Scope of the present investigation
Ageing is a process of 'progressive unfavorable loss of adaptation resulting in decreased expectation of life with the passage of time'. The progressive lengthening of the mean life span and the consequent growth of the elderly population are the major interests of the present world. Successful ageing of an organism has been influenced by the defense capacity of an organism to protect the cells and tissues during oxidative stress. Age-associated oxidative damage on macromolecule can lead to homeostatic imbalance and various types of age-related diseases.

Cell membrane is an important target for all radical damages. Erythrocytes being devoid of nucleus and internal organelles are extensively used for determining the effects of ageing. Exposure to oxidative insults could lead to membrane macromolecular damages altering the biochemical and mechanical properties of the cell. Erythrocytes residing at high oxygen tension suffer and accumulate physical and chemical damages that lead to their premature death.

Preventive measures against oxidative damages are the fore-front areas of gerontologists’ for elderly care. Supplementation of plant flavonoids are emerging as potent therapeutic drugs against free radical mediated diseases.
Studies on medicinal plants reveal that *Solanum trilobatum*, a biomedicine have been used extensively as an indigenous drug in Indian systems of traditional medicine, as an antioxidant and rejuvenator. Hence, the study was taken up to examine the potential role of CST on redox mediated erythrocyte alterations with advancement of animal age.

The aim of present investigation was

1) To explore the role of CST on biochemical and molecular alterations in erythrocytes of aged rats.

2) To evaluate the efficacy of CST on erythrocyte apoptosis during ageing.