Acknowledgements

My sincere thanks are due to my guide Dr. Sanjana Kaul, Assistant Professor, School of Biotechnology, University of Jammu, for suggesting the problem, critical evaluation of the manuscript and providing kind, inexhaustible and untiring guidance throughout the present work. I thank her for her utmost understanding and immense patience. I am at loss of words to thank her for her guidance and be a part and parcel of my life today and ever after.
I sincerely record my deep sense of gratitude to Prof. M. K. Dhar, Director School of Biotechnology, University of Jammu, for his able guidance, constant encouragement, beneficial suggestions, forebearance, moral support and cooperation.
I would like to thank the faculty of School of Biotechnology; Dr. Jyoti Vakhlu, Dr. B.K Bajaj, Dr Madhulika Bhagat, Dr Ritu Mahajan, Dr Nisha Kapoor for necessary help.
My heartfelt thanks are due to Dr Pooja Sharma, Dr Khalid Masoodi, Dr. Yashpal Khajuria Dr Gurmeet Kour, Dr Balbir Kour, Dr Avmeet Kour for their interest, advice and support throughout the course of this work.
My special thanks are due to my labmates, Ms Anjana, Ms Dharti, Mr Maroof, Ms Suruchi, Ms Tanvi, Ms Supriya for their assistance, help, love and care at every step of this work.
I place my warm thanks to the Scholars of Plant Biotechnology Lab, Metagenomics Lab, Fermentation Lab and Animal Biotechnology lab for time to time help.
Every effort is motivated by ambition, all ambitions have inspiration behind them. So I bestow my unbound gratitude and deep sense of respect to my parents for their affection, encouragement and emotional support. I extend my wholehearted appreciation to my in laws for their support, care and understanding.
I feel short of words in expressing my wholehearted appreciation to my husband Sh. Gurpal Singh and my angel daughter Ashveet for standing me through thick and thin of my life.
My grateful acknowledgements are due to the dignified non teaching officials in the School of Biotechnology Mr Sumit, Mr Mohit, Mr Arun, Mrs Ekta, Mrs Sushma, Mrs Rita, Mrs sumitra and Ms Meenakshi for extending help in every way they could.
I humbly register my thanks to, University of Jammu and University Grants Commission for the financial assistance in the form of fellowship.
This work would not have been possible without the facilities available in the School of Biotechnology and Bioinformatics center funded by Department of Biotechnology, Govt of India.
The grants received from Department of Science and Technology under FIST and PURSE programme are also acknowledged.
Last but not the least I would love to extend warm thanks to everyone who is related to me by one way or the other.
(Harjit Kour)