Plan of Work
Chapter 4
Plan of Work

Preformulation Studies

- Characterization of pure drug
  - Particle Size
  - Zeta Potential
  - Surface Area
  - Uniformity
- Drug-Drug/Drug-Excipients compatibility
  - IST Analysis
- Analytical Hierarchy Process
  - FT-IR Analysis

Formulation Studies

- Optimization of polymeric nanoparticles (Plackett-Burmann Method)
- Preparation of flavono loaded polymeric nanoparticles (Nanoprecipitation Method)
  - P NPs
  - Qu NPs
  - Ru NPs
  - Si NPs
  - Qu-Ru NPs
  - Qu-Si NPs
Chapter 4
Plan of Work

Evaluation of prepared polymeric nanoparticles

- Characterization of prepared nanoparticles
  - Average particle size
  - Polydispersibility index
  - Surface morphology
  - Zeta Potential
  - Drug content
  - Encapsulation efficacy
  - Drug loading
  - FT-IR analysis
  - In vitro drug release

- Toxicity studies (In vitro & In vivo)
  - Anticancer activity
  - Antioxidant activity

- In vitro studies
  - Anti-inflammatory activity
  - Wound healing activity
  - Antidiabetic activity
  - Hepatoprotective activity
  - Anticancer activity

- In vivo studies
  - Antidiabetic activity
  - Hepatoprotective activity
  - Anti-inflammatory activity
  - Wound healing activity
  - Anticancer activity