

BOTANICAL STUDIES AND HOMOEOPATHIC MEDICINE-AN ASSESSMENT OF THEIR INTEGRATION

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Although Homoeopathic System of Medicine emerged in Europe, it has far greater potential and acceptance in India. Most of the homoeopathic drugs are of plant origin. However, of about 11,000 drugs based on plants, barely 300 are reported to be of Indian origin. Endowed with 47,000 species of plants, including 3,000 species of medicinal plants, there is considerable scope for botanical resource development for homoeopathic drugs in India.

The credibility of Homoeopathy depends no less on the quality of medicines available over the counter but also on the genuine, authentic plant material of consistent characteristics required for preparation of standard drugs in accordance with prescribed procedures and proportions. Bark, twigs, roots, leaves, flowers, fruits and seeds are used as raw material for preparation of the mother tincture. Verification of antecedents of the plant species and part(s) used should be accorded utmost importance. Macro and microscopic characters such as type of stomata, trichome complement, raphides, sclereids and vascular tissues should be investigated to establish the authenticity of the collections/supplies and to detect possible adulteration or contamination. Moisture content, drying methods and storage conditions can significantly affect the efficacy of the raw plant material.

Recent experimental studies indicate that there exists considerable genetic diversity within a plant species with respect to its active constituents. The concentration of secondary compounds in plants is also affected by age, climate, season and stress factors such as pests and pathogens, extremes of temperature, moisture and light. Fresh analysis is necessary when a plant material is collected from a new locality or place of cultivation. Through experimentation, populations and variants can be recognized and conditions of growth standardised for optimal homoeopathic properties of key medicinal plants.

Homoeopathic System of Medicine is least demanding on plant resources despite its dependence on them. Unlike other systems, it requires small quantities of material which can be used to treat a large number of people. Yet, the

homoeopathic practitioners and manufacturers too will have to bear the brunt of the consequences of the habitat destruction and commercial exploitation to meet the demands of other systems of medicine. To add to this, there is a growing preference and demand for plants as resource base for drug manufacture. This has created unprecedented pressure on wild populations of medicinal plants, leading to threat of extinction and loss of genetic diversity of important plant species. It has now become necessary to plan strategies for conservation of threatened medicinal plants in their native ecosystems (*in situ*) or in botanical gardens and gene banks (*ex situ*). Life history studies including phenology, breeding systems, pollination, fruit and seed set, dispersal mechanisms and seed biology can provide clues for conservation and utilization of such plants. Homoeopaths have to highlight their plant resource needs, so that these too are kept in mind while framing the strategies for conservation of Indian plant diversity. Tribal and village communities in India use a large number of plants for medicinal purposes. Value of ethno-botanical information is now being realized. Manufacturers of homoeopathic drugs must utilize this information for realizing the full potential of our natural wealth without damaging it.

Many medicinal plants (e.g., *Ephedra gerardiana*, *Aconitum deinorrhizum*, *Rauwolfia serpentina*) thrive in specialized habitats and are sensitive to anthropogenic factors. Pollution has become a serious hazard to many medicinal plants. Not only is plant growth and development affected, and distribution restricted, the plants accumulate pollutants (heavy metals, pesticides, etc.) and their physiology is altered. The production of active principles is jeopardized. It is therefore, important to grow medicinal plants in pollution free environment.

India is considered a hot spot of medicinal plant diversity. We are rich in medicinal plants, but most of the homoeopathic medicines have been proved in the West. It would be a rewarding exercise if we can dig deeper into our long healing traditions and rich reservoir of medicinal plants to unearth new drugs that can cure the ills of mankind without disturbing the ecological equilibrium of the planet.