Some folk herbal medicines for possible use in veterinary practices

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In India, almost parallelly with the various systems of medicine like Ayurveda, Yunani, Siddha, Allopathy and Homeopathy, large sections of society, mainly in rural and remote areas, still use recipes based on folk knowledge. Folk medicines are regularly providing materials for experimental drug research. There is rich folklore in India about veterinary medicine also, and about 1000 plants are already reported to be used in ethnoveterinary practices. The starting plant material for research in veterinary medicine has usually been the same drug which has proven record of useful activity in same or similar ailments in man. Many indigenous recipes used for human ailments do not figure in ethnoveterinary practices, and can lead to prospective veterinary medicine. The paper provides brief account of 25 such plants. Veterinary diseases for which these plants are already known to be used in folk medicines are also indicated. These plants need experimental work and evaluation for prospect in veterinary practices.

Keywords: Folk medicine, Herbal drugs, Ethnoveterinary.

India is primarily an agricultural country with predominance of rural populations and hence, animals, particularly cattle, play great role in economy and social welfare. Ancient literature like the Vedas, Puranas and Nighantu are replete with references to animal health care. There are Puranas like Ashwapuran, Garudpuran and Hastipuran devoted to animal husbandry.

As regards management of ailments in animals, and research in veterinary medicines, excepting the diseases specific to animals (like hoof and mouth disease), usually, the initial experimental material has been the same as for drugs for humans. In India, almost parallelly with the various systems of medicine like Ayurveda, Yunani, Siddha, Allopathy and Homeopathy, large sections of society, mainly in rural and remote areas, still use recipes based on folk knowledge.

In last few decades, a very valuable source of information on starting research materials has been the indigenous knowledge of folk medicines. Articles have occasionally been appearing from different regions of India on folk or ethnoveterinary practices. Three years ago, Jain & Srivastava1 brought all such published information, and their observations in field in the form of a book named Nie-
tionary of Ethnoveterinary Plants of India: this book deals with about 850 plants occurring in India. After 1999, many more plants have been reported as useful in animal health care e.g. Bhatt, Mitaliya & Mehta.

Though, folk recipes were reported for almost all ailments, the most commonly treated ailments dealt in folk veterinary practices were cuts and wounds, diarrhoea, lactation, and boils and sores. It was very interesting to note that many folk veterinary practices in India compared well with folk practices in some other countries, like Spain, Jordan, Central Europe and Tanzania.

Extending this enquiry further, the data available on over 2500 ethnobotanicals reported from India was screened and it was found that over 300 recipes based on 200 plants were unknown or little known in the commonly used and recorded herbal drugs for humans in Ayurveda, and Unani. It was thought, that this information compared with folk veterinary practices should be of interest to researchers in animal healthcare in India. The following pages deal with herbal recipes from ethnomedicinal sources, and which are not so far included in ethnoveterinary practices of India, nor do they seem to be widely known for animal health care.

For precision, scientific name of plant is first given, followed by Sanskrit or some other Indian names, English names (when available, in capital letters), brief botanical characters, and use reported for managing human diseases. Their original references are cited. The last para gives briefly the diseases for which the plant is already known in ethnoveterinary practices (EVP). The plant part, wherever known, is indicated. For source of these data, readers are referred to work of Jain & Srivastava.

**Achillea millefolium** L. (Asteraceae)
Gundna, Biransifa, MILFOIL.
Erect herbs up to 60 cm high with sessile 3-pinnatisect leaves, and radiate whitish heads (5-7 mm diam.).
Newly reported use: In Ladakh the whole plant is used for killing intestinal worms.
Uses known in EVP (= ethno veterinary practices): Liver ailment.

**Achyranthes bidentata** Bl.
(Amaranthaceae)
Liskura, Oga, Kutub.
Woody herbs; flowers small reddish in slender spikes.
Newly reported use: Folk in Uttar Pradesh use leaf juice for blisters in mouth. Leaf juice with onion juice given for cholera.
Uses known in EVP: Galactagogue (whole plant).

**Aerva lanata** (L.) Juss. ex Sch.
(Amaranthaceae)
Kondapindi chettu, Gorakh buti, Kapurjari, Chaya.
Wooly herbs; flowers white minute in axillary spikes.
Newly reported use: Inhabitants of Rajasthan use the whole plant on skin diseases. Santal and Pahariya tribes of Bihar use the plant paste in malarial fever.
Uses known in EVP: Antidote (root), Snakebite (root), Insectbite (root), Galactagogue.
**Anogeissus latifolia** (Roxb. ex DC.) Wall. ex Guill. & Perr. (Combretaceae)
Bakla, Dhavada, Vellanava, Bakli, Dhoukara, Dhau, AXLE-WOOD.
Trees with white or grey bark; flowers greenish yellow in globose heads.
Newly reported use: Inhabitants of Abujh-Marh area in Madhya Pradesh use its bark for skin disease. The bark is pounded and the extract applied locally. Uses known in EVP: Snakebite (seed).

**Arisaema jacquemontii** Bl. (Araceae)
Baank, Khan-bang, Yas.
Erect herbs; leaflets unequal; spathe green with white stripes.
Newly reported use: Khasi and Garo in Meghalaya use its tuberous root for skin diseases. The root is crushed and the juice is given to treat ringworm and also applied on various skin affections. Uses known in EVP: Snakebite (seed).

**Barringtonia acutangula** (L.) Gaertn. (Barringtoniaceae)
Hinjal, Injur, Samudra phal.
Trees; leaves upto 15 cm long; flowers in long racemes; fruit quadrangular, 2.5 cm long.
Newly reported use: Santal and Mahali tribes of Mayurbhanj district in Orissa use its seeds for liver trouble. The seeds are powdered and given with water. Uses known in EVP: Diarrhoea (flower).

**Bauhinia purpurea** L. (Fabaceae)
Kochner, Sing-ara, Baper, CAMEL’S FOOT TREE.
Medium-sized trees; leaves rounded, bilobed; flowers rosy-purple.
Newly reported use: Among the inhabitants of Dharmapuri Forest Division in Tamil Nadu, the leaf-paste of this plant mixed with milk/latex of *Jatropha curcas* is administered to cure jaundice. Uses known in EVP: Swell neck (bark), Rinderpest (bark), Bone fracture (bark).

**Blepharispermum sessile** DC. (Asteraceae)
Batvali, Nallipoda, Rasnapadi.
Glabrous shrubs with sessile, coriaceous leaves, and flower-heads in solitary clusters of 2-4 cm diam.
Newly reported use: Folk of Madhya Pradesh powder its root and give 5g to cure scabies and other skin diseases. Uses known in EVP: Flatulence (root).

**Boehmeria macrophylla** Horn. (Urticaceae)
Khaglu, Khagaya, Patltae, Khwipehu, Garjile, Chhyal, Khakasha, Bemole, Seyar.
Shrubs with hispid, 10-30 x 8-15 cm leaves and small white flowers in spikes.
Newly reported use: Inhabitants of Kangra district in Himachal Pradesh use its leaves for curing eczema. One mature leaf or 2-3 small leaves are ground with 2-3 grains of black pepper and the powder is applied on the affected parts. It is found effective for any type of eczema. Uses known in EVP: Galactagogue (leaf, Fodder), Diarrhoea (whole plant).

**Boenninghausenia albiflora** (Hk.) Reichb. ex Meissn. (Rutaceae)
Dampate, Junare jhar, Min, Kankulee, Upanyaghas, Upanyankathes.
Herbs; leaves 3-4 pinnate; flowers white
or reddish, in leafy cymose panicles.
Newly reported use: Monpas of Kameng district in Arunachal Pradesh make the root into a paste and apply it locally to cure old wounds.\(^{17}\)

Uses known in EVP: Lice (leaf), Parasites (leaf), Stomach ache, Expel leech, Flea (leaf).

*Cissampelos pareira* L.
(Menispermaceae)
Poa, Chutullutur Akandi, Kali pahar, Akundi, Dhakhnibirsy, Parhey, Harjori, FALSE PAREIRA ROOT.
Twining deciduous tomentose shrubs with cordate leaves on long petioles; flowers greenish yellow, fruits hirsute, scarlet red when ripe.
Newly reported use: Local people of Assam use its leaves for jaundice. About 7-10 ml juice from the leaves is mixed with 10 g sugar and 200 ml cow milk. The mixture, in a pot made up of banana leaf-sheath or of clay, is taken on an empty stomach for three consecutive mornings. A belief is associated with this prescription that the cow whose milk is taken should have a calf of her own colour.\(^{18}\)
Uses known in EVP: Fever (root).

*Clematis buchananiana* DC.
(Ranunculaceae)
Ghatyali, Kilmwari, Marchhya.
Woody tomentose climbers; sepals greenish yellow, stamens conspicuous, anthers twisted.
Newly reported use: Angami Nagas of Nagaland apply the paste of leaf locally for sores and skin diseases.\(^{19}\)
Uses known in EVP: Poison (twig).

*Clematis hedysarifolia* DC.
(Ranunculaceae)
Tuni, Morvel.
Woody shrubs; flowers greenish yellow; filaments glabrous.
Newly reported use: Decoction of root is given in Gujarat as anthelmintic.\(^{20}\)
Uses known in EVP: Swell neck (whole plant).

*Cochlospermum religiosum* (L.) Alston.
(Cochlospermaceae)
Gong, Gongal, Gulgal, Aluru, Katira, Kumbi, Gay gara, Pili kapas, WHITE SILK COTTON.
Shrubs or trees, up to 10 m high; flowers greenish yellow, up to 8 cm across; capsule obovoid 5-10 x 2.5 -8 cm, 5-valved, ribbed.
Newly reported use: Santals of Bihar use bark of stem for jaundice.\(^{21}\)
Uses known in EVP: Bone fracture (bark).

*Combretum roxburghii* Spr.
(Combretaceae)
Phalandu, Aten, Rateng.
Extensive shrubby climbers, spikes tomentose, up to 3 cm long with large white leafy bracts in large panicles; fruits up to 3.5 cm, winged.
Newly reported use: Garos of Meghalaya use its leaves for diarrhoea and gastric trouble.\(^{22}\)
Uses known in EVP: Wound (root).

*Costus speciosus* (Koen.) Sm. (Zingiberaceae)
Tall robust herbs (leaves like *Canna*); flowers white; capsules globose red.
Newly reported use: Garos of Meghalaya use its rhizome for jaundice.
Uses known in EVP: Injury (rhizome), Fever (root), Wound (stem).

*Curcuma aromatica* Salisb.
(Zingiberaceae)
Kachaur: WILD TURMERIC.
Herbs; rhizomes strongly aromatic, whiteish inside; leaves long-petioled; spikes 15 cm long, lower bracts green, upper pink-tipped.
Newly reported use: Khasi and Garo tribes of Meghalaya make its rhizome into a paste and take with water to kill intestinal worms.
Uses known in EVP: Scabies (rhizome).

*Cyperus rotundus* L. (Cyperaceae)
Bhatha-bijir, Mutha, Piri-jimut, Bhahamutha, NUT GRASS.
Tufted, tuberous herbs; leaves flat, scabrous with brown sheaths; spikelets narrow.
Newly reported use: Garos of Meghalaya use its tuber in mixture with many herbs for jaundice.
Uses known in EVP: On inflammation of mammary glands (tuber), Expels intestinal worms (root).

*Dregea volubilis* (Linn. f.) Benth. ex Hook f. [*Wattakaka volubilis* (Linn. f.) Stapf] (Asclepiadaceae)
Pessa, Madhu mali, Nuk Chinkai, Juttapala teega, Dudipala, Marang kongat, Kaund veli.
Perennial woody twiners with watery sap; flowers in umbellate cymes, pale green; follicles long green.
Newly reported use: Tribals of Ranchi and Hazaribagh district in Jharkhand use its roots as vermifuge.
Uses known in EVP: Galactagogue (whole plant), Swell gland (fruit), Wound (leaf).

*Elytraria acaulis* (L.f.) Lind.
(Acanthaceae)
Yeddunulakaku, Ho-muli, Nilakadambu, Sasamula.
Herbs with leaves in rosettes, and white flowers.
Newly reported use: Among several tribes of north Gujarat, the root paste is recommended for the treatment of colic pain.
Uses known in EVP: Antidote (leaf), Respiratory diseases (leaf), Sore (leaf), Broken horns (mixture of plant powder, powdered seeds of *Panicum sumatrense* Roth ex Roem. & Schult., and some red soil, applied as plaster).

*Gardenia turgida* Roxb. (Rubiaceae)
Duduki, Katolmaram, Kharhar, Pendra.
Small deciduous trees; branches with straight thorns; flowers white; drupes yellowish brown.
Newly reported use: Among Bhil, Dhanka, and Nayaka tribes of Khedbrahma region of north Gujarat, its seeds are made into a paste given to cure food poisoning.
Uses known in EVP: Eye (fruit).

*Hedyotis scandens* Roxb. (Rubiaceae)
Tite ko latto, Baina, Haniktu, Kalomuttey, Kimprong, Hylubi.
Much branched climbers; leaves 8-13 cm
green when dry; cymes spreading, leafy, sometimes puberulous; flowers subumbellate; capsules broadly obovoid.

Newly reported use: Nagas use its leaves for skin affections. Its crushed leaves are rubbed on skin to cure wart like disease\textsuperscript{36}. Inhabitants of West Sikkim use its root as vermifuge and give the extract of its crushed roots for jaundice\textsuperscript{27}. Inhabitants of Jalpaiguri district in West Bengal give the root paste for diarrhoea and stomach pain\textsuperscript{28}.

Uses known in EVP: Galactagogue (whole plant).

\textit{Leea macrophylla} Roxb. ex Hornem. (Leeaceae)
Hati-lor, Hat-kan, Bir-kanda, Dhotelakand, Hathkan, Sukadini.
Herbaceous plants; leaves large, simple; flowers greenish; ripe berries black.

Newly reported use: Agari, Bhil, Raikare and other tribes of Dahanu forest division in Maharashtra take the extract of its roots as vermicide\textsuperscript{29}.

Uses known in EVP: Dysentery (root), Bone fracture (leaf).

\textit{Leucas cephalotes} (Roth) Spr. (Lamiaceae)
Gumma, Go-gashi, Dhrupi-sag, Aghimgummar, Tumbi-kura, Tummi, Motapatti, Dron-pushpi.
Herbs; flowers white in large terminal spikes.

Newly reported use: Kol of Banda district in Uttar Pradesh use decoction of the plant for malarial fever. Leaf is used for curing old boils\textsuperscript{30}.

Uses known in EVP: Snakebite, Wound (seed), Migraine (leaf).

\textit{Ranunculus hirtellus} Royle (Ranunculaceae)
Mangol.

Perennial, erect or decumbent herbs; flowers solitary or several, yellow.

Newly reported use: Amchis of Ladakh use decoction of the plant for killing intestinal worms\textsuperscript{8}.

Uses known in EVP: Refrigerant (aerial parts), Cut (whole plant), Wound (whole plant).

\textbf{Discussion}

The above data relates to following diseases or properties:

- anthelmintic
- blisters
- boils/wounds
- digestive disorders
- food poisoning
- intestinal diseases
- liver ailment/jaundice
- malaria/fevers
- skin diseases

As the plants are already reported to be in use for human ailments among aboriginal societies, and do not seem to be subjected to much experimental evaluation in animals, it can be hoped that they can provide useful starting material for research in veterinary medicine. Experimental work followed by field test can be expected to yield useful data and some additional herbal recipes for animal health.

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