PLAN OF WORK:

1. Literature review – Approx. 3-4 months
2. Collection of plant materials and extraction – Approx. 3-4 months
3. Phytochemical analysis of extracts - Approx. 1 – 2 months
4. Pharmacological screening of extracts - Approx. 2 – 3 months
5. Formulations development and evaluation – Approx. 2-3 months
6. Pharmacological screening of developed formulations – Approx. 3-4 months
4. PLAN AND METHODOLOGY:
1. Collection and authenticity of plant material.

2. Pharmacognostical study of plant material
   - Transverse section of the fruit
   - Powder characterization by microscopy

3. Physiochemical parameters Moisture content
   - Determination of ash
     - Total ash
     - Acid insoluble ash
     - Water soluble ash
   - Determination of extractive matter
     - Water soluble extractive value
     - Alcohol soluble extractive value
   - Preliminary phytochemical investigation

3. Preparation of extracts form the plant materials
   - Successive hot continuous extraction (soxhlet)

4. Qualitative Chemical Investigation of Extracts

5. Chromatographic Study
   - Thin layer chromatography

6. Pharmacological Screening
   - Animal Selection
   - Acute toxicity studies
   - Pharmacological screening of extracts
     - Carrageenan induced paw oedema method for anti-inflammatory activity
     - Tail immersion method for analgesic activity
7. Development and evaluation of conventional Polyherbal semisolid Formulations
    - Determination of the pH
    - Determination of spreadability
    - Determination of Viscosity
    - In vitro diffusion study
    - Primary skin irritancy studies

8. Development and evaluation of transdermal patch
    - Thickness of the patch
    - Weight uniformity
    - Folding endurance
    - Percentage Moisture content
    - Percentage Moisture uptake
    - Skin Irritation study
    - Tensile strength
    - In-vitro skin permeation studies

9. Stability study of optimized formulations as per ICH guidelines

10. Anti-inflammatory activity of optimized polyherbal conventional formulations and optimized transdermal patch