

## Acknowledgements



Foremost, I would like to pay my tribute to the founder of the Banaras Hindu University, **Pandit Madan Mohan Malaviyaji** whose thoughts and values encourage students to give their best and contribute to the nation building. I am very thankful and proud of the education I received at the Banaras Hindu University.

I would like to express my heartfelt gratitude to my revered supervisor, **Prof. Sushant Kumar Shrivastava** for his continuous support during my Ph.D. study and research, for his patience, motivation, and immense knowledge. His guidance helped me during the time of research and writing of this thesis. Without his supervision and constant help this dissertation would not have been possible.

I am also grateful to **Prof. B. Mishra**, Head, Department of Pharmaceutics, Indian Institute of Technology (Banaras Hindu University) and **Prof. R.S. Srivastava**, (Former Head) for allowing me to use the Departmental facilities for carrying out my research work.

I owe my gratitude to all my respected RPC members **Prof. P.V. Sharma, Prof. R.S. Srivastava, Prof. S.K. Srivastava** (Biochemical Engineering, IIT, BHU) and **Prof. S. K. Singh** 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, Prof. P. N. Singh, Prof. Sanjay Singh, Dr. (Mrs.) S. Hemlatha, Dr. K. Sairam, Mr. A. K. Srivastava, Dr. Vikas Kumar, Dr. Senthil Raja, Mr. A. N Sahu, Dr. S. K. Mishra, Mrs. Ruchi Chawla,** and **Dr. Ashok Maurya**.

I take the opportunity to sincerely acknowledge the University Grants Commission, Government of India, New Delhi for providing financial support in the form of Junior Research Fellowship and Senior Research Fellowship (Rajiv Gandhi National Fellowship), that immensely helped me to achieve my goals. I also thank the Indian Council of Medical Research, New Delhi and Banaras Hindu University for awarding me travel grant to attend an international conference.

I am grateful to the Head, Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi, India for  $^1\text{H}$  NMR and SAIF–Central Drug Research Institute, Lucknow, India for  $^{13}\text{C}$  NMR and Mass analysis.

My sincere thanks to **Dr. Sairam Krishnamurthy** for providing me assistance and required facilities to carry out the pharmacological evaluation. I am also thankful to **Mr. Debapriya Garabadu** and **Mr. Milind Geed** for assisting me in carrying out the animal experiments.

I warmly thank **Mr. Shome Shankar Bhunia** (CDRI, Lucknow) and **Dr. Ravi Kumar Muttineni** (Application Scientist at Schrödinger, Bangalore) for their assistance in carrying out the molecular modelling studies.

I pay my sincere thanks to (late) **Mr. Ajay Pal ji**, **Mr. Nandlal ji**, **Mr. Madan ji**, **Mr. Upadhya ji**, **Mr. Sanjeev ji**, **Mr. Jaamil ji**, **Mr. Pathak ji**, **Mr. Rafeeq ji**, **Mr. Kapil ji**, **Mr. Virendra ji**, **Mr. Chotelal ji**, **Mr. Arun ji**, **Mr. Gopal ji**, **Mrs. Saroj Kumari ji**, **Mrs. Archana Singh ji**, **Mrs. Shyamli Ghoshal ji** and all other non-teaching staff of the Department for their assistance and co-operation during the Ph.D. tenure.

I would particularly like to acknowledge the contribution of **Mr. Anupam G. Banerjee** and it is not sufficient to express my gratitude with only a few words. He has always been there to motivate me during the hour of hardship and helped me unconditionally throughout the tenure.

I am indeed thankful to have got welcoming and friendly fellow mates **Mr. Anupam** and **Dr. Meenakshi** who were ever ready to provide me with all possible help and they created a happy working environment and foster camaraderie within the laboratory. Amongst the juniors, I would like to thank **Biswajit** and **Akanksha** for their alacrity and support during the tenure.

I also acknowledge the warm support extended to me by **Gireesh, Gulam, Ravi Bhushan, Jugal, Achint, Rahul, Sanjay, Saurabh and Damiki**. They made my stay at Varanasi a very pleasant and memorable one. I would also like to express my thanks to my supportive seniors, juniors and fellow research scholars: **Dr. Prabhat Shrivastava, Dr. Sanjay Bharti, Dr. Monoj Rawat, Dr. Shailendra Pandey, Dr. Dinesh Patel, Dilip, Pramila, Madhu, Dr. Sanjay Tiwari, Manish Kumar, Anshul, Gopal, Pavan, Prabhash and Nagendra** to name a few and all the Research Scholars of the Department who were always there with a helping attitude whenever I was in need.

I am also grateful to the Assam University Silchar and to my good colleagues for extending support whenever required. My heartfelt thanks to all my teachers right from school until now for their keen interest, constant encouragement and wishes for my career.

I must express my gratitude to **Sanghita**, my wife, for her emotional support and constant encouragement. A loving appreciation is reserved for my younger brothers, **Pritam** and **Bishwarup**. Most importantly, none of this would have been possible without the love and patience of my family. My parents to whom this thesis is dedicated to, has been a constant source of love, moral support and strength all these years. I owe my achievement to both of them.

Last but not the least, I pray God for the animals who were mortified for the cause of research and advancement of knowledge. I wish for their soul to rest in peace.

Date:

Place: Varanasi

(**Nirupam Das**)

