PREFACE

The present research work pertains to the study entitled "ECOLOGICAL AND PHYTOCHEMICAL STUDIES OF CERTAIN ETHNOMEDICINAL PLANTS OF THE BARMER DISTRICT" which has been divided into twelve chapters. The introduction and review of literature of all the chapters have been given in the beginning whereas summary and highlights are in the end. References are given in the last, tables and graphs are given at the end of each chapter.

Climatological studies have been carried out at regular intervals. Temperature, humidity and rainfall recorded monthly from study area.

Mechanical, Physical and Chemical analysis of soil samples collected from three different sites of Barmer district have been carried out.

Field survey of study area was conducted at regular intervals for collection of plants and studies on ethnomedicinal aspects.

Taxonomical, morphological, phytochemical and ethnomedicinal aspects of all selected plant species have been studied.

Ethnomedicinal aspects of fifteen medicinal plant species of great medicinal value have been studied.

Three plant species have been selected for phytochemical aspects:

1. Clerodendrum phlomidis Linn.

2. Lycium barbarum Linn.

3. Sida cordifolia Linn.
Fresh, healthy and mature plants were collected from three different sites of Barmer district:

1. Chohatan

2. Pachpadra

3. Sindari

The evaluation of various nutritive contents of roots, shoots and fruits of all the selected plant species collected from three different sites of Barmer district have been carried out.

Mineral contents have been quantitatively estimated from different plant parts of all the three selected plant species, collected from three different sites of study area.

Qualitative and quantitative estimation of amino acids from various plant parts of all the selected plant species collected from different sites of study area has been carried out.

Various plant parts of selected three plant species were collected from three different sites have been analysed for their free endogenous ascorbic acid contents.

The leaves of selected plant species have been screened for their antimicrobial activity against *Staphylococcus aureus* (Gram positive), *Escherichia coli* (Gram negative) and a fungal pathogen, *Candida albicans*.

Antimicrobial substances (flavonoids) have been isolated and identified
from leaves of selected plant species.

Techniques applied in present study:

(A) Herbarium Techniques

(B) Chromatographic Analysis
   I - Paper Chromatography
   II - Thin Layer Chromatography (TLC)
   III - Preparative Thin Layer Chromatography

(C) Spectrophotometric Analysis

(D) Titration Method

Corning glasswares were used in experimental work. The ‘P’ grade chemicals ‘Analar’ of British Drug House (BDH) or E-merck were used in present study.

Double glass distilled water was used in the experimental work.