Controversial ayurvedic herbs

"Sandigdha dravays" is a term used for medicinal plants having controversial botanicals as sources. The Ayurvedic and Sanskrit literature describes a herb with names, which do not precisely indicate the botanical source but many a times attribute to therapeutic utility of the plant. India is a country having a variety of languages and population dependent on different tribal and folklore medicine. The variation in the language sometimes is responsible for confusion in the nomenclature of different plants having similar name. Moreover, the descriptions of a plant in the ancient literature are found in verses having ample use of synonyms. These synonyms have caused controversy in the identification of plants and hence the correct source sometime is misleading with a fictious plant. It has become an important task to generate parameters of identification as well as differentiation among different plant sources having a similar name. Since herbal products are prepared using the extracts of plants known for a particular activity, the controversial source sometimes leads to inefficacious preparation.[1,2]

Ambiguity in Ayurveda is reflected in the interpretation of names and description of drugs found in the books, such as *Charaka Samhita* and *Sushruta Samhita*, etc. Ayurvedic treatises were also hand written before the establishment of British rule, like the other books. Western scientists of the nineteenth century were divided in respect of the utility of ayurveda; some scholars were of the opinion that this old system of medicine is based on empiricism rather than science and no benefit can be derived from it, whereas there were a handful of dedicated workers who believed that ayurveda was permeated with the scientific spirit as it is built by the rationale of observation and experiment and of induction and deduction. Due to lack of scientific names in the original texts, under one name, different plants are known in different parts of the country as per the description, which makes the drug controversial.[3]

Access this article online	
Quick Response Code:	Website: www.japtr.org
	DOI: 10.4103/2231-4040.82948

Plant-based medicines form a very important component of total medicines available for treating various human and veterinary diseases. The increased demand and reduced availability has reportedly led to even adulterations of many plant-based formulations. Hence, a need has been felt to study the market and other associated processes, such as market demand, supply, harvesting, processing, and end use, etc. This requires coordinated and focused research on these aspects of medicinal value of all the plants and their actual uses so that the medicinal value of all the plants can be scientifically verified along with the documentation of traditional knowledge.[4]

Groups of Drugs Used in Ayurveda

In *Ayurveda*, medicinal plants have been classified according to pharmacological action. *Charaka* has described drugs in groups for alleviating diseases. *Arshoghana* contains 10 drugs having beneficial effect in hemorrhoids; the name is derived from Sanskrit words ARSH (Blood loss) and GHNA (killer or remover). Another method adopted by *Charaka* is based on collection of three or more plants having identical properties in one group signifies as *Gana* (means group).[5] Based on the physical forms of the different botanical sources, drugs are grouped in different texts of Ayurveda and are classified as follows:

Brahatpanchmula: It is a combination of roots of five medicinal plants, including Bilva (*Aegle marmelos*), Agnimantha (*Premna integrifolia*), Shoynaka (*Oroxylum indicum*), Gambhari (*Gmelina arborea*), and Patla (*Sterospermum suaveolens*).

Dashmula: It is a combination of roots of ten medicinal plants, including Bilva (*Aegle marmelos*), Agnimantha (*Premna integrifolia*), Shoynaka (*Oroxylum indicum*), Gambhari (*Gmelina arborea*), Patla (*Sterospermum suaveolens*), Shalaparni (*Desmodium gangeticum*), Prishnaparni (*Uraria picta*), Brahati (*Solanum indicum*), Kantkari (*Solanum xanthocarpum*), and Gokshura (*Tribulus terrestris*).

Triphala: It is a combination of fruits of three medicinal plants, including Haritaki (*Terminalia chebula*), Vibithaka (*Terminalia belerica*), and Amalaki (*Emblica officinalis*).

Since the plant drugs are collected generally from wild

Table 1: List of some controversial drugs in Indian medicine[6-8]

Daruharidra
Berberis aristata (Berberidaceae), *Coscinium fenestratum* (Menispermaceae)
Brahmi
Bacopa moniera (Scrophulariaceae), *Hydrocotyle asiatica* (Umbellifereae), *Moniera cuneate*
Amaravela
Cascutta reflexa (Convolvulaceae), *Cassyatha filiformis* (Lauraceae)
Punarnava
Trianthema partulacastrum (Ficoidaceae), *Boerhavia diffusa* (Nyctaginaceae)
Pasanabheda
Saxifraga ligulata (Saxifragaceae), *Aerva lanata Juss.* (Amarantaceae) *Aerva javanica Juss.* (Amarantaceae), *Ammania baccifera Linn.* (Lythraceae) *Bergenia ligulata* (Saxifragaceae), *Bryophyllum calcynum* (Crassulaceae) *Coleus aromaticus* (Labiateae), *Rotula aquatica* (Boraginaceae) *Bridelia montana* (Euphorbiaceae), *Homania riparia* (Euphorbiaceae) *Ocimum basillicum* (Labiatae)
Jivanti
Leptadenia reliculata (Asclepiadaceae), *Desmotrichun fimbritum* (Orchiaceae), *Cimicifuga foetida* (Ranunculaceae)
Sankhapushpi
Convolvulus pluricaulis (Convulvulaceae), *Evolvulus alsinoides* (Convulvulaceae), *Canscora decussata* (Gentianaceae), *Clitorea ternatea* (Papilonaceae).
Rasna
Vanda tessellate (Orchidaceae), *Alpinia galanga* (Scitaminaceae), *Pluchea lanceolata* (Compositae) *Viscum album* (Loranthaceae), *Withania coagulens* (Solanaceae), *Aristolochia indica* (Aristolochiaceae) *Inula racemosa* (Compositae), *Rauwolfia serpentina* (Apocynaceae), *Lochnera rosea* (Apocynaceae) *Enicostema littorale* (Gentianaceae)
Nagakesaram
Mesua ferrea (Guttifereae), *Ochrocarpus longifolius* (Guttifereae), *Dillenia pentagyna* (Dilleniaceae)
Brahma-dandi
Argemone mexicana (Papaveraceae), *Tricholepis glaberrima* (Compositae), *Echinops echinatus* (Echinaceae)
Ashoka
Polyalthia longifolia (Anonaceae), *Saraca indica* (Caesalpiniaceae), *Shorea robusta* (Dipterocarpaceae)
Twak
Cinnamomum tamala (Lauraceae), Cinnamomum zeylanicum (Lauraceae), Cinnamomum cassia (Lauraceae)

sources sometimes by skilled but many a times by unskilled collectors and due to improper identification of correct species of plant/organ and collection methods lead to a state of confusion, and thus a controversy is cropped up [Table 1].

There is a huge surge in Ayurvedic plants and world over it has become a subject of intensive research for various aspects. There have also been substantial efforts to standardize the Ayurvedic crude drugs as well as finished Ayurvedic medicines. However, these initiatives would imperatively need establishing correct identity of the plant drug. The long history of safe usage of Ayurvedic medicines can be extrapolated only when the botanical identity of the plant going into those medicines is established and standardized. Hence proper nomenclature of all crude drugs and establishing their exact botanical origin is a must.

Current practice of Ayurvedic physician and Industry is to use one of the several alternative herbs that are considered equivalent to Ayurvedic plant drugs. Some amount of legal sanction exists for use of plants as one can use only plant drugs mentioned in one of the 56 authorized books by Drugs and Cosmetic Act, 1940 of India. Hence even though, one would use the alternative herbs, one would restrict to only those which are mentioned in the Ayurvedic authorized text books. However, for global acceptance as well as providing safe and effective Ayurvedic products, it would be required to identify which of the particular botanical entities is to be used to have regulatory compliance. Ayurvedic scholars, plant taxonomists, and regulators need to work together on this.

Prof. V. K. Dixit

Department of Pharmaceutical Sciences,
Dr. Hari Singh Gour Vishwavidyalaya, Sagar, Madhya Pradesh, India
E-mail: dixitvk2011@rediffmail.com

J. Adv. Pharm. Tech. Res.

REFERENCES

1. Sethiya NK, Nahata A, Mishra SH, Dixit VK. An Update on Shankhpushpi, a cognition boosting Ayurvedic medicine. Zhong

Xi Yi Jie He Xue Bao 2009;7:1001-22.
2. Sethiya NK, Trivedi A, Patel MB, Mishra SH. Comparative pharmacognostical investigation on four ethanobotanicals traditionally used as Shankhpushpi in India. J Adv Pharm Tech Res 2010; 1:388-95.
3. Wilson. On the medical and surgical sciences of the Hindua, Oriental Magazine, 1823, Works 3, 269-76, 380-93, London:; 1864.
4. Hashmi S, Ghouse AK. Analysis of Jadwar, a controversial Herbal Drug. Hamdard Med 1994;37:79-84.
5. Singh A. Contribution of dravyaguna to herbal materia medica. Ethnobotanical Leaflets. 2008;12:599-602.
6. Vaidya BL. Some controversial drugs in Indian medicine. Chaukhambha Orientalia. Varanasi: 1982.
7. Brain KR, Turner TD. In the practical evaluation of phytopharmaceuticals. Wright-Scientechnica, 1st ed. Bristol: 1975.
8. Kumar CD. Pharmacognosy can help minimize accidental misuse of herbal medicine. Curr Sci 2007;93:1356-8.

How to cite this article: Dixit VK. Controversial ayurvedic herbs. J Adv Pharm Tech Res 2011;2:78-80.

Source of Support: Nil, **Conflict of Interest:** Nil.