ETHNO MEDICINAL CLAIMS OF LEONOTIS NEPETIFOLIA (L.) R. BR: A REVIEW
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Received on: 04/08/12 Revised on: 10/10/12 Accepted on: 02/11/12

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DOI: 10.7897/2277-4343.03617
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ABSTRACT
India has a very rich tradition of indigenous and health care practices. Most of these practices are unique and known to a very few individuals or communities. Such ethno botanical knowledge needs documentation and research validation. There are many strong ethno medicinal claims which later on led to novel drug discovery all over the globe. Leonotis nepetifolia (L.) R. Br. belonging to Lamiaceae family, native to Southern India and tropical Africa is used by tribes and folklore traditions in India. This paper is an attempt to collect, review and analyse all ethnomedicinal claims of the plants reported in India.

Keywords: Leonotis nepetifolia (L.) R. Br, ethno medicinal, rheumatism, anti-inflammatory

INTRODUCTION
Primary health care needs of the majority of world population are being fulfilled by traditional medicine. The use of medicinal plants is still a living tradition in the hands of traditional healers such as traditional birth attendants, bone setters, herbal healers and wandering monks. The indigenous system of medicine practiced in India is based mainly on the use of plants in addition to that of animal, metallic and mineral substances. Charaka explains that local communities understood and explored nature’s gift of medicinal plants necessary for the typical health needs of the people living in that environment. Moreover the seers of Ayurveda believed that there is nothing in this universe that is non medicinal, which cannot be made use for many purposes through various modes. This definition rightly suggests that in principle, all plants have a potential medicinal value although “in practice” a plant is referred to as medicinal when it is used by some system as medicine. The Indian system of medicine, both codified and folk varieties, today use around 8000 species of plants. The maximum species are utilised by the folk traditions followed by Ayurveda. Acharyas of Ayurveda had utilized the knowledge of ethno medicinal practice of village dwellers, nomads, cattle rearers. The information collected from ethnic sources has to be evaluated on the basis of pharmacodynamic principles promulgated by wise scholars of Ayurveda as quoted in Raja Nighantu, a lexicon on Ayurvedic pharmacology. An outstanding example of an ethno medicinal claims which later on led to novel drug discovery all over the globe is Arogyapacha (Trichopus zeylanicus) used by the Kani tribes as an anti-fatigue medicine which was scientifically established and handed down to the general practitioner as “Jeevani” commercially marketed by The AryaVaidya Pharmacy, Coimbatore, India.

History and Description of the plant
Leonotis nepetifolia was first described by Linnaeus (in the genus Phlomis), based on an illustration and description of plants growing in the Leiden botanic garden thought to have originated in Surinam. In India it was collected on the Coromandel Coast by the Transqueare Missionaries, and it may have been one of these, J.G. König, who sent it to Sir Joseph Banks, by whom it was introduced to Kew Gardens in 1778. The plant is considered as a weed of waste lands and cultivated areas. The genus Leonotis has 12 species widely distributed in Pantropics and is represented by one species, Leonotis nepetifolia in India. Leonotis nepetifolia (L.) R.Br (Family- Lamiaceae) is a tall annual herb growing in plains, roadsides, waste places near villages and is often cultivated throughout India. The plant is identified by its finely pubescent obtusely quadrangular stems, long internodes and spiny whorls of orange scarlet flowers with densely woolly upper lip. It is native to tropical Africa but it was introduced and naturalized throughout hotter parts of India but it is nowhere common. It is doubtful whether the herb is indigenous to India. Two varieties of the species are identified: L.nepetifolia var.nepetifolia (with long orange hairs on corolla) and L.nepetifolia var.africana (hairs are usually pale yellow coloured). Common names of the plant are Knod grass (Eng), Lion’s ear (Eng), Matijerעבור (Telugu) or Then thumbai (Tamil) and Ranabheri (Telugu). Medicinal uses of the plant are reported in Madagascar, Brazil, Canada, Kenya and many African countries to treat kidney diseases, rheumatism, dysmenorrhoea, bronchial asthma, fever and diarrhea. The drug is reported to have wound healing, antibacterial, antirheumatic, anti-inflammatory, analgesic and anti cancer activities.
Constituents
Whole plant contains labdane diterpenoid characterised as 8β,17:9,13-diepoxylabdane-16,15:19,6β-dilactone, coumarin characterised as 4,6,7-trimethoxy-5-methylchromen-2-one, nepetaefolin and leonotinin. Leaves contain labdane diterpene -nepetaefolin, methoxynepetaefolin. Essential oil of leaves contain octane, (2α,β,12α,15α,19β,6α,7β)-octacosanol, diepoxylabdane, nepetaefolino, germacrene, caryophyllene oxide and root contains n-octacosanol, campesterol 4,6,7-trimethoxy-5-methylchromen-2-one and β-d-glucopyranoside. In India, the medicinal uses of the plant are reported for burns, breast swelling, ring worm, scalds, skin affictions, malaria and rheumatic pain. Roots of Leonotis nepetifolia is considered as the botanical source of Granthiparna (an Ayurvedic herb) which is included in the formulations such as Brihat guduchi taila, Himasarag taila, Nakula taila and Mritasanjeevani sura. The ethnomedicinal uses of the plant reported in various parts of India is enumerated in Table 1.

The whole plant ash of L. nepetifolia is used externally to treat paralysis. The seed, flower and inflorescence (ash and paste) are used as external application for burns. The application of paste of inflorescence mixed with groundnut oil is used for wound healing. Similarly the paste of the leaf is reported to be applied externally in eczema. The ash of the whole plant mixed with mustard oil on external application relieves breast pain during post natal period and also pain due to swelling anywhere in the body including joint pain. Crushed leaves of the plant are rubbed gently on the affected part to alleviate burning sensation due to scorpion sting. Decoction made from 20 g of the whole plant in 50 ml of water and given once a day for 3 days relieves joint pain. Decoction of the stem, leaf and flowers is administered for jaundice. Whole plant is prescribed for regulating the menstrual cycle as well as diabetes. The paste of the inflorescence fried in ghee is administered for treating cough. Internally the juice of the flower mixed with sugar is given for night blindness. Gonds (an ethnic community) of Andhra Pradesh use the roots to treat vomiting in pregnant women.

CONCLUSION
Most of the ethno medicinal claims are centered on flower and inflorescence of the plant. The whole plant and leaves are also administered in a few specific clinical conditions. The analysis of all the claims clearly indicates the potential of the plant to be an excellent analgesic, anti pyretic and anti inflammatory drug which needs to be validated through thorough preclinical and safety and efficacy trials.
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Source of support: Nil, Conflict of interest: None Declared