Conclusion
Ageing is the accumulation of changes responsible for the sequential alteration that accompany with advancing age and the associated progressive increase in the chance of disease and death. Free radical mediated modification of cellular macromolecules enhances the development of one or better recognized, age-related manifestations in an organism. Mammalian erythrocytes are attractive subjects to explore free radical damages as they are devoid of biosynthetic machinery and were exceedingly liable to oxidative stress. Age-associated increase in reactive oxygen species and decrease in antioxidant defense system altered the erythrocyte structural and functional activities that paved way for premature death of erythrocytes.

The recent usage of natural antioxidants and has been intensified to improve the quality of the life of organism. Solanum trilobatum the naturally occurring antioxidant has wide range of beneficial biological effects. Various functional properties including scavenging of ROS, chain breaking activity and thiol group replenishing property contributed by flavonoids present in Solanum trilobatum ameliorated the age associated erythrocyte membrane alterations and allowed the erythrocytes of aged rats to lead their complete life span.

Overall, the present investigation proved Solanum trilobatum as an efficient antioxidant protecting erythrocytes from age associated oxidative
stress in a way preventing their premature death. CST therapy may thus help to reduce erythrocyte related disorders and thereby improve the well-being of the elderly. Ultimately the study will help in designing elderly care that can lead to lead to enhance the mean life expectancy of an organism.
Schematic diagram illustrating the potential role of chloroform extract of *Solanum trilobatum* on the pathways contributing to membrane damage and apoptosis in erythrocytes of aged rats.