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## Therapeutic important medicinal plants and way forward

**Neeraj Tandon**

Indian Council of Medical Research, India

Over the last few decades alternative medicines, which are essentially plant based, have experienced a remarkable and steady increase all over the world. India with its rich biodiversity and tradition of use of herbal drugs in health care, holds tremendous opportunity for growth in a multibillion global trade, particularly in the herbal area, which has vast potential for developing multiple products for nutrition and prevention and cure of diseases. Knowledge based value addition would mean exporting value added products rather than merely the raw material, besides leading to wider acceptance of Indian plant based drugs. While herbal medicine can potentially contribute to the advancement of healthcare, many major challenges must be overcome prior to the successful integration of herbal remedies into mainstream medicine. It is a time to revisit plants with an objective of developing multicomponent botanical therapies (MCBT) with the full understanding of Systems Biology in order to develop safer and efficacious drugs. Medicinal and aromatic plants (MAPs) act as a well spring of traditional medicines, herbal drugs, nutraceuticals, new chemical entities as drugs and drug intermediates, sweeteners, flavour, fragrances, insecticides, natural cosmetics and a number of health care related products. No doubt, the MAPs have substantially and significantly contributed to the drug armamentarium of the modern Allopathic system of medicine and towards traditional medicines. Bioresource rich nations will be exploring untapped bioresources to meet the demands. India is blessed with rich biodiversity of bioresources and tremendous traditional knowledge base for healthcare products. At present nearly four billion people of the world use plant derived healthcare products. Each plant part used in our traditional systems of medicine (Ayurveda, Unani & Siddha) is a complex mixture of many primary and secondary metabolites. Developing MCBT will provide much safer and efficacious drugs. Plant drugs sound an answer for prioritized diseases such as protozoal diseases (trypanosomiasis, malaria, filaria, leishmania, amoebiasis), viral diseases (Dengue, herpes, Aids, bird flu), metabolic disorders (inflammation, arthritis, diabetes, hypercholesterolaemia), diseases of less known etiology (cancer, muscular dystrophy, Parkinson's diseases), cardiovascular and central nervous system disorders and self-inflicted diseases (obesity, depression), HIV/AIDS etc. Standardisation of raw materials has been one of the major impediments in wider acceptance of herbal drugs. In an effort to address this issue monographs on Quality Standards of important medicinal plants used by the industry are being developed by Indian Council of Medical Research on the basis of WHO guidelines for widely used raw materials involving laboratories of reputed institutions across the country to generate requisite data as per prescribed format. The monographs translate practically generated knowledge into direct utility for the Indian Drug Industry engaged in production of plant based drugs and for the Pharmacopoeial Commissions in India & abroad for developing official quality standards on plant based drugs. Special emphasis has been laid on chromatographic fingerprinting of the extracts and assay using phytochemical reference standards as one of the parameters of identity, purity and quality under this programme. The endeavour has yielded very fruitful results evidenced by the publication of 14 volumes of Quality Standards of Indian Medicinal Plants containing 484 plants. The work continues to progress on remaining potential plants required by the industry. Another programme has been initiated on the isolation of Phytochemical Reference Standards (PRS), a key factor in standardization from selected medicinal plants. The procedure of isolation have been optimised and characterized both on the basis of chromatography and spectroscopy for the benefit of these interested in standardizing drugs. Ninety PRS have been isolated and monographs have been prepared and published as three volumes of Phytochemical Reference Standards of Selected Indian Medicinal plants. The samples of these marker compounds are stored as a repository. The work is continuing on other important PRS. Quality standards for the medicinal plants used in India are absolutely necessary for the drugs and formulations produced from them to be of adequate quality, safety and efficacy for their wider acceptance.

### Biography

Neeraj Tandon was a scientist and head in Indian council of medical research, India

tanneeraj@gmail.com