

Acknowledgement

It is man's true function to make the impossible into possible by dint of his own power; that is not for him to be confined merely to what has happened before. That he must progress towards what ought to be by rousing all his inner power by means of force of his soul.

R. N. Tagore

It is my proud privilege to acknowledge with deep sense of gratitude and indebtedness to Dr. J.P. Yadav, Professor and Head, Department of Genetics, M. D. University, Rohtak who imparted me the zeal to initiate, compile and complete this research work. His constant painstaking and vigilant supervision, immense knowledge of the subject, sublime suggestions, unflagging interest, limitless patience, constructive criticisms, ever helping nature, regular and methodological approach has enabled me to take this work to its logical conclusions.

With utmost sense of regard and fondness, I express my overwhelming gratitude to Dr. D. R. Arora, Ex-Professor and Head, Department of Microbiology, Pt B D Sharma Postgraduate Institute of Medical Sciences (PGIMS), Rohtak for his constant meticulous supervision and thorough involvement. His unending co-operation, erudite scholarship and unwearied service, most perceptive mind, analytic gaze, great sense of precision were the constant source of inspiration during course of study.

I owe my inexpressible debt to Dr. Ravi Parkash, Ex-Professor & Head, Department of Genetics, M. D. University Rohtak for providing me necessary facilities and to work in the department. His repeated encouragement, affectionate behavior, expert guidance, moral support, and kind advice which has gone a long way in completion of this awful task. My sincere thanks to Dr. Vishram Singh Yadav, Professor of Ayurveda for sharing his valuable time and innumerable tips for identification and uses of medicinal plants, Dr. Sas Biswas, Scientist and Head of Department of Forest Research Institute (FRI), Dehradun, for allowing me to visit the herbarium for identification of specimens.

I express my deep sense of regards to Dr. (Mrs.) Uma Chaudhary Senior Professor & Head, Department of Microbiology, Pt. B. D. Sharma PGIMS, Rohtak for her whole hearted encouragement, affectionate guidance and ever available generous

help. I am thankful to Dr.(Mrs.) Rama Sehgal Professor, Dr. (Mrs.) Aparna, Professor and other faculty members, Dr.(Mrs.) Madhu Sharma, Dr. P.S Gill, Dr. (Mrs.) Kiran Bala and Senior Resident K. Prabhat Ranjan, Department of Microbiology, Pt. B. D. Sharma PGIMS, Rohtak, for their invaluable and ever available help which I really need. I am thankful to Sh.Rishi Raj, Dr. Madan Soni, Dr. O.P. Dahiya, Dr. Suresh Kumar Sharma, Dr.(Mrs.) Mamta Ahlawat, Dr. Sunil Chhikara, Dr. Kaptan Singh Dangi, Mr. Manmit Rawat (NMRC, Delhi), Mr Rajender Bishnoi, Mr.Viney Malik, Mr. Navdeep Hooda, Mr. Naseeb Singh Kala and Sh.S.S Dahiya, for their constant encouragement and moral support.

My colleagues deserve special mention for their constant support Mrs. Manju Panghal, Mrs. Seema Dhankhar, Mrs. Manilla, Ms.Ved Pirya Arya, Ms. Sangeeta, Mr. Sandeep Grover and Mr. Sanjay Yadav. All shared my burden with full sincerity.

I must confess that the completion of this uptaking would have been nearly impossible with out the continuous moral support of all Laboratory staff of Pt B. D. Sharma PGIMS, Rohtak for their unstinted support, Mr. Sanjay Singh, Mr. Kalu Ram, Mr. Madan Lal, Mr.Rama Prasad, Mrs. Kanta Grover, Mrs Anita Dhiman, Mrs. Mukesh Rani, Mrs. Raj Bala, Mr. Manoj Sangwan, Mr. Gopi Ram, Mr. Zile Singh, Mr. R.N. Mudgil, Mr. Khem Chand Jasoria, Mr. O.P. Lodhi and Mr. Narender Ahlawat deserve special thanks.

I wish to express my thanks to Mr. Sanjay Rathee, Rathee Computer, Delhi Road, Rohtak for typing the thesis with great care and patience.

Last but not the least, I express my appreciation for various favors extended by family folk at various stages of research My mother Smt. Lado Devi, brother Mr. Yoganand, my wife Mrs. Raj Bala, sons Mr. Ashish Dangi and Aditya Dangi deserve special mentions. I couldn't complete my research without their valuable support and help.

Lastly I thanks all those who helped me directly or indirectly in carrying out this research work. If I failed to give the due credit, it is unintentional and should be forgiven.

Anand Singh Dangi