5.0 WORK PLAN AND METHODOLOGY:

1. Literature survey.
   ✓ It will be done through official books, Standard journals and E-Journals

2. Cultivation and collection of plant leaves.
   ✓ It will be collected from standard government approved research center with authentication.

3. Extraction of selected part of the plants and isolation of chemical constituents.
   ✓ It will be done by different solvents from polar to non-polar.

4. Characterization of isolated chemical constituents by various modern analytical techniques.
   ✓ It will be done by standard sophisticated instruments like Mass spectroscopy, IR, UV etc.

5. Design of various oral herbal formulations of anti-asthmatic plant extract.
   ✓ Tablets and Oral liquid dosage forms.
   ✓ Application of experimental design.

6. Development of various oral herbal formulations of anti-asthmatic plant extract like...
   ✓ Tablet (wet granulation method or direct compression method)
   ✓ Oral liquid dosage forms (Syrup)

7. Evaluation of developed formulation by various in-process and finished product test.

8. Evaluation of Powder Blend (Direct compression)
   ✓ Bulk density
   ✓ Tapped density
   ✓ Carr’s index
   ✓ Hausner’s ratio
   ✓ Angle of repose

9. Evaluation of Tablets (wet granulation method, direct compression method)
   ✓ Disintegration test
   ✓ Dissolution test
   ✓ Hardness test
   ✓ Friability test
   ✓ Weight variation test
10. Evaluation of Syrup
   ✓ Physical parameters
      - Specific gravity
      - PH
      - Refractive index
      - Colour
      - Odour

11. Stability testing of syrup
    - Turbidity/Homogeniety (24, 48, 72 hrs.) (4, R.T, 47 C)
    - Colour/Odour
    - HPTLC fingerprinting

12. Development of TLC and HPTLC fingerprinting for Anti-asthmatic herbal extract and its comparison with formulated dosage form.

13. Drug excipient compatibility studies. (FTIR)

14. Study of effect of various extracts and formulated products of selected plants and isolated chemical constituents on,
   ✓ Acute toxicity in mice.
   ✓ Acetylcholine and Histamine induced Bronchoconstriction in guinea pigs.
   ✓ Isolated Guinea pig ileum.