3. **Plan of work**

The formulation development, evaluation and optimization of sustained release tablet.

**Phase I**

- Literature survey
- Selection of problem on the basis of literature survey
- Collection of database regarding the problem, drug and polymer
- Procurement of raw material (like drug, excipients, chemicals and solvents)
- Characterization of drug and polymer by UV, DSC, melting point, etc.
- Study of different physicochemical property like solubility at different pH flow properties percentage purity
- UV spectrophotometric method development and validation

**Phase II**

- HPLC analytical method development and validation
- Preformulation study to develop matrix tablet formulation (compatibility study using IR, DSC)
- Selection of polymer for the matrix tablet formulation by PB design screening
- Optimization of selected polymer concentration
- Formulation and evaluation of the optimized formulation
- Preformulation study to develop liquisolid tablet formulation (compatibility study using IR, DSC)
- Selection of polymer for the liquisolid tablet formulation by using Box Behnken design
- Formulation and evaluation of optimized formulation
- Stability study of optimized formulation
Plan of work

Phase III

➢ Sustained release formulation development by using hot melt granulation technique

➢ Use of QbD for formulation development

➢ Evaluation of prepared formulation

➢ In vitro release characteristic study

➢ Statistical analysis

➢ Stability study

Phase IV

➢ Interpretation of data

➢ Summary and conclusion

➢ Compilation of thesis

➢ Submission of thesis