

### **3.0. AIM AND OBJECTIVE OF THE STUDY**

The aim of the present study is to formulate and evaluate free flowing Efavirenz solid dispersions using Neusilin US2 as anti sticking agent in order to achieve better dissolution characteristics and more bioavailability of the formulation.

Neusilin acts as anti sticking agent which reduces the processing problems like less practical yield and flow problems normally occur in solid dispersion formulations.

### **PLAN OF THE WORK**

- Development of solid dispersions using different excipients like PVP k-30, HPC and HPMC.
- To perform solubility studies using different solvents.
- Drug entrapment studies
- To test all the physico-chemical parameters.
- Microscopic examination
- Drug excipient compatibility studies:
  - FT-IR studies
  - DSC studies.
  - XRD studies
- To study the in-vitro release pattern of Solid dispersions using suitable in-vitro model.
- To select the best formulation based on the above studies.
- To perform in-vivo studies.