

ACKNOWLEDGEMENT

I express my earnest regards, deepest gratitude and immense respect to my respected supervisor, Dr. Sujata Maiti (Choudhury), Professor of Department of Human Physiology with Community Health, Vidyasagar University, who has been an excellent mentor throughout the period of my doctoral research. I am grateful for her critical comments, valuable advices, continuous monitoring, encouragement and motivation. I always enjoyed all the discussions with her for academic purpose as well as other aspects of life. She is always there for me, being patience, amenable and supportive. Without her guidance and help this work could not have been done.

I also express my deepest gratitude and respect to my supervisor, Dr. Sibsankar Roy, Senior Scientist, Dept. of Molecular Endocrinology, IICB, Kolkata who has been an excellent mentor and motivator, throughout the period of my doctoral research.

I extend my sincere gratitude to Dr. Sumana Sarkhel, head of the Department of Human Physiology with Community Health for her kind co-operation and advice during my work.

I sincerely acknowledge to Prof. Chandradipa Ghosh, for her perceptive comments and kind cooperation in the submission of my thesis work.

I express my sincere gratitude to Prof. Somenath Roy, for helping me in carrying out this research work. I wish to express my honest gratitude to Prof. Prakash Dhara, for his valuable advice and comments. I owe my sincere gratitude to Dr. Sandip Sinha, for his continuous encouragement and co-operation during my work. I extend my earnest thanks to all the staffs of the Department of Human Physiology, Mr. Anup Barman, Mr. Malay Nayek, Mr. Sabyasachi Bera for allowing me avail the laboratory facilities.

I am grateful to University authorities of Vidyasagar University for giving me administrative facilities.

I am also grateful to the USIC Laboratory (Central instrumental facilities) of Vidyasagar University.

I am thankful to my seniors and lab mates Saswata Sanyal, Rini Ghosh, Tuhina Das, Parlay Maity, Madhubanti Bepari, Anurag Paramanik, Surya Kanta Dey, Tamanna Roy, Prasanta Sabud, Debjani Chatterjee, Chaitali Ghosh, Angsuman Das Chaudhuri, Anirban Majumder, Dibyendu Giri, Arup Dhar, Suman Mondal, Rumi Mahata, Subharanjan Das, Subhabrata Das for their kind cooperation and important advice for the completion of the research work.

My earnest gratitude goes to Dr. Subhasis Das for his constant and enormous help in planning of experimental works.

I am indebted to all my respected teachers who show me the path of knowledge.

I am deeply indebted to my parents, my husband, relatives, my friends, for their love, encouragement, and continuous support that enabled me to cross all the hurdles. Their best wishes have always been a source of inspiration throughout my academic career.

Ananya Pradhan