CHAPTER-II- RATIONALE AND OBJECTIVE OF WORK

2.1 RATIONALE OF THE WORK

Inspite of great strides made in the field of medicine through the use of synthetic drugs, many obscure diseases still remain untreated\(^1\). Furthermore, most of these drugs are expensive and are always accompanied with side effects in varying degrees. There appears a good scope for medicinal plants to offer an effective therapy with minimizing undue effects.

It is evident from the literature survey that *Vigna* genus plants are traditionally used for a variety ailments\(^2\) including diseases like weakness, indigestion, cough, mouth infections, polyneuritis, dyspepsia, congestive cardiac failure, diabetes\(^3\), hepatitis\(^4\).

According to folklore usages of *Vigna* genus plants *Vigna mung* Linn, *Vigna radiate* Linn, *Vigna unguiculata* Linn were selected for the study.

2.2 OBJECTIVE OF WORK

The purpose of this research work is to investigate Pharmacognostical, Pharmacological and Antioxidant studies on three selected *Vigna* genus plants in a scientific manner.
2.3 PLAN OF WORK

1. Literature review of plants
2. Collection of plant materials
3. A general study about the plants
4. Pharmacognostic characterization of the plants
   a. Microscopical characterization
   b. Macroscopical characterization
   c. Powder microscopic identification
   d. Physicochemical evaluation
   e. Fluorescent evaluation of powder
5. Preparation of the extracts
6. Qualitative chemical evaluation of the plant extracts
7. Biological studies
   a. Acute toxicity studies
   b. \textit{In vivo} screening of selected plant extracts for hepatoprotective activity (carbon tetrachloride induced liver toxicity in rat model).
   c. \textit{In vivo} screening of selected plant extracts for Anti hyperlipidemic activity (cholesterol induced diet in rat model).
   d. \textit{In vitro} screening of selected plant extracts for antioxidant activity against (DPPH radical, Nitric oxide radical, ABTS$^+$ radical models)
Aim & Objective of work

2.4 REFERENCES


