Title:	Correction to: DNA barcoding and NMR spectroscopy-based assessment of species adulteration in the raw herbal trade of saraca asoca (roxb.) willd, an important medicinal plant (international journal of legal medicine (2016) 130 6 (1457-1470)).
Authors:	Gogna, Navdeep (/jspui/browse?type=author&value=Gogna%2C+Navdeep) Dorai, Kavita (/jspui/browse?type=author&value=Dorai%2C+Kavita)
Keywords:	spectroscopy DNA Barcoding
Issue Date:	2021
Publisher:	Springer Nature
Citation:	International Journal of Legal Medicine, 135(6), 2681.
Abstract:	Saraca asoca (Roxb.) Willd, commonly known as “Asoka” or “Ashoka,” is one of the most important medicinal plants used in raw herbal trade in India. The bark extracts of the tree are used in the treatment of leucorrhea and other uterine disorders besides also having anti-inflammatory, anti-bacterial, anti-pyretic, anti-helminthic, and analgesic activity. The indiscriminate and rampant extraction of the wood to meet the ever-increasing market demand has led to a sharp decline in naturally occurring populations of the species in the country. Consequently, the species has recently been classified as “vulnerable” by the International Union for Conservation of Nature (IUCN). Increasing deforestation and increasing demand for this medicinal plant have resulted in a limited supply and suspected widespread adulteration of the species in the raw herbal trade market. Adulteration is a serious concern due to: (i) reduction in the efficacy of this traditional medicine, (ii) considerable health risk to consumers, and (iii) fraudulent product substitution that impacts the economy for the Natural Health Product (NHP) Industry and consumers. In this paper, we provide the first attempt to assess the extent of adulteration in the raw herbal trade of S. asoca using DNA barcoding validated by NMR spectroscopic techniques. Analyzing market samples drawn from 25 shops, mostly from peninsular India, we show that more than 80 % of the samples were spurious, representing plant material from at least 7 different families. This is the first comprehensive and large-scale study to demonstrate the widespread adulteration of market samples of S. asoca in India. These results pose grave implications for the use of raw herbal drugs, such as that of S. asoca, on consumer health and safety. Based on these findings, we argue for a strong and robust regulatory framework to be put in place, which would ensure the quality of raw herbal trade products and reassure consumer confidence in indigenous medicinal systems.
Description:	Only IISER Mohali authors are available in the record.
URI:	https://doi.org/10.1007/s00414-021-02669-x (https://doi.org/10.1007/s00414-021-02669-x) http://hdl.handle.net/123456789/5195 (http://hdl.handle.net/123456789/5195)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format

Need To Add…Full Text_PDF (1) (/jspui/bitstream/123456789/5195/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF%20%281%29)	15.36 kB	Unknown	View

Show full item record (/jspui/handle/123456789/5195?mode=full)

(/jspui/handle/123456789/5195/statistics)