

MEDICINAL PLANTS IN CHANGING ENVIRONMENT



Edited by
Altaf Ahmad
Tariq O. Siddiqi
Muhammad Iqbal

**S. AHMAD – M. SINGH – E.T. TAMBOLI –
M. GARG – R. PARVEEN**

Phytochemistry and pharmacology of some medicinal plants

India is endowed with a rich wealth of medicinal plants. These plants have made a good contribution to the development of ancient Indian materia medica. One of the earliest treatises on Indian medicine, the Charak Samhita, records the use of over 340 drugs of vegetable origin. Most of these continue to be gathered from wild plant populations. During the past seven or eight decades, there has been a rapid extension of the allopathic system of medical treatment in India. It generated a commercial demand for pharmacopoeial drugs and products in the country. During the last two decades, the pharmaceutical industry has made massive investments on pharmacological, clinical and chemical researches all over the world. This chapter provides an overview of various properties of three important medicinal plants (*Acorus calamus*, *Cassia sophera* and *Picrorrhiza kurroa*) and highlight their uses, especially in pharmacology.

1. PICRORRHIZA KURROA ROYLE EX BENTH.

Picrorrhiza kurroa Royle ex Benth., commonly known as Kutki in Hindi and as Hellebore in English (Anonymous, 1992), belongs to the family Scrophulariaceae. This important perennial herb, more or less hairy with long creeping rootstock/ stoloniferous rhizomes 30 cm long and 0.3-1.0 cm and having bitter taste usually grows in moist, sandy soil (Kaul and Kaul, 1996; Anonymous, 2001) with short life cycle of 4-5 months and starts emerging with melting of snow in summer (Kaul and Kaul, 1996). Dried rhizomes are used for medicinal purposes and propagated by vegetative method (Agarawal et al., 2005). The drug is native to western Himalayan region and grows in India at an altitude of 3000-5000 m in Himalayas from Kashmir to Sikkim (Bhattacharjee, 1998; Rangari, 2007).

The maximum amount of bioactive ingredients can be obtained by harvesting the drug in the month of September when upon maturity, they acquire grayish-dark brown color (Rangari, 2007). The plant has been traditionally used for the treatment of liver disorders, epilepsy, paralysis, and as emetic, abortifacient, antidote for dog bites and also externally for skin