ACKNOWLEDGEMENT

I wish to express my deep sense of gratitude to Dr. Mrs. K. RADHA SHANMUGASUNDARAM, M.Sc., Ph.D., M.Sc. (Shef.), A.R.I.C. (Lond), Professor and Head, Department of Biochemistry, Post-Graduate Institute of Basic Medical Sciences, Taramani Campus, University of Madras, for her wholehearted and patient guidance, invaluable suggestions, constant support and encouragement which enabled me to successfully complete this piece of work.

I am extremely grateful to Dr. E.R.B. SHANMUGASUNDARAM, M.A., B.Sc., Ph.D., F.R.I.C. (Lond), F.C.S. (Lond), Former Senior Professor and Head, Department of Biochemistry, Guindy Campus, University of Madras for his kind advice and suggestions and timely help.

I wish to thank Dr. C.K. MATHEWS, Dr. L.N. KRISHNAN, Group Leaders at the Indira Gandhi Centre for Atomic Research, Kalpakkam, for their enthusiasm and encouragement in involving the hospital and households of the Department of Atomic Energy Township, Kalpakkam, in this study. I thank Dr. D. JACOB, the health workers and other medical staff of the DAE Hospital for all the assistance rendered during the study period at Kalpakkam. I am grateful to Dr. T.R. MAHALINGAM of the Materials Science Division, IGCAR, for carrying out the selenium analysis.
I gratefully acknowledge the members of all the households both in Kalpakkam and Madras who enthusiastically participated in all aspects of this study.

Thanks are due to the administrative staff of the Department of Biochemistry, Taramani Campus, University of Madras, for their timely help. I take pleasure in expressing my gratitude to all my friends and colleagues for their encouragement. I am very grateful for the constant support received from Mrs. Sumathy Kumar, Mrs. Meera Shivashkar, Ms. V. Geetha and Mrs. Sharadha V.

I thank Mr. Raju Thomas, Ms. Sri Devi, Ms. Dharani, and Mr. Senthil Kumar for their kind assistance in the preparation of this manuscript.

I thank my family for always being there for me.

The fellowship granted by the University Grants Commission is gratefully acknowledged.