ACKNOWLEDGEMENTS

"A successful man is he who receives a great deal from his fellowmen, usually incomparably more than corresponds to his service to them. The value of a man, however, should be seen in what he gives and not in what he is able to receive"..... Albert Einstein.

Though words are seldom sufficient to express gratitude and feelings, it somehow gives me an immense pleasure to acknowledge those who helped me during the tenure of my study. First of all, I bow with reverence to thank the ALMIGHTY for giving me an intellectual mind and soul and then from the core of my heart I would like to salute the great soul of Bharatratna Mahamana Pandit Madan Mohan Malaviyaji, founder of this beautiful temple of education and whose creation of this serene varsity gave me a conducive environment and perfect facilities to carry out this research work during my education.

I express my profound sense of gratitude and indebtedness to my venerated teacher and Supervisor Prof B. Mishra, Former Head, Professor, Pharmaceutical Engineering & Technology, IIT-BHU, Varanasi for his scholastic guidance, expert supervision, constant encouragement, steadfast support, and affection which made it possible to conduct the dissertation work smoothly. He has always been a constant source of encouragement and patient bearer of my mistakes. I feel very much honored and it has been a real privilege for me to get an opportunity to work under him.

I am indeed obliged and sincerely thankful to **Prof. Sushil Kumar Singh**, Head and Professor, Department of Pharmaceutical Engineering & Technology, IIT (BHU), Varanasi, whose intellectual guidance, untiring efforts, enthusiasm and insistence for perfection, inspired me throughout this work right from its inception.

I owe my gratitude to all my respected RPC members Mr. A. K. Srivastava, Dr. Sanjay Singh, Dr. Abha Mishra (Biochem Engg.) for their encouragement and insightful comments leading me to the completion of the research work. I would also like to thank all the teachers; Prof. J K. Pandit, (Retd.), Prof. S K. Shrivastava, Dr. S Hemlatha, Dr. K. Sairam, Dr. Senthil Raja, Mr. A. N. Sahu, Dr. S. K. Mishra, Dr. Ruchi Chawla, Dr. P. K. Nayak, Dr. M. S. Muthu, Dr. G. P. Modi and Dr. Ashok. Maurya for their kind cooperation at all moments during the progress of my research.

My sincere thanks to **Dr. Monika Bansal** (IMS, BHU) for valuable suggestions in the subject and helping me in clinical studies.

I am indeed obliged and sincerely thankful to ENDOC Lifecare Pvt. Ltd., Gujarat, India, Ranbaxy industries (now known as Sunpharma Industries Ltd., Gurgaon, India) for providing gift samples of drugs so that this study has become possible.

I pay my sincere thanks to all non-teaching staff NandLal ji, Virendra ji, Rafique ji, Jameel ji, Chotelal ji, Gopal ji, Yashwant ji, Sanjeev ji, Neelu ji, Archana, Ghosal ji, Ramjiyawan ji, Upadhyay ji, Sengupta ji, Shankar ji, Pandey ji, Ramchandra ji and Neeraj for their technical assistance and co-operation throughout my dissertation work.

I would particularly like to acknowledge the contribution of my lab-mates; Gayasuddin, Pooja, Harsh, Gufran, Gunjan, Sathish, Manasi, Sheetal, Sandeep and Nitin; for their motivation during the hour of hardship and camaraderie within the laboratory.

I am indeed thankful to welcoming and friendly fellow mates **Rati** and **Ajit** who helped me unconditionally throughout the tenure.

I take the opportunity to gratefully acknowledge the UGC, MHRD, New Delhi and IIT (BHU), Varanasi for providing financial support in the form of Research Fellowship that immensely helped me to achieve my goals.

I am also grateful to CIFC, Central facility for providing the facility of SEM, XRD, DSC and EDXA. I extend my sincere thanks to my friend Ajay Kumar, NBRI, Lucknow for generous help in antimicrobial and toxicological studies. I would also like to thank Ayush pathology, Lanka for analyzing and histopathological examination during in-vivo studies.

Further I wish to thank my room-mates Ms. Anuranjeeta, Rati, Deepa mam and Ms. Anubha who remained supportive during my studies and also made my stay in Varanasi so memorable.

I wish to express my heartfelt gratitude to my collegues of UPFSDA, Lucknow; AL Srivastava sir, Neelam, Bharti, Reeta, Pragati mam, and all other seniors for their co-operation, encouragement and generous help.

I also acknowledge the warm support extended by colleagues of Department of Pharmacy, MLN Medical College, Allahabad including Alka mam and Rahul. I would also like to express thanks to my supportive seniors: Dr. Ashutosh Sir, Shirish Sir, Shukla Sir, Patel Sir, Maan Sir, Ratan Lal and non-teching staff CD Babu, Balmiki and Vijay for their co-operation throughout my dissertation work.

My heartfelt thanks to all my teachers right from school until now and all my well-wishers

for their constant encouragement and wishes for my career.

Most importantly, none of this would have been possible without the love and patience of my

family. Words cannot express my gratitude for "Papa" and "Maa" for making me capable of reaching

this height of education. My parents to whom this theis is dedicated to, has been a constant source of

love, moral support and encouragement all these years and made me what I am. A stock of loving

appreciation is reserved for my younger sister Babita, and brother Bhanu for being loving and caring

siblings. I am also gratified to dear friends Shilpy and Kayal, for their extreme affection that will

always remain close to my heart.

Words fail to express my immense appreciation for my loving husband Mr. Vijay Shankar

Yadav, who has been a constant source of priceless love, moral motivation and emotional support to

me. I owe him for showing great confidence in my abilities and encouraging me to start afresh

whenever. I would also take this opportunity to thank my Father and mother in-laws for their

blessings and moral support, encouragement in all aspects of life.

With deepest gratitude and love, I bow down at the lotus feet of lord Vishwanath ji, for

never leaving me alone during the times of trials and suffering and moulding me in to what I am

today.

I am highly obliged to the patients who have participated in clinical studies and helped in

completion of this work, I am thankful to all persons who directly or indirectly contributed to

accomplish this research work.

Lastly, I pray to almighty for the 'Moksha' of my experimental animals, those little Albino

rats, whose sacrifices proved the truth of my thesis work done for the betterment of the ailing

humanity. I wish for their soul to rest in peace.

Date:

Place: Varanasi

(Sarita Kumari Yadav)