ACKNOWLEDGEMENT

I am expressing my sincere and deep gratitude to my guide Dr. Joseph John K., Department of Zoology, St. Thomas College, Kozhencherry, for rendering valuable guidance and encouragement throughout the course of the study. His unfailing patience, constructive criticism and scientific directions helped me to complete this work.

I acknowledge the support given to me by the Principal Prof. K. George Abraham and former Principals, Dr. P.J. Philip, Rev. Dr. Mathew Daniel. I am thankful to Prof. Rossy Issac Nallangara, Head, Department of Zoology and Prof. Leelamma Alex, former head of the department for providing facilities to carry out this research work.

I express my heartfelt thanks to Dr. Nelson P. Abraham and Dr. Roy George, Dept. of Zoology, St. Thomas College, Kozhencherry who encouraged me by their ever stimulating guidance, motivation and inspiration throughout the period of my research programme. I express my deep gratitude to Dr. Thomas P. Thomas, Dept. of Botany, St. Thomas College, Kozhencherry for going through the manuscript and suggesting necessary modifications.

I remember with gratitude and reverence the help and guidance extended to me by Dr. Vijayalakshmi, Dr. Unnikrishnan, Smt. Mary Issac, Dr. C. P. Nair, Principal Scientist and Smt. Sini A. Research Assistant of CEPC, Kollam for sparing their valuable time, effort and lending their expertise for histopathological studies and Residue Analysis of samples.

I extend my sincere thanks and appreciation to Dr. Joy Jacob, Department of Statistics, St. Thomas College, Palai, Smt. Ligi George and
Sri. Jaison George, Department of Statistics, St. Thomas College Kozhencherry for suggesting proper statistical methods for the study.

I would like to acknowledge with thanks the help received from Dr. Abraham Samuel, Department of Zoology, CMS College, Kottayam, Dr. Sunny Kuriakose, Department of Chemistry, St. Thomas College, Palai. Dr. G. Prasad and Dr. Subhash Peter, Department of Zoology, University of Kerala, Kariyavattom, Dr. Chandra Mohan, Research Officer, Department of Anatomy, Medical College, Thiruvananthapuram, Dr. V.R. Prakash, Prof. and Head, Department of Environmental Science, University of Kerala, Kariyavattom and Dr. M.S. Latha, Reader, Department of Bioscience for providing help and kind co-operation during the entire period of study.

I owe my thanks to the Librarians and staff of the libraries of St. Thomas College, Kozhencherry, Department Library of Biosciences and General Library, Mahatma Gandhi University, Kottayam, General Library, University of Kerala, and The British Library, Thiruvananthapuram for providing facilities for the collection of literature. My special thanks are due to Sri. K. Muralidharan and Sri. T.L. Chandran for providing me with most necessary papers at a short notice.

I pay all my regards to the authorities of Veterinary College, Mannoothy, Thrissur, The Rodents Research Centre, Kottayam and Sri. P.D. Kochukunju for providing me experimental animals and all the required housing facilities.

At this inexplicable moment of joy I deem it a proud privilege to recall all the co-operation and contribution of Smt. S. Girijakumari, Pampa College, Parumala and Smt. Sabeeta Mariyam Alex, Research Scholar, Smt. Ninu
Thomas, Lecturer, Prof. Shirly Annie Oommen, Dr. Jassy Thomas, Prof. Annie J. Mathew and Prof. Achamma Kurian, St. Thomas College, Kozhencherry for their valuable support.

I wish to place on record my gratitude to the non-teaching staff, Department of Zoology, St. Thomas College, Kozhencherry who never showed any prosaic attitude in helping me at the best of their skills. I am sincerely thankful to them for their kind help during the study.

I acknowledge my gratitude to Mahatma Gandhi University, Kottayam for providing Junior Research Fellowship for the present investigation and to University Grants Commission, New Delhi for sanctioning a Minor Research Project to the Research Guide.

I am immensely thankful to Mr. Dainy Kurian, Cyber Soft, Kozhencherry and Mr. Motti Cheriyan, Data Write, Kozhencherry for the error-free DTP work. I also thankful to Mr. Prasanth Kumar, Mr. Sivakumar. and Mr. Rajaneesh.

I owe my special thanks to all my family members, teachers and all individuals who have been in any way associated with the completion of this work but have not been mentioned so far.

Finally I fall short of words to express my deep sense of reverence and indebtedness to my dearest parents who sustained my spirit and endeavor at every critical juncture of my educational career. I take this opportunity to dedicate this work to the loving memories of my parents.

Vimala K. John