2. AIM AND OBJECTIVES

*Clitoria ternatea* belongs to the family of Fabaceae. It is an ornamental perennial climber with conspicuous blue or white flowers. It has got several medicinal properties including promoting memory and intelligence and curing neurological disorders. The roots are bitter, refrigerant, and laxative, diuretic anthelmintic and tonic and useful in dementia, hemicranias, leprosy, inflammation, asthma, pulmonary tuberculosis and hepatopathy.

2.1 The Present Study is aimed to Investigate:

- To optimize plant growth regulators for shoot and root induction.
- Formulation of suitable pretreatments to enhance germination of *Clitoria ternatea* seeds as well as to find optimal germination temperature.
- Screening of leaves extracts of both plants (Blue flowered and White flowered plants) against few pathogens, viz, *Bacillus subtilis, Escherichia coli, Klebsiella pneumoniae* and *Proteus vulgaris*.
- Genetic conformity test by using isoenzyme analysis.
- Analysis and Identification of different Bioactive compounds.
  - HPTLC analysis of plant extract for Alkaloid profile
  - HPTLC analysis of plant extract for Flavonoid profile
  - HPTLC analysis of plant extract for Terpenoid profile
  - Estimation of Total sugars, Protein, Carbohydrate and Total Ash
- Identification of the major phytochemical constituents present in leaf extract of *Clitoria ternatea* by GC-MS Analysis.
- Standardization of protocol for the isolation of good quality genomic DNA.
- DNA was quantified by using “Hoefer’s DyNA Quant” and the quality was verified.
- Optimization of PCR amplification conditions.
- Estimation of genetic variance between four different samples of *Clitoria ternatea* (Blue flowered and White flowered plants) using RAPD Markers.