



## Review on Some Selected Herbal Plants for its Traditional and Medicinal Uses - A Novel Approach

**P. Shaila Bhanu<sup>1</sup>, Anitha Kuttiappan<sup>2</sup>, A. Anna Balaji<sup>3</sup>, N. Sambavi<sup>1</sup>, K.Taruna<sup>1</sup>**

<sup>1</sup>Sree Vidyanikethan College of Pharmacy, Sainath Nagar, A. Rangampet, Andhra Pradesh, India.

<sup>2</sup>Department of Pharmacology, JNTUA, Anantapurumau, Andhra Pradesh, India.

<sup>3</sup>Department of Pharmaceutics, Sree Vidyanikethan College of Pharmacy, Sainath Nagar, A. Rangampet, Andhra Pradesh, India.

\*Corresponding author's E-mail: [shaanukunnu4413@gmail.com](mailto:shaanukunnu4413@gmail.com)

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### ABSTRACT

Use of herbal products has been increased dramatically for the past few years. The herbal medicine industry is growing at an astounding rate. The knowledge base devoted to the adverse effects of these products has not grown in proportion to their increased usage. Even in some resources misleading information about the beneficial and adverse effects of some herbal plants can be found. Each plant reviews the herbs status including traditional and current uses. Traditional physicians and scientists generally believe that, if a plant has any medicinal value it is because of the presence of the active principle constituents present in that herbal plants that must be isolated, purified and used. The present review is designed to provide the necessary information regarding traditional and medicinal uses of some herbal plants.

**Keywords:** *Ephedra sinica*, *Piper methysticum*, *Ginkgo biloba*, *Valeriana wallichii*, *Hypericum perforatum*, *Uncaria species*, *Angelica species*, *Crataegus oxyacantha*, *Phytolacca Americana*, *Rhamnus purshiana*, *Senna*, *Canavalia species*.

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### INTRODUCTION

This study documents the medicinal plant species, most commonly used by the indigenous people of different regions of the world. The botanical name, family name, vernacular name, part used, and the application of different plants have been provided in this review paper. It was recorded traditional knowledge and use of medicinal plants from herbal practitioners. Medicinal plants are the “backbone” of traditional medicine, which means more than 3.3 billion people in the less developed countries utilize medicinal plants on a regular basis to treat most of the disease conditions till now in various corners of the world.

In this study it was analyzed that medicinal plants with most therapeutic uses in the different regions of the world and because of utmost usage of medicinal plants in this region and more immethodical pick of them, some of species have become extinct now a days so for this reason, an important study of this review paper is to study all medicinal and traditional properties of herbal plants and to protect the preservation of the herbal plants. Herewith this paper depicts some of the following herbal plants.

### *Ephedra Alkaloids:*

*Ephedra* (*Ephedra sinica* and *E. equisetina*). Traditional Chinese healers used ephedra extracts thousands of years before the romans ever contemplated the idea. In 15<sup>th</sup> century Chinese texts recommended ephedra as an antipyretic and antitussives. In Russia extracts of ephedra were used to treat joint pain and recent laboratory studies confirm that ephedra might just be useful for that purpose<sup>1</sup>. In 1600s Indians and Spaniards in the American southwest used ephedra as a treatment for venereal diseases<sup>2</sup>. The latest studies show that ephedra contains a novel antibiotic called transtorine<sup>3</sup>. Chen and Schmidt published a monograph recommending ephedrine as the treatment of choice of asthma<sup>4</sup>. Unlike the other alkaloids contained in ephedrine is also a potent CNS stimulant<sup>5</sup>. Injections of ephedrine called *Philopon* (which means love of work) were given to Japanese kamikaze pilots during World War II<sup>6</sup>. In the past ephedrine was used to treat strokes- Adams attacks (Complete heart block) and was also recommended as a treatment for narcolepsy<sup>7</sup>. Ephedrine is found in many food supplements especially the type used by bodybuilders, it is compounded with other ingredients such as vitamins, minerals and amino acids in products designed to increase muscle mass and enhance endurance<sup>8</sup>.

### *Piper methysticum:*

Kava is the dried rhizome and roots of *Piper methysticum*. There are reports up to 72 varieties of kava plant which differs in appearance and chemical analysis has shown differences in their composition<sup>9</sup>. Prepared as a beverage and consumed for its intoxicating, calming effects that promote sociability<sup>10</sup>. The beverage was traditionally made



by mixing grated, crushed or chewed fresh or dried root with cool water or coconut milk and then straining the mixture through plant fibers to isolate the liquid which was consumed. Several substances extracted from roots were used as diuretics in Europe. Other folk uses of kava have included treatment of headaches, colds, rheumatism, sexually transmitted disease and inflammation of the uterus<sup>11</sup>. It has been used as a sedative, aphrodisiac, urinary antiseptic<sup>12</sup>, wound healing agent, to treat asthma and currently promoted for relief of anxiety and stress.

#### **Ginkgo biloba:**

Popular ornamental plant worldwide and sold as dietary supplement in the United States. It is purported to improve blood flow to the brain and to improve peripheral circulation. It is mainly to sharpen mental focus in otherwise healthy adults as well as in dementia. Currently used as diabetes related circulatory disorders, impotence and vertigo. The ancient Chinese and Japanese ate roasted ginkgo seeds as a digestive aid and to prevent drunkenness. Traditionally Chinese physicians used ginkgo leaves to treat asthma and chilblains (swelling of the hands and feet from exposure to damp cold)<sup>13</sup>.

#### **Valeriana wallichii:**

The vertical rhizome and attached roots of valerian are parts used medicinally and are best harvested in the autumn<sup>14</sup>. Fortunately smell can be removed from the skin and utensils by washing with sodium bicarbonate<sup>15</sup>. Even though valerian has a disagreeable odor, people in the 16<sup>th</sup> century considered it a fragrant perfume<sup>16</sup>. Traditionally uses include treatment of migraine headache, anxiety, fatigue, seizures. Applied externally on cuts, sores, acne, numbness due to rheumatic conditions, colds, menstrual difficulties and bruises, promoted in US for the treatment of insomnia<sup>17</sup>.

#### **Hypericum perforatum:**

Perennial aromatic shrub used to treat neurologic and psychiatric disturbances, anxiety insomnia, bed-wetting, irritability, migraine, excitability, exhaustion, fibrositis, hysteria, neuralgia and sciatica, gastritis, gout, hemorrhage, pulmonary disorders, and rheumatism, diuretic<sup>18</sup>. Topically used as an astringent, to treat blisters, burns, cuts, hemorrhoids, inflammation, insect bites, itching, redness, sunburn and wounds. Promoted for treatment of mood disorders particularly depression and promotion of emotional well being and in combination with ma huang for weight loss<sup>19</sup>.

**Table 1:** Representing traditional and medicinal uses of some herbal plants

S.no	Parts used	Some of the Herbal plants possessing traditional and medicinal properties
1	Bark	<i>Cinnamomum zeylanicum, Croton cajucara</i>
2	Bulb	<i>Allium cepa, Allium sativum</i>
3	Aerial parts	<i>Artemisia pallens, Bidens pilosa, Bixa orellana, Teramnus labialis</i>
4	Tubers	<i>Ipomoea batata</i>
5	Leaves	<i>Aloe barbadensis, Annona squamosa, Averrhoa bilimbi, Azadirachta indica, Beta vulgaris, Camellia sinensis, Cassia alata, Eclipta alba, Eucalyptus globulus, Euphrasia officinale, Ficus carica, Gymnema sylvestre, Gynura procumbens, Ipomoea aquatica, Mangifera indica, Myrtus communis, Memecylon umbellatum, Morus indica, Ocimum sanctum, Senna</i>
6	Roots	<i>Commiphora caudata, Glycyrrhiza glabara</i>
7	Seeds	<i>Canavalia ensiformis and Canavalia gladiate</i>
8	Whole plant	<i>Phytolacca Americana</i>

#### **Uncaria species:**

*Uncaria tomentosa, uncaria guianensis, uncaria gambir* known as cat's claw is a twining woody vine with small, sharp thorns at the base of leaves. It has a long history of use in South America as an anti-inflammatory, antirheumatic and contraceptive. It is also traditionally used to treat gastrointestinal ulcers, tumors, gonorrhea, dysentery, various skin problems, cancers of the female genitourinary tract, intestinal disorders. Also used to cleanse the kidneys, treat bone pain [20]. An Asian species *Uncaria gambir* is used as a tanning agent, astringent, antidiarrheal. The stem, bark, roots and leaves are all used medicinally<sup>21</sup>.

#### **Angelica species:**

*Angelica polymorpha Maxim.var. senensis, A. senensis, A.dahurica, A. atropurpurea* known as Dong quai. It is a biennial or perennial member of the carrot family found in Asia, Canada, and Europe. Root has been used for centuries throughout the east. It is known historically as a female remedy and has been referred to as empress of the herbs, sovereign herb for women and the female ginseng. Historic uses include treatment of dysmenorrhea, amenorrhea, metrorrhagia, menopausal syndromes, anemia, abdominal pain, injuries, migraine headaches and arthritis. It is also said to ensure healthy pregnancies and easy deliveries<sup>22</sup>. In the United States it is promoted to alleviate problems associated with menstruation and menopause.



***Crataegus oxyacantha:***

Hawthorn is a spiny, small tree or bush with white flowers and red berries and member of rose family and is found in Europe, North Africa, and Western Asia. Uses for the herb have included high and low blood pressure, tachycardia, arrhythmias, atherosclerosis, and angina pectoris<sup>23</sup>. Hawthorn is also purported to have spasmolytic and sedative effects, Native Americans used it as a diuretic for kidney and bladder disorders, to treat stomach aches, stimulate appetite and improve circulation<sup>24</sup>. The flowers and berries have astringent properties, also used to treat sore throats in the form of haw jelly or haw marmalade<sup>25</sup>. It is also promoted for use in heart failure, hypertension, arteriosclerosis, angina pectoris, Buerger's disease, paroxysmal tachycardia<sup>26</sup>. Heart valve, murmurs, sore throat, skin sores, diarrhea and abdominal distension<sup>27</sup>.

***Aloe species:***

*Aloe* was the third most common folk or herbal remedy mentioned in the Egyptian book of remedies as laxative and dermatologic preparations<sup>28</sup>. Mesopotamians were also aware of its medicinal properties by that time. An Egyptian papyrus written about 1500 BC gave formulas for preparing aloe to treat external and internal ailments<sup>29</sup>. Aloe was first mentioned in Greek literature as a laxative, the Greek physician's Dioscorides wrote of its use in treating wounds, chapping hair loss, genital ulcers, hemorrhoids, boils, mouth irritation and inflammation<sup>30</sup>. In the 17<sup>th</sup> century aloe was used in the orient for eczema and sinusitis. The western culture began with its use in the 1930s to treat radiation burns<sup>31</sup>. It is an ingredient in dieter teas used for their laxative effect<sup>32</sup>. Aloe is found in other laxative and body cleansing products also. It is used in areas around the world for wound healing, ringworm, joint inflammation, edema, burns, and constipation<sup>33</sup>.

***Phytolacca americana:***

Known as pokeweed grows in several parts of the world. The flowers are white sag towards the ground. Pokeweed has several traditional uses from medicinal to industrial. It has been used as a cathartic, emetic, narcotic and gargle<sup>34</sup>. Additional medicinal uses included treatment of various skin diseases, conjunctivitis, syphilis, cancer, parasitic infestations of the scalp, chronic rheumatism, ringworm, dyspepsia, swollen glands, scabies, ulcers, edema, dysmenorrhea, mumps, tonsillitis. The immature leaves and stems were boiled twice and eaten as greens<sup>35</sup>. Europeans used their juice as a dye for wine. Eating uncooked berries or mistaking the root for that of an edible plant was other causes of poisoning<sup>36</sup>.

***Glycyrrhiza glabara:***

Liquorice is harvested from the roots of *Glycyrrhiza glabara*. Its use dates back thousands of years to ancient Egyptian rituals that enabled the spirits of pharaohs to prepare a sweet drink known as mai sus in the afterlife. A beverage called mai sus is still consumed today as an iced beverage in Egypt. Theophrastus an ancient Greek botanist referred in

his writings to the ability of liquorice to treat asthma and heal wounds. Liquorice was used to abate hunger and thirst, clear the voice, and heal sores of the mouth and genitals. Treat kidney and bladder ailments. Western herbalists recognized liquorice as a remedy for dropsy as did Pliny and asserted that the root had emollient, demulcent, expectorant, and diuretic effects. Liquorice was probably introduced to Native Americans by the early English settlers and was subsequently used by medicine men to treat diabetes. In traditional Chinese medicine licorice was considered to benefit all organs of the body. Today in China licorice is used to treat a variety of symptoms and diseases, including Addison's disease<sup>37</sup>. Sore throats, carbuncles, diarrhea due to spleen deficiency, thirst due to stomach deficiency, cough due to dry lungs and palpitations. Other medicinal uses include bronchitis, catarrhal conditions, gastritis, colic arthritis and hepatitis. Licorice contains the natural sweetener glycyrrhizic acid and is used to flavor soy sauce in China and Japan. Used to cure and flavor tobacco products<sup>38</sup>.

***Rhamnus purshiana:***

Synonymous with *Frangula purshiana*, *Cascara sagrada*. The dried bark of *rhamnus purshiana* was first used in conventional American medicine in 1877, after being introduced as a laxative by Mexican and Spanish priests in California<sup>39</sup>.

***Senna species:***

*Cassia senna*, *cassia acutifolia*, *cassia angustifolia* known as Indian senna. Its medicinal use was introduced by Arabian physicians who used both the leaves and the pods as laxative<sup>40</sup>.

***Canavalia species:***

*Canavalia gladiata* family belonging to Leguminosae is climber that was distributed throughout India. *Canavalia gladiata* synonyms are *Dolichos gladiatus* Jacq. The seeds particularly the pink colored were employed in traditional medicine. Dietary fiber of both the species of *Canavalia ensiformis* and *Canavalia gladiata* was considered to be an important legumes which contributes to health in various ways by reducing disease risks in coronary heart disease by lowering the serum cholesterol level by decreasing the absorption; reduce the colon cancer risk, by increasing the fecal bulk and thereby decreasing the concentration of carcinogens; improve glucose tolerance in diabetic subjects by slowing the release of glucose into the bloodstream<sup>41</sup>.

**CONCLUSION**

The present review depicts the authoritative review of some herbal plants and gives the data regarding the traditional and some other promoted uses of different herbal plants.

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