

ACKNOWLEDGEMENT

I thank god to give me this unique opportunity at such a great institution. Without his will, not a single leaf does shake. So I bow my hands in front of the God. Of an equal eminence is my Supervisor [**Late. Prof. (Mrs.) Rajani Giridhar**], Faculty of Pharmacy, The Maharaj Sayajirao University of Baroda, who is no lesser God for me. I thank Prof. Giridhar for her supervision, advice, and guidance from the very early stage of this research as well as giving me extraordinary experiences throughout the work. Above all and the most needed, she provided me unflinching encouragement and support in various ways. Unfortunately, Prof. Giridhar is no more among us but her blessing are continuously shading lights in our success paths. Mam, we miss you a lot.

A special thanks to **Prof. M. R. Yadav**, Dean, Faculty of Pharmacy, The Maharaj Sayajirao University of Baroda, for his valuable guidance he has provided me during this dissertation work. I have developed a very positive attitude towards the life under his nourishment. His criticisms were always positive that definitely helped me in finding new ways when I reached at roadblocks during the research work. It was my immense pleasure to work under his guidance. Yadav Sir, thanks for everything.

I also fell fortunate enough to have a mentor like **Dr. (Mrs.) Kirti Patel**, Faculty of Pharmacy, The Maharaj Sayajirao University of Baroda, I thank her for encouraging my research and for allowing me to grow as a research scientist. Your guidance and advice on both research as well as on my career have been priceless. I take this opportunity to express my profound gratitude and respects to you mam.

I also express my sincere thanks to **Dr. Prakash Pillai**, Zoology Department, Faculty of Science, The Maharaj Sayajirao University of Baroda, for his valuable suggestions and assistance during this dissertation work. He is a splendid adviser. He had explored all his lab facilities to carry out this research work. I am particularly appreciative to **Ashutosh Tripathi** and **Zalak Parikh** who were ready to work with me when I was in need.

Without their support, I wouldn't have performed such in depth molecular biology research in this dissertation work. I had the incredible fortune to work with **Prof. (Mrs.) Sarita Gupta**, Head, Department of Biochemistry, Faculty of Science, The Maharaj Sayaji Rao University of Baroda. She had continuously provided her support in this work. I also thank **Ragitha Chruvattil** for her throughout help and support.

I would also like to thank **Shri. S. P. Rathod, Prof. Sadhan Rajput, Prof. A. N. Mishra, Prof. Krutika Sawant, Dr. Rajashree Mashru** and **Dr. Prashant Murumkar** for their constant support and motivation during this dissertation work.

I had a magnificent team during this dissertation work. **Hardik Gandhi** and **Anshuman Sinha** stand beside me throughout this journey as my elder brothers. We had very positive and scientific atmosphere around us. I have learned so many things from them. Without their help, my research work would be incomplete. Moreover, my beloved juniors, **Bhavesh Variya** and **Jinal Trivedi** made the lab atmosphere very friendly. I have learned so many scientific things from them. They were continuously engaged in different pharmacological experiments and discussions which showed their true passion for Pharmacology. Other colleagues like **Dipali Patel, Sagar Patel, Vivek Yogi, Disha Shukla, Bushra Pathan, Pratik Patel, Hardik Savsani** and **Prachi Karia** made the lab atmosphere very lively and comfortable. We all had a great time together.

I would also like to thank my Pharmaceutical Chemistry Lab colleagues including **Mayank Sharma, Mahesh Shidore, Neetesh Agrawal, Ashish Kanhed, Mahesh Barmade, Atul Khadse, Navnit Prajapati, Rupesh Chikhle, Rahul Gughe, Nirav Patel, Dushyant Patel, Riyaj Tamboli, Amit Verma, Anand Mantri**, and many more. I have done Pharmacological screening of the synthetic compounds in this research project, where the P'Chem Lab is my sole source of synthetic compounds. They provided me continuous support and motivation. We all shared a

memorable time at the G. H. Patel Pharmacy Building, The Maharaja Sayajirao University of Baroda.

Our Pharmaceutical QA team: **Mohit Mahajan, Chintan Vora, Riddhish Patadiya** and **Karan Mittal**, was fabulous. They all are very big hearted and are ready to help anybody at any time. I had hammered them frequently for my HPLT and other bio-analytical studies. Thanks to all for spending a wonderful time with me.

I would also like to thank other colleagues including, **Pravin Shrivastava, Sushil Patil, Imran Vhora, Jitendra Amrutya, Rohan Lalani, Priyanka Bhatt, Prachi Bhamre, Madhuri Bhagel, Rahul Dandhe, Arpita Patel, Chintal Patel, Abhijit Pandey, Kinjal Patel...** who were directly or indirectly attached to me during my stay at G. H. Patel Building.

I am obliged to **Hasumatiben, Vaishaliben, Binitbhai, Hinaben** and **Chandrakantbhai** for their support in my authority paperwork since the start of my doctoral study. I likewise recognize the co-operation gave by **Pragneshbhai, Pravinbhai, Pramodbhai, Naginbhai** and **Jagdishbhai** in connection to any lab work.

I finish with my astounding family (**Mummy, Papa, Binita Didi, Dharmesh Jiju, Diya, Vrinda** and **Nikita**). Their backing has been genuine all these years; they have surrendered numerous things for me to be at The M.S. University; they have treasured with me each extraordinary minute and underpinned me at whatever point I required it. Thanks for being a valuable part of my life.

I apologise to those whose names I might have missed inadvertently but I will always remain to every individual who provided me the smallest support so that I could reach this stage.

JatinKumar P. Machhi