Chapter 3
Aim and Objectives
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Aim

The aim of the present study is to gather knowledge about the antioxidant mechanism(s) of the aqueous bark extract of *Terminalia arjuna* (TA) against mitochondrial oxidative stress generated by copper-ascorbate (CuAs) in an *in vitro* study with a view to understand the mechanism(s) by which it may protect or alleviate oxidative stress involved in various human situations.

Objective(s)

The specific objectives of the present investigations are:

I. Isolation of mitochondria from an enriched source (Human placenta).

II. Induction of oxidative stress in mitochondria *in vitro* by CuAs system and study of the changes brought about in the mitochondrial structure, membrane transporters, pro-oxidant and anti-oxidant defense system as well as mitochondrial DNA.

III. To study the protective effect, if any of the aqueous bark extract of TA against oxidative stress *in vitro* and the underlying mechanisms of such protection.