

6. PLAN OF WORK

1. Selection of kudineer formulation based on survey among Siddha physicians and from available literature.
2. Collection, Herbarium preparation and authentication of raw materials taxonomically.
3. Detailed Pharmacognostical methods of standardization using modern techniques for each plants and the formulation such as
 - a. Exo-morphology,
 - b. Histo-morphology,
 - c. Power microscopy,
 - d. Quantitative physico-chemical analysis,
4. Toxicological/safety profile evaluation by
 - a. Determination of heavy metals,
 - b. Determination of Pesticides residues and
 - c. Determination of Microbial contamination as per WHO specifications.
5. Advanced phytochemical methods of standardization using modern techniques like
 - a. Fluorescence analysis,
 - b. Qualitative phytochemical screening and
 - c. Quantitative phytochemical estimation.
6. Phyto-analytical evaluation including
 - a. TLC studies
 - b. HPTLC finger printing and

- c. GC-MS studies.
7. Modern Pharmacological screening of kudineer formulation by following method to underlying the mechanism of action.
 - a. Acute toxicity testing,
 - b. *In-vivo* anti-diabetic activity in normal rats.
 - c. *In-vivo* anti-diabetic activity in Streptozotocin induced type-II diabetes in Rats
 - d. *In-vitro* anti-diabetic activity by α -glucosidase enzyme inhibitory assay
 - e. *In-vitro* anti-diabetic activity by α -amylase enzyme inhibitory assay
 - f. *In-vitro* anti-oxidant activity by DPPH radical scavenging assay
 - g. *In-vitro* anti-oxidant activity by Nitric acid free radical inhibition assay
8. Phyto-pharmaceutical studies for improving the traditional kudineer formulation into modern solid dosage formulation. It includes
 - a. Pre-formulation studies
 - b. Preparation of tablets and
 - c. Preparation of capsules
9. Finished products evaluation studies such as
 - a. Quality control of tablets including assay
 - b. Quality control of capsules including assay
 - c. Accelerated stability studies.
10. Computation of results and to derive conclusion