ashish Vala of Department of Biotechnology, College of Agriculture, Junagadh Agricultural University, Junagadh, for their help during my research work.

I record my sincere thanks to the authorities of the Junagadh Agricultural University, Dr. A. R. Pathak, Vice chancellor, Dr. A. M. Parakhia, Registrar, Dr. V. P. Chovatia, Director of Research and PG Dean and Dr. B. K. Sagarka, Principal, College of Agriculture, Junagadh Agricultural University, Junagadh, for providing necessary facilities during this scrutiny.

I would like to express my special thanks to Dr. D. N. Vakharia, Professor, Department of Biochemistry, J.A.U., Junagadh and Dr. P. V. Patel, Director of student welfare, Dr. S. M. Upadhyay, Professor and Head, Department of Agricultural Statistics, College of Agriculture, J.A.U., Junagadh, Dr. M. K. Mahatma, Senior Scientist (Biochemistry), Directorate of Groundnut Research, ICAR and I also express my unboundful and sincere thanks to Mr. Hitesh Hirpara,
Naynaben, Mr. Vijay Vyas, Mr. Vijay Bajaniya, Mr. Rohit Bhalala, Nilesh Bhai and Mr. H. Chavada for helped in purchasing the laboratory requirements and assistance for completing the research in time bound and for their help during my research work.

I specially appreciate librarian Ms. P. Dave and staff members especially Chandresh Shah, Assistant librarian for their ever willing help during this study. I would like to express my deepest gratitude to the staff members of ‘C’ branch are gratefully acknowledged for their necessary help and cooperation during the period of study.

I also express my boundless and sincere thanks to Dr. Vishal Kothari, Dr. Raj Dave, Jaimin Jadav, Khyati Rathod, Shital, Visha, Mita, Sameer, Radhika, Kishan, Jalpa Thakar, Neha Bodar, Nikunj, Disha, Dr. Heena Odedra, Amisha, Bhumi, Dr. Disha Savaliya, Darshna, Zinkal, Divya. I am really grateful to my seniors Dr. Pritesh Sabara, Dr. Tushar Antala, Dr. Sacheen Raval, Dr. Roshni Bhadania, Dr. Disheeta Akbari and Hiren Bhalani.

I take this opportunity to express my gratefulness to every staff person, Sodhabhai, Moribhai, Jalpaben, Rahulbhai, Kishorbhai, Hirenbhai, Hamirbhai and Abdulbhai from Department of Biotechnology, for providing encouraging and friendly atmosphere.

How can I forget to thank my friends, I shall always cherish the sweet memories of lively company, sincere corporation and providing cheerful environment throughout my research work from my loving friends and classmates Nilam, Abheejita, Vishal, Sohail, Dr. Bharose, Jasmin, Hiral, Halak. The help extended by my juniors Avni, Ankita, Rushita, Harshita, Nidhi, Shiwani, Shefalee, Kruti, Mayur, Rahul and Ravi are specially acknowledged.

My vocabulary utterly fails in expressing my tributes to my parents Mr. Girishkumar Umretiya, Mrs. Induben Umretiya, brother Divyesh, sister Nimisha, Jiju Jagdish Kapuriya, all my family and in-laws family members whose inspiration and motivation brought me to this stage. They spared no pains to see that their loving daughter gets the best of everything in the world.

I express my deep sense of indebtedness and gratitude to my life partner Dr. Hitesh Jasani for his support, love and constant encouragement. He stood with me at all time and whose support enabled me to stood confidently against all challenges I faced during this period.

All cannot be mentioned but none is forgotten.

Place : Junagadh Grateful and indebted
Date : / /2017

(Umretiya Nimita)