

Acknowledgements

Research is a never ending acquisition of knowledge and data, which can't be done solely by any single person without the help of others. On the accomplishment of the present study, I would like to take this opportunity to extend my deepest sense of gratitude and words of appreciation towards those, who helped me during the pursuit of study. I bow with reverence and gratitude to thank ALMIGHTY BABA VISHWANATH who enriched me with such a golden opportunity to strive for the highest academic degree from Kashi, a place which is blessed by him and has been a seat of learning since the time immemorial. Words are less to express my deep heartfelt to Pt. Madan Mohan Malaviya Ji, founder of prestigious Banaras Hindu University, who made this wonderful temple of knowledge.

I take the privilege with great pleasure and profound sense of reverence to express my deep sense of gratitude and indebtedness to my revered supervisor Prof. Brahmeshwar Mishra for his valuable and critical suggestions, boundless enthusiasm, scientific acumen, perspicacious remarks, scholarly guidance, excellent co-operation, active persuasion and supervision, which served as a constant source of inspiration throughout the course of my study and research work. He has always been a constant source of encouragement and patient bearer of my mistakes. I shall remain indebted to him for his diligent efforts and professional competencies, which contributed towards the completion of the research wok. Working under his guidance had been a rich experience & a gala journey for me to cherish forever. His very cordial behavior would always remain beacon light for me in future also.

I am indeed obliged and sincerely thankful to Prof. B. Mishra, Ex-Head and Prof. S.K. Singh, Head, Department of Pharmaceutics, Indian Institute of Technology (Banaras Hindu University) for kindly allowing me to use the facilities required to carry out this research work.

I shall remain thankful to all respected faculty members of department Prof. R.S. Srivastava, Prof. S.K. Shrivastava, Prof. Sanjay Singh, Mr. A.K.

Srivastava, Dr. Hemalatha, Dr. K. Sairam, Dr. Vikas Kumar, Dr. Senthil Raja, Dr. A.N. Sahu, Dr. S.K. Mishra, Mrs. Ruchi Chawla and Dr. Ashok Kumar Maurya for their suggestions and kind cooperation at all moments during the progress of my research. I sincerely thank to the members of my Research Program Evaluation Committee (RPEC) for their valuable suggestions in my research work.

I owe my deepest gratitude to my Parents for being a constant source of encouragement and support throughout my life. Their silent sacrifice, moral support and encouragement cannot be defined in words. It is their love and trust on my abilities which has made me a person I am today. They backed my decision in all peaks and troughs of my life and made it a smooth journey for me. I also offer my sincere gratitude to my paternal as well as maternal grandparents. They are like canopy of a life tree providing me their shade of love & care. They have been a constant source of inspiration & guidance through ups & downs of my life. Words fail to express my immense appreciation for my loving brother Jay who has been a constant source of priceless love, moral motivation and emotional supports to me. I owe him for showing great confidence on my abilities and encouraging me to start a fresh whenever I gave up. Words fall short to thank Pooja Patel for her unflinching love, support and care, whose presence in my life has given a meaning to my existence and has completely changed me as a person.

My profound thank to Ministry of Science and Technology, DST-INSPIRE Programme Division, New Delhi for the award of DST-INSPIRE Fellowship to carry out the research work. I deeply admire and acknowledge the support extended by Prof. S.C. Lakhotia (Department of Zoology, BHU) for providing the facility of CLSM, Prof. O. N. Srivastava and Prof. R.K. Singh (Department of Physics, BHU) for providing facility for DSC, XRD and TEM. I deeply admire and acknowledge the support extended by Entod Pharmaceuticals, Mumbai, India and Evonik Degussa, Mumbai, India who have assisted me in providing gift samples during the research work.

I am indeed thankful to have got welcoming and friendly fellow mates Mr. Gayasuddin Khan, Mr. Sundeep Chaurasia and Mr. Nagendra Kumar, who were ever ready to provide me with all possible help and they created a happy working environment and foster camaraderie within the laboratory.

My thankful regards to my seniors of this department Mr. Dileep Kumar, Mr. Anupam G. Banerjee, Dr. Pramila Chaubey, Dr. Rahul Tripathi, Dr. Ahint Jain, Dr. Satyendra Prasad, Dr. Ajit Thakur, Mr. Sanjay kumar Singh, Mr. Vijaykumar for their co-operation and making my stay in the Varanasi so memorable as we had wonderful time together. I would like to thank my juniors, Mr. Gufran Ajmal, Mr. Sateesh T., Mr. Gunjan Bonde, Ms Pooja Mittal and others for their ever cheerful attitude, alacrity and support during the tenure. I shall fail in my duty if I do not convey my regards to all the non-teaching staff members of the department Mr. Sanjeev Kumar Singh (for preparing fellowship bill), Mrs. Saroj Kumari, Mr. Chotelal Jaiswal, Mr. Virendra Kr. Singh, Mr. Yaswant Singh, Mr. Nand Lal Ji, Mr. Arun Kumar, Mr. Jameel Ji, Mr. Ram Jiyawan, Mr. A.N. Upadhyay, Mr. Sunil Kr. Singh, Mr. Ram H. Pathak and other non-teaching staff members of the department for their support and help during the research work .

My heartfelt regards to all my well-wishers for their constant encouragement and good wishes for my career. I also extend my thanks to all those, who ever have been directly or indirectly related to my research work.

With deepest gratitude and love, I bow down at the lotus feet of Lord Vishwanath, baba Kal Bhairav, Lord Sankatmochan Hanuman and Lord Sanidev for never ever leaving me alone during the times of trials and sufferings and molding me into what I am today. Lastly, I pray to almighty for the 'Moksha' of my experimental animals, whose sacrifices proved the truth of my thesis work done for the betterment of the ailing humanity.

Date:

Place: Varanasi

(Patel Ravi Rameshbhai)