

Chapter 3

Objective and plan of study

3.1. The objectives of the present study are as follow:

- A. To improve the pharmacokinetic and pharmacodynamic properties of *Ficus religiosa* L. extract by formulating it as solid lipid nanoparticles and functionalized using triphenylphosphonium
- B. To improve the pharmacokinetic and pharmacodynamic properties of lupeol by formulating it as solid lipid nanoparticles and functionalized using triphenylphosphonium
- C. To compare the *in vivo* efficiency of *Ficus religiosa* L. extract loaded solid lipid nanoparticles with lupeol loaded solid lipid nanoparticles.

3.2. The plan of present study include the following:

- A. Standardization of ethanolic extract of *Ficus religiosa* L.
- B. Preparation and optimization of *Ficus religiosa* L. extract loaded solid lipid nanoparticles and to perform *in vitro* and *in vivo* evaluation for the management of oxidative stress induced diabetes.
- C. Preparation of lupeol loaded solid lipid nanoparticles and to perform *in vitro* and *in vivo* evaluation for the management of oxidative stress induced diabetes
- D. To compare the efficiency of *Ficus religiosa* L. extract loaded solid lipid nanoparticles with lupeol loaded solid lipid nanoparticles both *in vitro* and *in vivo*.