ACKNOWLEDGEMENT

I am extremely grateful and sincerely thank my guide and supervisor, Dr.(Mrs).G.VANITHAKUMARI, M.Sc., Ph.D., F.I.C.S., F.A.S.I., F.N.A.S., Dip. in German, Reader, Department of Zoology, Bharathiar University, Coimbatore 641 046, India, for having introduced me to the fascinating field of Reproductive Endocrinology and Toxicology. Her personal enthusiasm, unstinted help and fathomless encouragement have supported me to a very great extent. I am deeply indebted to her for her able and diligent guidance.

My profound thanks are due to Dr.G.Sundararajulu, M.Sc., Ph.D., D.Sc., Professor and Head, Department of Zoology, Bharathiar University, Coimbatore-46, for allowing me to carry out this work in the Department. I also thank Dr.R.Manavalaramanujam, M.Sc., Ph.D., Reader, Dr.K.Sasikala, M.Sc., Ph.D., and Dr.K.Murugan, M.Sc., M.Phil., Ph.D., Lecturers, Department of Zoology, Bharathiar University, Coimbatore for their encouragement. The excellent technical assistance of Mr.M.Muthusamy, M.Sc., B.Ed., is gratefully acknowledged.

It is my privilege and pleasure to offer my heartful gratitude to Prof.N.NAMASIVAYAM, M.A., Secretary, N.G.M. College, Pollachi, India, without whose help and constant encouragement, it would not have been possible for me to accomplish this stupendous task. My sincere thanks are also due to Dr.G.Alagar Ramanujam, M.Sc., Ph.D., Principal, N.G.M. College, Pollachi, for his vital support and encouragement.
I am ever grateful to retired Professor of Zoology, Mr.K.P.Karunanandam, B.Sc.,(Hons), B.T., for his consideration and brotherly affection throughout my teaching and research career.

I have benefitted immensely by the advice and creative criticism of Dr.N.Rangaram, M.Sc., Ph.D., M.A., B.T., Professor and Head, Department of Zoology, N.G.M. College, Pollachi and I am highly grateful for the same. I also thank my colleagues Mrs.V.Dhanalakshmi, M.Sc., M.Phil., B.Ed., and Mrs.V.Suseela, M.Sc., M.Phil., B.Ed., for their cooperation.

I am grateful to Dr.P.Govindarajulu, M.Sc., Ph.D., F.I.C.S., F.R.E.S. (Lond.) F.A.S.I., F.I.R.S.T., F.R.E., Professor of Endocrinology, Registrar, Madras University, Madras-5, for permitting me to make use of his department facilities and laboratory throughout this study.

I wish to thank Dr.Michael Aruldhas, M.Sc., M.Phil., Ph.D., M.A.S.I., M.R.E., Reader and Head-in-charge, Department of Endocrinology, Dr.A.L.M.P.G.I.B.M.S., Taramani, Madras-113, for having provided me with fine chemicals and accessibility to department laboratory and library with all generosity. I am also indebted to Dr.N.Srinivasan, M.Sc., M.Phil., Ph.D. and Dr.K.Balasubramanian, M.Sc., M.Phil., Ph.D., Readers, Department of Endocrinology, Dr.A.L.M.P.G.I.B.M.S., Taramani, Madras-113, for their affectionate encouragement and constructive criticism.

I acknowledge with deep sense of gratitude Dr.J.Arunakaran, M.Sc., M.Phil., Ph.D., Temporary Lecturer cum Technical Assistant and Dr.T.Malini, M.Sc., M.Phil., Ph.D., Research Associate (CSIR), Dr.A.L.M.P.G.I.B.M.S.,
Taramani, Madras-113, for their keen interest, personal encouragement and helpful criticism throughout my research career. Without them, I would not have completed this work successfully.

I will be failing in my duty if I do not thank Mr.K.Sunderraj, B.Com., for being my guide and philosopher, apart from constantly encouraging me with utmost enthusiasm.

My special thanks are due to Dr.V.Kuralmani, M.Sc., M.Phil., Ph.D., Research Associate, Department of Statistics, Bharathiar University, Coimbatore, for his suggestions and critical evaluation of the statistical analysis.

I am extremely thankful to the research scholars and Dr.R.Sampathraj, M.A., M.Sc., B.Ed., M.Phil., Ph.D., Research Associate, Division of Endocrinology, Department of Zoology, Bharathiar University, Coimbatore, for their help.

I extend my sincere thanks to Dr.Terry Taylor, M.D., F.A.C.P., Director, National Hormone and Pituitary Program, USA, for providing NIDDK hormone kits as a gift.

I am pleased to thank my teachers Dr.I.Christy, M.Sc., Ph.D., Vice-Principal and Professor of Zoology and Mr.P.Sekar, M.Sc., M.Phil., D.H.Ed., Lecturer in Zoology, Voorhees College, Vellore-1 for their continuous support and encouragement.
I wish to thank the Librarians of Bharathiar University, Coimbatore, Tamilnadu Agricultural University, Coimbatore, Tamilnadu Veterinary and Animal Science University, Madras, Dr.M.G.R.Medical University, Madras, Dr.A.L.M.P.G.I.B.M.S., Taramani, Madras, Dodd Memorial Library, C.M.C. Hospital, Vellore, Madras Medical College, Madras, J.I.P.M.E.R., Pondicherry, Indian Institute of Science, Bangalore, Guindy Campus, Science Library, Madras University, Madras-25, for permitting me to carry out literature survey.

I take this opportunity to thank my sister-in-law Prof.P.LAKSHMI, M.A., (Retd., Principal) Administrative Officer, Vellalar's College for Women, Erode-9, for constantly encouraging and inspiring me by her hard work and devoted academic service.

I acknowledge Indian Institute of Science, Bangalore for INSDOC assistance and Distributed information sub centre (DBT), Centre for Molecular Biology, TNAU, Coimbatore-3, for their Bio-information search service.

I would like to acknowledge my friends Mr.M.Jeyaprakash, M.A., M.Phil., Professor of History and Mr.N.Rajkumar, M.Sc., M.Phil., M.Ed., Lecturer in Botany, N.G.M. College, Pollachi for prompting me to undertake this research work.

I also would like to thank M/s. Adyar Students Xerox, Adyar, Madras-20 for the neat execution of this thesis.

Financial assistance under faculty improvement programme for one year (FIP - 8th Plan 159-4/93 (TF) CD-1, dt. 13.8.93) by University Grants Commission (UGC), New Delhi is gratefully acknowledged.