WORK PLAN AND METHODOLOGY

- **Literature survey**
  Literature survey will be carried out by referring the books, related journals. Also by using Internet Access various National as well as international journals will be followed for referencing.

- **Selection of drug and excipients**

- **Preformulation study**
  Preformulation testing is the first step in the rational development of dosage forms of a drug. The overall objective of preformulation testing is to generate information useful in developing stable and effective dosage forms.

**Characterization of Drug**

- Appearance
- Melting range determination
- Solubility
- pH
- Appearance of solution
- Loss on drying
- Fourier transforms infrared (FTIR) spectroscopy

**Analytical method development**

- UV Spectroscopy
- Determination of $\lambda_{\text{max}}$
- Preparation of Standard Curve

- **Preparation and characterization of Placebo Niosome formulation**

  In this step various lipids concentration will use in selected method. During formulation lipid concentration and processing variable will be optimized.

  - Organoleptic properties like color, odour, appearance, texture
  - pH
  - Microscopic evaluation
  - Creaming volume
➢ Preparation of drug loaded Niosome

➢ Characterization of drug loaded Niosome

- Drug content
- Particle size analysis
- Transmission Electron Microscopy study
- Zeta potential
- Entrapment efficiency

➢ Preparation of Topical gel

- Preparation of topical gel will be carried out using Carbopol Polymer as viscosity modifier

➢ Evaluation of the Topical gel

- Appearance
- pH
- Spreadability
- Rheological characterization
- Viscosity
- In-vitro drug diffusion study
- Ex-vivo studies
- Deposition study
- Antifungal study

➢ Stability testing of optimized formulation as per ICH guidelines