WORK PLAN AND METHODOLOGY

1. Extensive literature survey
2. Collection and authentication of crude drugs
3. Extraction
4. Preliminary Pharmacological evaluation of extracts
   a. Wound healing activity
5. Selection of plant/part with most significant biological activity
6. Pharmacognostical evaluation of the plant/part
   i. Macroscopy
   ii. Microscopy
   iii. Determination of Physicochemical constants
   iv. Extractive value
   v. Crude fiber content
   vi. Moisture content
   vii. Foaming index
   viii. Volatile oil content
   ix. Fluorescence behavior
   x. Swelling index
7. Chemoprofiling
   i. Qualitative chemical examination of extract
   ii. Fractionation
8. Formulation and development of creams/ointment
9. Detailed Pharmacological study
   i. In-vitro activity
      ● Anti bacterial activity
      ● Anti oxidant activity
   ii. In-vivo studies
      ● Acute toxicity study
      ● Wound healing activity
10. Histopathological & Biochemical studies
METHODOLOGY

Extensive literature survey:
The literatures have been reviewed through various sources like:

- National and international journals.
- Published material in various official standard books.
- Various scientific websites

Collection and authentication of crude drugs
The plant material will be collected from sonepat local area and authenticated by the renowned botanist.

Extraction of crude drug
The dried coarse powdered plant material will be subjected to successive solvent extraction using various solvents of increasing polarity in Soxhlet extractor.

Preliminary Pharmacological evaluation of extracts
Wound healing potential of extracts will be evaluated by excision method using albino rats/mice.

Selection of plant/part with most significant biological activity
The plant having most significant biological activity will be selected for further studies.

Pharmacognostic study of the plant/part having significant activity:
Various pharmacognostic parameters like macroscopy (colour, odour, taste and texture), microscopy and physical parameter (extractive value as per I.P., ash value, total ash, acid insoluble ash, water soluble ash, moisture content, volatile oil content, crude fiber content, foaming index, swelling index and floresence) will be carried out as per Pharmacopoeia.

Chemoprofiling of extract:
Extract will be screened for presence of various phytoconstituents like alkaloids, carbohydrates, glycoside, flavonoids, saponins, steroids, free amino acid and others using standard chemical tests. The extract will be fractionated using chromatographic techniques.
Formulation and development of creams/Ointments:
Cream will be prepared by selecting the base and incorporation of extracts in the base. The formulation will be studied for its stability and various other parameters.

Detailed Pharmacological study:
In-vitro Antimicrobial & Antioxidant activity will be carried out by cup-well method and DPPH method respectively.
In-vivo acute toxicity study and Wound healing activity of extract will be evaluated using different models of wound healing in albino rats/mice. Histopathological and Biochemical study will also be carried out.