CHAPTER 2

RATIONALE AND OBJECTIVE
Keeping in view the worldwide prevalence of psoriasis (3% population) (Gelfand et al., 2004) as an incurable autoimmune disorder and a great scope of herbal/botanical products in psoriasis management, we propose to carry out the investigations on below mentioned Ayurvedic antipsoriatic medicines for their analysis and quality control.

Ayurvedic formulations selected

1) Nimbatiktam (Oral)
2) Lajjalu Keram (Topical)
3) 777 oil (Topical)

The main objectives of these studies are

- **Standardization of herbal formulations used in the treatment of psoriasis**
  - Physicochemical standardization of Nimbatiktam, Lajjalu Keram and 777 oil
  - Phytochemical screening of Nimbatiktam, Lajjalu Keram and 777 oil
  - Chemical toxicity evaluation of Nimbatiktam, Lajjalu Keram and 777 oil
  - Estimation of total phenolic and total flavonoidal contents in Nimbatiktam, Lajjalu Keram and 777 oil by Spectrophotometric Method
  - Estimation of total fatty acid content in Lajjalu Keram and 777 oil by GC-FID

- **Development of analytical standards for herbal formulations by using HPTLC, HPLC and UPLC-MS**
  - Development of HPTLC method for quantification of Nimbatiktam
  - Development of HPLC method for quantification of mimosine present in Lajjalu Keram
  - Development of HPLC method for quantification of rutin present in 777 oil
  - Development of UPLC/MS method for pharmacokinetic studies of Nimbatiktam (Oral Formulation) in rat plasma
Objectives 2012

- **Isolations and characterization of novel phyto-constituents present in oral herbal formulations**
  - Isolation and characterization of nimbin and 1,2-dioleyl glyceryl phosphate by column chromatography
- **Pharmacological and toxicological studies on topical and oral anti psoriatic herbal formulations**
  - Long term oral toxicity studies of Nimbatiktam in wistar rats
  - Immunomodulatory activity of Nimbatiktam in wistar rats
  - Dermal toxicity studies of Lajjalu Keram and 777 oil in wistar rats
  - Anti inflammatory activity of Lajjalu Keram and 777 oil in wistar rats
- **Evaluation of shelf life of anti psoriatic herbal formulations**