

## **ACKNOWLEDGEMENTS**

I take this opportunity to thank Prof. Souvik Bhattacharya, Vice-Chancellor, BITS Pilani and my mentors Dr. C. Dutt, Director, Torrent Research Center and Dr. Sunil Nadkarni, Executive Director, Torrent Research Centre for providing me this opportunity to pursue the off-campus Ph.D. program of the Institute.

I thank Prof. S.K. Verma, Dean, ARD, BITS Pilani and Prof. Hemant Jadhav, Associate Dean, ARD, BITS Pilani for their constant cooperation and guidance to pursue such goal oriented research during the past few semesters off-campus.

I thank my Doctoral Advisory Committee (DAC) members Dr. Sunil K. Dubey and Dr. Anil Jindal at BITS Pilani, who spared their valuable time to go through my draft thesis and were an audience to my pre-submission seminar in order to provide several valuable suggestions that immensely helped in improving the quality of my Ph.D. thesis report. I am indebted to Dr. Anil Gaikwad, Head, Department of Pharmacy, BITS Pilani, for all the administrative support, time and again.

I would like to extend my profound gratitude to my supervisor, Prof. Ranendra N. Saha for his patience, mentoring since my undergraduate days, positive criticism during the course work helped me at every step through the Ph.D. program. It helped me to pursue scientific inquiries very critically and his relentless drive for the pursuit of excellence was a source of my inspiration. His unwavering support for my efforts during undergraduate, postgraduate and now for Ph.D. thesis, has helped to achieve my academic as well as career goals.

I also take this opportunity to thank my colleagues at Torrent Research Centre, Bhat, Gandhinagar, for stimulating brain storming discussions and motivating me throughout the course of my studies. Special thanks to my colleagues, friends, and family - Srinivasa, Vipul, Parag, Anirban, Vibhu, Satish, and Mohit for their constant support and encouragement.

Forever, I am indebted to my family and my fellow BITsians for their continuous encouragement which helped me to achieve my unfulfilled dream.

I dedicate this thesis to my son Vihaan.

**Jaya Abraham**