Acknowledgments

First and foremost I want to pay my gratitude to most magnificent God who enlightens my heart with spiritual light to find the true path of life.

Prof. Iqbal Parwez, my supervisor, gave his kind supervision to me for the present work. As he is an extraordinary teacher of an ordinary student like me, I feel highly privileged to work with him. His strict discipline and great vision not only taught me research methodology but taught me the art of living. His constant encouragement and rewarding appreciation always energized me to think novel. He moulds me into a new sculpture, which is more capable to accept challenges. In return to him for the little knowledge which I got from him, I can only offer my respectful obeisance to him.

I am greatly indebted to Prof. Irfan Ahmed, Chairman, Department of Zoology for providing me infrastructure support.

I am highly grateful to Dr. Sher Ali, NII, New Delhi, Prof. Aparna Dixit, School of Life Science, J.N.U., New Delhi and Prof Jamal Ahmed, J.N. Medical college A.M.U. for their concern and timely contribution.

I am obliged to Dr. Aysha Qamar who boosted me whenever I got disappointed and Dr. Fauzia Anwar Sherwani for keeping my moral high and maintaining my level of patience. I am also grateful to Dr. (Mrs.) Hina Parwez for her help, support and encouragement.

Thanks of also due to my lab mates i.e., Dr. Arif Ahmed, Dr. Mustufa Arif Kamal and Imran Mustufa Malik and friends for their suggestions and cooperation.

Whatever we do in this world reflects the image of our parents. If today I’ll be able to achieve anything whether socially or scientifically, its whole credit solely goes to the blessings of my great parents and other family members particularly my Bajjo, Mrs. Rehana Kazmi who provided me rock-like support during my acute moments of crisis. For now Thanks everybody.