CHAPTER 4: PLAN OF WORK

- Literature survey and selection of drug substance
- Procurement of drug and excipients for preparation of pellets.

- **Characterization of drug:**
  - IR spectra, melting point using capillary method, DSC etc.
  - Preparation of calibration curve of drug by suitable method of analysis.

- Compatibility studies with the excipients using DSC.
- Preliminary studies on formulation of pellets by solution/suspension layering method using different polymer.
- Design and evaluation of zolpidem tartarate coated pellets formulations.

A. Scheme of design (Preliminary study):

- Fluid bed coating:
  1) Formulation of drug loaded pellets
  2) Formulation of sub-coated pellets
  3) Formulation of eudragit coated pellets.

- Formulation based and process based **optimization study** of modified release formulation of zolpidem tartarate.

B. Physical evaluation and assay of optimized formulation.

1. Micromeritic properties:
   - Bulk density.
   - Tapped density.
   - Angle of repose.
   - Hausner ratio.

2. Scanning electron microscopy of pellets.

3. Floating behavior of pellets.
C. In-vitro drug release studies of pellets.
   ✷ Stability studies as per ICH guidelines.
   ✷ Summary and conclusion
   ✷ Thesis writing and publication of data.