Drug discovery is substantially benefited by ethnopharmacological approaches and based upon their traditional uses. A review of literature revealed that all three selected plants (*Emblca officinalis*, *Jasminum humile*, *Punica granatum*) are highly reputed plant, and has been widely employed in traditional medicines but no significant work has been conducted on antioxidant and antidiabetic area of the plant leaves. Hence, the present study was aimed at *In vitro* and *In vivo* evaluation of antimicrobial, antioxidant and antidiabetic activity of selected plants leaves.

On the basis of above literature, the present study was undertaken with the following objectives:

- Preparation of various extracts of the selected plants.
- Evaluation of antimicrobial activity of the various leaves extracts of selected plants using well agar method.
- Estimation of MIC and MBC concentration against various strains of gram positive and gram negative bacteria.
- Evaluation of antioxidant activity by DPPH, hydrogen peroxide and reduction potential methods.
- Investigation of antidiabetic activity of all selected plants in streptozotocin induced diabetes rats.
- Estimation of Blood glucose and plasma insulin level in normal and diabetic animals.
- Estimation of biochemical parameters for evaluation of toxic effect on kidney and liver.
- Estimation of antioxidant enzymes level in liver and kidney.
- Investigation of the possible underlying mechanisms of antidiabetic effect.