4.0 WORK PLAN & METHODOLOGY

1. Literature survey related to drug profile, excipients profile, plant profile and formulation development.

2. Procurement of pure drug from industry/authorized distributor.

3. Identification and Characterization of pure drug will be carried out by
   a) I.R. Spectroscopy
   b) UV Spectroscopy
   c) Solubility
   d) DSC studies

4. The mango and jack fruit resin gum will be collected from trees by injured trunk site.

5. *Mangifera indica* and *Artocarpus heterophyllus* authentification by authorized personnel.

6. Herbarium of the selected plant part will be prepared and preserved for future reference.

7. The *Mangifera indica* and *Artocarpus heterophyllus* resin gum will be extracted and purified using standard procedure.

8. Physicochemical and phytochemical characterization of the extracted resin gum using standard procedure.


10. Sustaining property of the extracted resin will be explored.

11. Design and formulation of tablets using *Mangifera indica* and *Artocarpus heterophyllus* resin gum.

13. Comparison of *Mangifera indica* and *Artocarpus heterophyllus* resin gum tablets with synthetic polymer tablets.

14. Evaluation of pre-compression parameters such as
   a) Bulk density ($D_b$)
   b) Tapped density ($D_t$)
   c) Angle of repose ($\theta$)

15. Evaluation of post-compression parameters such as
   a) Thickness and diameter
   b) Hardness
   c) Friability (F)
   d) Weight variation
   e) Uniformity of drug content
   f) In-vitro release study
   g) Kinetic Analysis Of In-Vitro Release
   h) FTIR study
   i) Stability Studies in accordance with ICH time points.