ACKNOWLEDGEMENT

I express my sincere gratitude to Dr. V.V. Modi for the invaluable help rendered during the course of this work. His constant guidance and criticism, not necessarily related to the subject only, has helped build my values and efficiency.

I am thankful to Prof. K.K. Rao and Dr. P.J. Dave for providing all the requirements and facilities in the department. I am much grateful to all my research colleagues, who offered their support from time to time, specially, Sudhir Sahasrabudhe, Sujata Chiplunkar, Rajesh Patel, Sunita Patil, and my grand parents. To Miss Anjali Saharabudhe, I owe my heartfelt thanks for her help during the preparation of this thesis. The help of Sumona Ghosh and Devesh Muley in some of the experiments is highly appreciated.

I wish to thank Dr. R.N. Singh and Mrs. K.R. Singh, Tata Institute of Fundamental Research, Bombay, India and Dr. (Mrs) Handa, Department of Pathology, Medical College, Baroda, for their help in the microscopic studies. I wish to express my gratitude to Dr. T.C. Stadtman, National Institute of Health, Bethesda, Maryland, USA., for the help and guidance rendered during the selenium incorporation studies and Dr. H.R. Sliwka, Organic chemistry laboratory, University of Trondheim, Norway, for seleno-carotenoid identification studies.

The financial assistance given by the University Grants Commission during the tenure of this work is gratefully acknowledged.

- Nitin Udar-