

## ACKNOWLEDGEMENT

It is an honor to express sincere gratefulness to my research supervisor Prof. B.K.Konwar for his constant support, training and valuable advices without which the completion of my doctoral research would not have been a reality. Particularly, his confidence on my ability strengthened my self-confidence and also the lesson of hard work learnt from him has helped me to grow in life.

I would like to offer my sincere thanks to Prof A.K.Buragohain, Dr. S.K.Ray and Prof. S.K.Dolui for their advice and guidance as my DRC members. I offer my deep gratitude to all the faculties and staff members of the department. I am also grateful to Samar da and Pranab da for their constant help. I also offer thanks to Deepak Deka and Dharanidhar Bonia for their all-round support.

I owe my heartiest gratitude to labmates Dr. Jyoti P. Saikia, Dr. Pinkee Phukon, Pranjal Bharali, Mayur Mausoom Phukan, Krishna Gogoi, Kalpana Sagar, especially Yasir Bashir, Salaam Pradeep, Nilakshi Baruah, Lipika Aidew, Bhaskarjyoti Gogoi and Dr. Ranjan Dutta Kalita with whom I worked in a homely atmosphere and shared maximum time of my research life. I would like to extend my gratefulness to all other friends for their inspiration and support and also for the wondrous time I spent with them. In this regard I will specially thank to Pranjal Bharali for his lessons on microbiological works and always supporting me with his friendship. Apart from my labmates, I would also like to express my sincere thanks to Rasna Devi, Vijay Das and Papia Dutta from Department of Chemical Sciences, for assisting me in data analysis and interpretation. I would also like to express my gratitude to Nipu da, Sankur da and Raju da for analyzing my samples.

It is my pleasure to express my deepest admiration and reverence to my beloved and respected parents for their confidence on me, limitless support and affection during my happiest and hardest times. I have been bestowed with a lovely sister (Mrs. Ananya Deb) whose love and affection has always enriched my life. I am grateful to her for taking care of our parents all throughout my study period.

I would like to express my gratitude to Dr.N.C.Barua, Head, Natural Products Chemistry Division, North East Institute of Science and Technology (CSIR), Jorhat for his kind help in structure elucidation of a few compounds. I take this privilege to offer my sincere thanks to his lab-stuffs Joymoni ba, Biswajit da, Pritismita, Naresh, Pori for their help and friendly attitude.

I am highly indebted to Dr. Pronobesh Chattopadhyay, Scientist, Pharmacokinetic Division, Defence Research laboratory, Solmara, Tezpur for his generous help and guidance to carry out studies on animal models and interpretation of results. I also offer my gratitude to his lab-stuffs specially Subham Banerjee, Jyochna Gogoi, Shanta Mondol for their assistance.

I would like to specifically thank to hostel mates Lucky, Anushree, Nibedita, Madhulekha, Gitamoni, Arani, Priyakshi, Rupamoni, Maitrayee, Yutika, Simran, Shilpi for giving me a wonderful time in the hostel to be remembered throughout my life and also for helping me in difficult times.

Dated: 13.03.2014

Place: Tezpur

(Anggana Ray)