

Acknowledgements

Six years ago, I wasn't particularly fascinated with cancer. Neither did I have any particular concerns about its origin nor did I celebrate many hours thinking of the slow deterioration of a human body and the helplessness of a person destined with no cure, that was until I joined Dr. Debjani Chakraborty's group. It has been six years of roller coaster ride into research and this thesis has come to epitomize those musings. A great number of people have contributed in assorted ways to my research and the making of this thesis and they deserve special mention. It is a pleasure to convey my gratitude to those who helped me to stand where I am.

It is said that "the parents are the first teacher and teachers are the second parent" and hence I would like to express my heartfelt gratitude to my research supervisor **Dr. Debjani Chakraborty** for her advice, and guidance from the very early stages of my research as well as to impart scientific temper, so very needed for a researcher. I sincerely thank her for introducing me to the exciting and promising field of medicinal inorganic chemistry and for being patient and extremely kind to me throughout. What made my stay even more enjoyable is the constant source of inspiration I derive from her in academic as well as non-academic matters in my life. The scientific ideas she shared with me has enormously helped me to enrich my growth as a student, a researcher and a scientist. Besides academic matters she taught me various aspects of life which has turned a girl, who came with a beating heart into the world of research, to an empowered women to think of her own problems independently; her contribution will be unequalled throughout my life as well as my career.

I am thankful to Professor (Dr.) N. D. Kulkarni, Head, Department of Chemistry, The Maharaja Sayajirao University of Baroda and Professor (Dr.) B. V. Kamath, former Head for the support and encouragement in various departmental activities. The Department of Chemistry has provided the support and equipment I have needed to produce and complete my thesis.

I take this opportunity to thank Prof. S. Padhye, Prof. Amitava Das and Dr. Ranjith V. Devkar for their valuable suggestions in academic matters. I have had a great pleasure in working with some wonderful collaborators. I am thankful to Dr. Ravi N. Jadeja, Dr. Menaka C Thounaojam, Ankita and Sharmita jana for all the bioactivities. I wish to thank my lab mates P. Rama Devi, Priyanka, Nisha and friends at M.S. University: Dr. Hemant Mande, Dr. Nilesh, Krupa, Heta, Parul, Riyaz Tamboli, ketan and Shilpi for the stimulating discussions and for all the fun we have had in the last six years.

I wish to take this opportunity to express my sincere thanks Mrs. Revathi, Mr. Kailash Rane, and Mr. Kaushik for their warm support and kind help in administrative matters to ease off my research work. I extend a special thanks to the staff members of different departments such as Administration, Accounts, Stores, Purchase and Library whose names although not mentioned individually here, but have always been ready to understand my problem and helped me in all possible manners.

It is said that “a friend in need is a friend indeed” so it is my great pleasure to have some people in my life without whom I cannot think of friends: Sakib and Ankush, being a constant support beside me. Words ever fell short whenever I wanted to express my heartfelt gratitude to both of them for being an invaluable support beside me in my hardest days in M.S.U and in my life.

I gratefully acknowledge UGC and DST (INSPIRE), New Delhi, India for providing research funds that has enable me to accomplish my Ph.D. work

Finally, I would like to thank to my parents, my sisters, my husband and my son Ansh, their love gave me forces to make this work. Words cannot express how grateful I am to my parents for all of the sacrifices that you’ve made on my behalf. I thank the almighty for giving me the strength to plod on despite piling troubles and continuing tensions. I am also thankful to all the people for their support, who contributed in my life, but my inability couldn’t express their name here.

Thank You all

Rinky Singh