Proposed Plan of work

The hepatoprotective activity of selected traditional medicinal plants along with its phytochemical investigation will be studied, and development and evaluation of a standardized polyherbal formulation using selected medicinal plants for acute as well as chronic liver damage.

The hepatoprotective activity of selected traditional medicinal plants will be studied

- Effect of the prepared extracts of selected medicinal plants by the assay of liver function biochemical parameters (total bilirubin, serum protein, alanine aminotransaminase, aspartate aminotransaminase, and alkaline phosphatase activities and histopathological effects on liver).
- Isolate the active constituent responsible for the hepatoprotective activity and prepare its potent.

Development and evaluation of the polyherbal formulation.

- Development and standardisation of polyherbal formulation using selected medicinal plant’s isolated active potent.
- Evaluation of the polyherbal formulation for biochemical parameters and histopathological studies.

Literature Survey:

The literature for the proposed research work would be obtained from the drug information centers, standard reference books, research articles and research journals, websites like Pubmed, Science direct, Medline, physicochemical databases, Internet and library of Smt. B.N.B. Swaminarayan Pharmacy College.

Materials and Methods:

For present study three traditional medicinal herbs will be selected and extracts be prepared using different solvents. The active constituents responsible for the therapeutic activity would be isolated. The acute toxicity study will be done on group of animal as per CPCSEA guideline and depend on a result of toxicity study therapeutic dose will be
calculated for different experimental animal models and hepatoprotective activity will be evaluated.

On the basis of above study an optimized polyherbal formulation would be prepared and standardised which would be evaluated for its hepatoprotective activity.

**Proposed experimental models for hepatoprotective activity:**

- Hepatoprotective effect against ethanol induced hepatotoxicity (Sadhana 2007 and Pornpen 2007)
- Hepatoprotective effect against CCl4 induced hepatotoxicity (Mehta 2006 a)
- Hepatoprotective effect against D-Galactosamine induced hepatotoxicity (Mehta 2006 b)
- For the present study animals required will be procured from Smt. B.N.B. Swaminarayan Pharmacy College, Salvav, Gujarat. (CPCSEA reg no. 1276/a/09/CPCSEA)

**Animal Required:**

1. Species: Albino Wister Rat
2. Weight/Size: 140-225gm
3. Gender: Either sex

**Statistical analysis**

The statistical significance will assess using one-way analysis of variance (ANOVA) test. The values will be express as mean ± S.E.M and level of significance will be calculated.