

ACKNOWLEDGEMENT

This thesis is the outcome of a long rigorous journey in which I have been encouraged and supported by many peoples who actually make my dream possible. It is really pleasure moment for me to express my full gratitude for them.

I express my most sincere gratitude to my supervisor, Dr. Amiya Kumar Panda, former Professor, Department of Chemistry, University of North Bengal, Darjeeling, for his invaluable thoughts, guidance and constant support during the entire period of my research work.

I offer my gratitude to the authority of University of North Bengal for providing the facilities and accessibilities related to the research work.

I wish to express my warm and sincere thanks to Prof. Boris A. Noskov, and his group, Department of Colloid Chemistry, St. Petersburg State University, St. Petersburg, Russia, for their assistance and support during my research work.

I also would like to thank to Prof. Chien – Hsiang Chang, Department of Chemical Engineering, National Cheng Kung University, Taiwan, for carrying out the morphological studies.

I offer my special thanks to Prof. Kaushik Nag, Department of Biochemistry, Memorial University of Newfoundland, St. John's, NL, Canada, for his valuable contribution in my scientific work.

The thesis would not been possible without scientific support from Dr. Parashurama Jaisankar, Head and Chief Scientist, Organic and Medicinal Chemistry Division, IICB Kolkata, Dr. (Mrs) Shila Elizabeth Besra, Principal Technical Officer, Cancer Biology & Inflammatory Disorder Division, IICB Kolkata and Dr. B. Achari, former scientist, IICB Kolkata. The research assistant that received in their laboratories or through their expertise has enriched my scientific aptitude.

I would like to acknowledge Dr. (Mrs.) Kakali De, IICB, Kolkata, for her valuable contribution during my PhD transition time.

I express my profound sense of gratitude to the Head and all my respected Teachers in the Department of Chemistry, University of North Bengal for their helpful assistance and continual inspiration. I am thankful to all the non-teaching staff of my Department for their cooperation and help.

My special thanks go to my past and present fellow colleagues Dr. Kausik Manna, Dr. Sujoy Paul, Dr. (Mrs.) Moumita Chakraborty, Banitadi, Sudarshana, Pritam, Biplab, Gourab, Priyam, Tanushree, Manish, Suraj, Amrit, Ravi, Anup, Manas Kumar Mandal, Atanu and Manas Barai for their valuable assistance and cooperation during my research work.

The inspiration, encouragement and whole-hearted cooperation that I received from my friends, is most elegantly acknowledged. Just to name a few, I would like to thank Dr. Rinku Baishya, Dr. Bikram Keshari, Dr. Deepak Kumar, Mr. Shayon Bhattacharya, Dr. Sushil Kumar, Dr. Vikash Gupta, Mr. Rahul Gajbhiya, Mr. Sreedhar Reddy, Mr. Ghansham sadashiv More, Dr. Ankur Shukla, Dr. Ashok Behra and Mr. Shyam Ji Gupta. Their selfless support and belief made me see this day. I owe you all a lot.

I convey my special thanks to Dr. Tamal Goswami, Dr. Debasish Sengupta, Dr. Soumik Bardhan, Sujitda, Dr. Kinkar Biswas, Gulmi, Prasenjit, Biprانشda Souravda and Baidurya for their constant support.

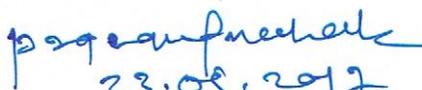
The financial support to our laboratory from DST, CSIR and DBT, which let me avail uninterrupted access to DLS, DSC, Langmuir blodgett balance, Ultrasonicator, UV-visible spectrophotometer and Lyophilizer are highly acknowledged.

I take this opportunity to acknowledge SAIF- NEHU, Shillong for providing paid instrumental facilities.

I would like to thank my special friend Ms. Jyotsna Nayak for her constant selflessness, love and support.

I also express my deep sense of gratitude to my Parents for their constant love and support. Without them, I would not be half the person that I am today.

Finally, I would like to express my thanks to UGC, New Delhi, for awarding me Junior Research Fellowship, University of North Bengal for providing financial aid to continue my research work.


23.08.2017

PRASANT NAHAK

Department of Chemistry

University of North Bengal

Darjeeling - 734013