ACKNOWLEDGEMENT

To fulfill a dream, it needs to be first converted to an aspiration, then executed and further nurtured to accomplish into an achievement. The task of research is no effortless requiring ability, inspiration, perspiration, patience, perseverance, blessings, good wishes and prayers. The task was not easy, but the journey was made easier by help, support, concern, stimulation and rejuvenation of precious populace. Words are scarce to express my gratitude to people who have helped and supported me. This is done as an accustomed gesture of acknowledgement. I am heartily gratified to:

Honorable Sir Sayajirao Gaekwad, the founder of The Maharaja Sayajirao University of Baroda, for establishing such a wonderful and multidisciplinary education foundation.

Pharmacy Department, The Maharaja Sayajirao University of Baroda, which nurtured me from high school pass out to graduate, graduate to post graduate and post graduate to PhD research fellow.

I also take the privilege and pleasure to acknowledge all my teachers, friends and relatives who inspired, motivated, supported and helped me to reach at this level and to complete research project of my life.

With great pleasure and profound sense of gratitude, I express my most cordial and humble thanks to my eminent guide respected Dr. A. N. Misra, Prof. in Pharmaceutics, Pharmacy Department, The M S University of Baroda, for his constructive and meticulous guidance, which exonerated me to consummate the small work assigned to me. His criticism, inspirations, profound knowledge rectitude is inexplicable in few words. With small interaction with him during the course of dissertation work made me advertent and prudent about research in pharmacy field.

I am grateful to Dr. M. R. Yadav, Head, Pharmacy Department, The M S University of Baroda, for providing necessary facilities to carry out this work.

Department of Biotechnology, New Delhi, under scheme of Small Business Innovation Research Initiative (SBIRI) for awarding me with Senior Research Fellowship.

I express my sincere thanks to Dr. (Mrs.) K.K. Sawant, Professor in Pharmaceutics & Coordinator Shri. G H Patel Pharmacy Building, Dr. (Mrs.) Rajani Girdhar, Professor in Pharmaceutical Chemistry, Dr. (Mrs.) S.J. Rajput, Professor in Pharmaceutical Quality Assurance, Dr. RC Mahru, Reader of Pharmaceutical Quality Assurance and Dr. (Mrs) Hetal Thakker, Reader of Pharmaceutics, Pharmacy Department, The Maharaja Sayajirao
University of Baroda for their invaluable inspiration, guidance, motivation and constant encouragement throughout the course of my study and dissertation.

Dr. (Mrs.) Sarita Gupta, Head, Department of Biochemistry, The Maharaja Sayajirao University of Baroda for guiding and providing the facilities for cell culture studies.

I am thankful to Sun Pharma Advanced Research Centre (SPARC) for providing me drug sample and helping me in the TEM analysis during this dissertation work.

I extend my heartiest and dearest gratitude to my colleagues Abhinesh, Akhilesh, Amit, Anand, Anju, Atul, Bhavik, Chetan, Deepa, Dhaval, Dipesh, Garima, Gaurang, Girish, Gitanjali, Imran, Jagruti, Jigar, Kailash, Kaushubh, Manisha, Manjappa, Mukesh Kumar, Nirav, Piyush, Rakhi, Sandip, Soniya, Sushil and other colleagues for their valuable technical assistance and moral support in my project throughout the year.

I would like to thank all Teachers, Researchers and Writers who made me understood of the very basic concepts without which this dissertation could not be completed.

I could devote my time to this work only because of support, love and understanding of my family. Thanks to my Dear Parents, Sisters, Masaji; Kaushlendra Somani, Uncle; K T Gandhi, and Aunty; Rupali Gandhi and last but not the list my Mamaji; A K Bhutada. They have always supported and motivated me during my hard time.

Last but not the least, I thank almighty God for empowering me with courage, perseverance and strength to take up and accomplish the task.

Finally, I express my sincere thanks to all staff members, Librarian, and non-teaching staff of my college for their help in research work especially in odd hours. Besides this, there might be several people who knowingly or unknowingly helped me in the successful completion of this project and I thank all those for every ounce of effort they contributed.

Lastly, my sincere apologies to all those whose name could not be included in this section. No names have been intentionally missed out. My heartfelt thanks to one and all.

Date: 27/07/2015

Place: Vadodara

Mohan N. Rath