

Acknowledgements

I feel immense pleasure in expressing my deep gratitude to my Guide Dr. Sangeeta Saxena, Professor, Department of Biotechnology, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow for her excellent guidance and valuable suggestions during the course of present investigation. By the grace of god students get such a guide like her, who does every effort to make their students efficient in academic, research and also in being a good person.

I am highly indebted to The Head of Department of Biotechnology. Dr. D.R. Modi, BBAU, Lucknow for giving me permission and providing necessary facilities to carry out the present research. I would like to express gratitude to Dr. M.Y. Khan, Prof., Dr. G. Sunil Babu, Asst. Prof., Dr. Anand Prakash, Asst Prof. and Dr. Monica, Asst. Prof., Department of Biotechnology, BBAU, Lucknow, for their beneficial lectures on different topics of course work and suggestions on the research work to improve the progress of work.

I am very much thankful to Dr. Bakshi Ram, Dr. Arun Kumar, (Ex-Directors) and Dr. B.L. Sharma (Present Director), U.P. Council of Sugarcane Research, Shahjahanpur for providing necessary facilities for executing parts of experimental work. My sincere thanks are extended to the Joint Director, Dr. Atul Singh for encouragements.

Thanks are due to Dr. Madan Lal, Scientific Officer, Sugarcane Research Institute, U.P.C.S.R., Shahjahanpur (Co-guide of the present work) for his sincere advice, continued encouragements and constructive suggestions. His guidance in executing various experiments related to in vitro studies and cooperation in compiling the relevant results of the present work is gratefully acknowledged.

I am also thankful to Dr Anupam Anand, Associate Prof., and Dr. Deepak Anand, Bareilly College, Bareilly, who encouraged me to join the research work. It is an appropriate platform to say thanks to Dr. Ajay Tiwari, Scientific officer, UPCSR, for his suggestion and help in understanding experimental problems.

I am thankful to my colleagues Ms. Priyanka Varun, Mr. Piyush Choudhary, Mr. Alok, Ms. Kriti Roopendra for their support and love. I am thankful to my junior colleague Ms. Nikita Shukla and Ms. Nishtha for her support. I must thank the non teaching staff of Department of Biotechnology, BBAU, Lucknow for their support in doing my work at the department and thanks to Mr. Deep for his support.

I would not miss to say thanks to all members of Tissue Culture Lab, UPCSR, Shahjahanpur where I did my experimental work. I must thank Mr. Rajesh and Mr. Atul for their support in doing the experimental work.

My research work is devoted to my family because it is my strength, energy and my inspiration.

Kavita
(Kavita)

M.Sc. (Biotechnology)
Enrolment No. 235/13