WORK PLAN AND METHODOLOGY

1) Procurement of drug, coating polymers and nonpareil seeds.

2) Preformulation studies will be performed on non pariel seeds and drugs.

3) Formulation and development of different batches of sustained release pellets.

4) Drug coating will be done by using conventional coating pan on non pariel seeds using suitable coating agent and drug coated pellets will be finally coated with sustained release agent.

5) Visual and physical characterization of pellets.
Formulated pellets batches will be evaluated for the following parameters,
a) Determination of % moisture content of pellets
   It will performed by using laboratory oven.
b) Size distribution
   It will perform by sieving method in which sieves of different numbers arranged on the sieve shaker.
c) Bulk density
   Bulk density will be measured by using calibrated measuring cylinder.
d) Tapped density
   It will be also counted by using measuring cylinder in which specified numbers of taps were applied to the measuring cylinder.
e) Flow property of pellets
f) Friability
   The Roche friabilator will be used to measure the friability of the pellets.

6) Pharmaceutical evaluation of pellets.
a) % Drug loading
   UV-visible spectrophotometer single beam will be used to measure the absorbance.
b) In-vitro dissolution study
   Six stage dissolution test apparatus will be used to measure the drug release.

7) Statistical analysis of the obtained results and selection of optimized batch.
The obtained drug release readings were inserted to various models of kinetics so as to have idea about the kinetics of release which explain the general nature of drug release pattern from prepared pellets.

8) Advanced studies like FTIR, scanning electron microscopy and DSC will be performed.

   FTIR will be performed to know the drug polymer interactions in optimized formulation.

9) Formulation and evaluation of capsule prepared from the optimized batch of pellets.

   Optimized batches of capsule will be evaluated for general appearance, content of active ingredient, weight variation and content uniformity.

9) Stability study will be carried out on the optimized formulations. After stability study the following study will be carried out on the capsules.

   a) General study consisting of evaluation of appearance, texture, deformity and pinholes if any.

   b) Drug content evaluation

   d) \textit{In vitro} drug release study.