

ACKNOWLEDGEMENTS

I would like to express my truthful appreciation and heartfelt thanks to all the persons around me intended for their valuable advices, critics, commitment and encouragement that made my journey conceivable.

Initially, I would like to express my deep sense of gratitude to my supervisor **Dr. Jeyakumar Kandasamy**, Department of Chemistry, Indian Institute of Technology (Banaras Hindu University), Varanasi, for providing me generative, positive supervision and also for his valuable guidance, constant support, critical and motivating comments throughout the course of my research work.

I would like to thank former heads **Prof. (Mrs.) Rashmi Bala Rastogi** and **Prof. M. A. Quraishi** and the present Head, Department of Chemistry, IIT (BHU), Varanasi, **Prof. Dhanesh Tiwary** as well as all the faculty members of Department of Chemistry IIT (BHU) for their kind support and for extending all required facilities to carry out my research work smoothly.

I would like to thank my RPEC members, **Prof. V. Srivastava**, Department of Chemistry, IIT (BHU), Varanasi and **Dr. K. Sairam**, Department of Pharmaceutical Engineering and Technology, IIT (BHU), Varanasi for their valuable suggestions, constant guidance and kind encouragement during my research work.

I gratefully acknowledge the facilities provided by CIFIC, IIT (BHU), Varanasi for NMR facilities for doing characterization of samples.

I would like to express my deepest affection to my father, **Mr. Ashok Kumar Chaudhary**, my mother, **Mrs. Subhadra Chaudhary**, elder sister **Dr. Shalini Verma** and younger brother **Mr. Ashish Chaudhary** for their love, concern, continuous moral support and encouragement which enabled me to perform my liabilities. I also would like to thank my friends (**Mr. Akhil Verma, Ms. Jyoti Yadav, Dr. Neha Gupta, Dr. Veena Singh and Ms. Reena Singh**) and siblings (**Dr. Vivek Verma, Mr. Niraj Verma, Mr. Suraj Verma, Mr. Durgesh Verma**) for their affection, prayer and support in my research work as well as their willingness to share my research problems.

I am thankful to all lab members **Ms. Surabhi Gupta, Mr. Adesh Kumar Singh, Ms. Varsha Tiwari, Ms. Sadaf Azeez, Mr. Siddharta Barnewal, Mr. R. Venkatesh, Dr. Sureshbabu Popuri, Dr. Kunj Bihari Mishra, Dr. Bharat Kumar Allam, Dr. Vishnu Nayak Badavath, Dr. Kranthikumar Tungala, and Dr. Saidareddy Puli** for their kind co-operation and friendly environment during entire period of my research. I would like give special thanks to project staff member **Mr. Ashish Kumar Maurya** of our laboratory for his support in complete duration of my research.

I am thankful and indebted to **IIT (BHU)** for providing me financial support during my research work.

At the last but not the least, I thank to all my well-wishers whose names I may have failed to mention here unintentionally. Thanks to all of you for being there for me when times were the toughest.

Date:

Priyanka Chaudhary