I deem it as a singular honour in placing on record my deep debt of gratitude to the learned dons of the University, Prof. Dr. Mahdi Hasan and Prof. Nawab Hasan Khan under whom it has been my proud privilege to pursue this study.

It is not a usual formality when I say that it was a rare good fortune for me to work under the able guidance of an eminent scientist like Prof. Dr. Mahdi Hasan, Director, Interdisciplinary Brain Research Center, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh. The rare quality of a generous heart in Prof. Dr. Mahdi Hasan makes him a remarkable human being with a lot of affection for his students. I was lucky to have this favour from him. I owe my heartiest gratitude to him for his paternal affection, continued encouragement, pertinent advice, illuminated discussions and devotion of his precious time towards this investigation.

My grateful thanks are due to Prof. Nawab Hasan Khan formerly Chairman, Department of Zoology who, as my supervisor has been kind enough to spare no pains in seeing me through the arduous task of accomplishing this research work. His words of encouragement, generous help, invaluable advice and profound scholarly guidance has enabled me to fulfil my commitment.
My sincerest thanks are next due to Prof. Salahuddin, Chairman, Department of Biochemistry, A.M.U., and Prof. Sohail Ahmad, Chairman, Department of Microbiology, A.M.U. Professor Salahuddin’s fruitful discussions have gone a long way in elucidating the biochemical aspects of my study. Prof. Sohail Ahmad not unhesitatingly allowed me use of his light Microscope, but also encouraged me throughout this study. My sincere thanks are also due to Dr. N.P. Gupta & Dr. N.L. Sharma, formerly Head, Department of English, Varshney College and D.S. College, Aligarh respectively for their kind help.

I shall be failing in my duty, if I forget to express my thanks to my senior colleagues Drs. S. Fatehyab Ali, S. Saleem Haider, Sabir Ali and Fakhrul Islam for their pleasant cooperation. With high appreciation I owe my deepest thanks to my colleague Miss Priti Vadhva for her very friendly assistance and supportive understanding. The help of Mr Naseem Ahmad Khan is also acknowledged. I am immensely thankful to my colleague Miss Achla Gupta for her active cooperation and help, specially in arranging the bibliographic details. I also wish to express my thanks to my colleague Mr Masood and Miss Amita Gupta, Department of Biochemistry for their help in drawing the diagrams.

I am grateful to Mr Ashwaque, Computer Center, A.M.U. for his help in computing the data; to Mr Mansoor Ahmad and Wajid Husain, Central Photography and Audiovisual Section for developing and printing the photographs; Mr Syed Mohammad and Mr S.M. Hashim for their contribution in drawing beautiful
diagrams; to Mr Mohd. Zubair and Mr Shakil Ahmad Khan
for their meticulous typing.

I felicitate to acknowledge my thanks to my husband
Dr. Qadri who beared mine and my little daughter Sana's
parting with patience and enhanced my spirit with supported
enthusiasm.

I am immensly thankful to University Grants Commission
(U.G.C.) and Indian Council of Medical Research (I.C.M.R.),
New Delhi, for the financial aid provided in the form of the
Junior and Senior Research Fellowships.

Last but not least I express my deepest sense of
gratitude to my parents who were always with me mentally
and emotionally to give moral support and allowed me to work
single mindedly on this project. It would have been impossible
for me to complete this task without their forebearance,
large-heartedness and deep affection.

(TAYYABA KHATOON)