ACKNOWLEDGEMENTS

Discipline, determination, focus and patience are the words that come to mind when we deal with Science and Technology. Areas of research in Science and Technology control the growth and development of human beings and we feel proud that we are working in the field of Science and Technology, due to Blessings of Extreme Power. First of all, I would like to thank Him, because only due to His grace I was able to complete this Thesis successfully.

I shall be lacking in my duties unless I put into words my gratitude and humbleness to Most Rev. (Prof. Dr.) R. B. Lal, Honourable Vice-Chancellor, SHIATS and Bishop of Yeshu Durbar congregation, SHIATS, Allahabad. I cordially thank Prof. (Dr.) S. B. Lal, Pro Vice-Chancellor, SHIATS, for his invaluable support, encouragement and unfailing help, concern and benevolent advice rendered to me. This acknowledgement seems to be incomplete without the name of Prof. (Dr). A. K. A. Lawrence, Registrar, SHIATS.

Prof. (Dr.) B. P. Masih, Dean, Jacob School of Biotechnology and Bioengineering whose consistent help has only leaded me to the completion of this thesis work as a my SAC member.

I feel great pleasure to evince my profound sense of veneration and deepest gratitude to my guide Dr. Eapen P. Koshy, Assistant Professor, Department of Molecular and Cellular Engineering, for his perennial guidance, sharp and constructive criticism, cordial cooperation, keen interest, untiring supervision, thereby bringing in ease in my work which has made this manuscript a memoir of my life. He always extricated my queries with enamouring suggestions, wise counselling and setting new challenges. It is unforgettable that whenever I faced any problem, he encouraged me to move ahead with benevolent behaviour, confidence in me and other indefatigable efforts.
Now I would like to pay my sincere regards to the exemplary and excogitative Co-Advisor, Prof. (Dr.) George Thomas, Department of Molecular and Cellular Engineering, and Member, Dr. Suresh B. G. Department of Genetics and Plant Breeding for their keen interest, valuable suggestions, inspiration and guidance.

I extend my heartiest regards and special thanks to Mrs. Blessymole K. Alex, Dr. Pragati Mishra and Dr. G.D. Ram for their valuable guidance and help at the most critical time of my research, without which I could not reach at this stage.

I extend my heartiest regards and special thanks to Dr. Sanjay Pathak, Professor and Head, Department of Post-Harvest Technology, Dr. Pramila Panday, Department of Plant Biotechnology, Dr. Abha Singh, Dr. Rekha Chauby and Er. Om Prekash, NDUAT, Faizabad; Dr. M. D. Ojha, Associate Professor, Department of Horticulture, Bihar Agricultural University for their valuable guidance and help at the most critical time of my research, without which I could not reach at this stage.

Next to God, thy parent, all that I am quest to be, owe to my venerable and affectionate parents, Shri. Shyam Ji Shukla and Mrs. Mala Shukla, sister Parul Misra, jijaji Dr. Pranay Misra (IFS) and my one month old nancy Shubhima and my other family members whose benissons, consistent encouragement and above all trust in me helped me to combat the formidable problems with frit and make my dream feasible by giving it a shape of concrete reality.

It is my personal conviction that no amount of space or words would suffice to express my appreciation to my friends Kalika, Jyotiswaroop, Dharmendra, Preeti, Loudiya Naresh, Raise, Manish, Nishesh and Aparna, who always stood by my side like a shadow whenever a need arouse. The seed of regard for them in every part of my conscious and subconscious mind sprouted in a magnificent thought.
Equal thanks and appreciation to Mr. Vimlesh and Mr. Raj Kumar for their co-operation, liberal help and caring attitude towards me.

Last but not the least, many more people helped me a lot during the span of times. It will be not fair if I do not list them all, it is not lack of gratitude but for lack of space that I keep my pen down. To them all I convey my deep regards.

Place : Allahabad
Date : 08.02.2014

Rahul Shukla