



Ethnobotanical Note on the Medicinal Plants of the Lower Himachal Pradesh

Kritika Thakur ^a, Nishant Thakur ^{a*}, Chandan Sharma ^a and Bhupinder Kaur ^a

^a *University Institute of Pharma Sciences, Chandigarh University, India.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Himachal is rich in the natural resource. These plants are hereditary used in various formulation and dietary foods. The plants are widely distributed in the lower Himachal from the altitude of 800mtrs to 2600mtrs. The plants are known by their local names and the ethnic knowledge has been passed from one generations to next generation. These plants are immunomodulatory, anticancer and improves the body functions. Various parts of plants like roots, barks, leaves and fruits are used in the food and medicines by local peoples.

Keywords: *Plants; Himachal Pradesh; Dadu plant; anti-cancer.*

1. INTRODUCTION

Traditional knowledge in the India is passed from one generation to another. These are in folks, tales and in the form of the customs. Rural population in India uses the traditional knowledge to cure diseases and small ailments. In 2008 the total herbal market in India was 8 billion dollars and 25 percent modern drugs depends on the phyto constituents and raw herbs. Plants

produce various secondary products like saponins, carbohydrates and tannins etc. These are considered safe and inexpensive [1]. Medicinal plants are used in the Ayurvedic, Unani and many other industrial formulations.

Himalyas are the one of the biggest source of herbs and medicinal plants. The demand for ethno pharmaceutical products has increased

*Corresponding author: E-mail: nishant.pharma@cumail.in;

globally and crafted its place in the modern healthcare system. Himachal Pradesh is the naturally rich area in the terms of the natural resources. A number of medicinal plants from Himachal Pradesh have been found useful in the cure and mitigation of diseases and microbial infections.

2. DADU PLANT

It is known as *Punica granatum* (Pomegranate) height ranges from five to eight meters and found in the eastern and middle Asian countries. This plant can survive in the arid conditions. Its medicinal properties are used by the plant based industries preparing the herbal formulations. This has created immense pressure on the natural resources and demand increased up to 50 percent but availability decreased by 26 percent [2].

3. DREK PLANT

It is native plant of the Burmah and India and commercialized in the American countries. It is also distributed in the other countries and attains the heights of about 45 mtrs and diameters of 120 cms. It is also an ornamental plant and grown in the tea gardens for shade purpose. It is a draught resistant plant. It has Antidiarrheal, deobstruent, diuretic properties and used in rheumatic pain. It has antipyretic action, used to treat nausea, vomiting, general debility, loss of appetite, and stomachache. Bark decoction is used to cure fever aches and pains. Bark paste is used to treat piles, used as lotion on ulcers and anti-syphilitic agent. It is also used to stimulate hair growth in baldness.

4. JAMNU

Its common names are jambolan, jamun, java plum, Indian blackberry, purple plum, Jamaica and damson plum. It contains anthocyanins, glucoside, ellagic acid, iso-queretin, kaemferol and myrecetin alkaloid. Jambosine, and glycoside are present in the seeds, which inhibits the conversion of starch into sugar. Seed extract has reported to lower blood pressure by 34.6% and this response is mainly due to the ellagic acid content. Jamnu also contains the flavonoids which have the antioxidant potential and decrease the sugar levels. Various aerial parts of

the jamnu have proven to be effective in the lowering down the blood sugar level in various experimental and clinical conditions. Tea prepared with leaves of jambolan showed anti-hyperglycemic effect.

5. NIRGUNDI

Nirgundi is a sacred plant in the India and it originated from Lord Ganesha as per the tales. It tastes bitter and pungent. It elevates the Pitta Level in the body and supposed to be hot post digestive. Nirgundi roots are added in to the tonics because of its febrifugal effect, relieves cough, and it also possesses the diuretic properties. It has also been found to improve the oral hygiene and improve the mandosha [3].

6. BRAHMI

Brahmi is considered to be correlated with the creator "The God Brahma" and its actions are related with the brain. Charak Sahinta has correlated the plant with the memory boosting and treating the mental insanity. Bacopa monneri, belongs to the Scrophulariaceae family. This plant has coiling type of the branching and bears light purple flowers. It is considered to improve the memory power and enhance the focus. It is used in various blood disorders, brain illnesses, diabetes and epileptic seizures [4].

7. TIRMIRA

Zanthoxylum armatum is an is a tall herb contains the spike and number of branches. Its Bark is pale brown and deeply furrowed. Sharp thorns are present on the bark. Leaves are trifoliate. Flowers are greenish yellow in color. Seeds are pungent and black in color. Small twigs of the plant are chewed and used as tooth stick for cleaning teeth. It is taken as high for this purpose as it creates a characteristic tingling sensation in the mouth and also activated the salivary glands. Its wood is very hard, so its branches are valued for making clubs to be used in stone grinding pots. The bark, fruits and seeds are extensively used in indigenous system of medicine. Tirmir shrub can be planted for being used as a hedge or border. Stem bark is used in cough, asthma, difficult breathing, and rheumatism [5].

8. SHATAWAR

Shatawari as the name suggests "With hundred husbands", has proven effective in the numerous female reproductive problems. It belongs to the family Asparagaceae. It is extensively used for the medicinal benefits. The fresh roots are milky white in appearance, seems to be fleshy and turned to brown color on drying. Methanolic extract of *Asparagus racemosus* possesses the Anti-depressant activity and interacts with adrenergic, dopaminergic, serotonergic and GABAergic systems. Its effects are almost comparable to the metoclopramide. In Ayurveda, it has found to be lipid lowering and hence used in numerous lipid lowering formulations [6].

9. BERBERIS ARISTATA

Berberis Aristata popularly known as Kashmal. Its aqueous extracts contain berberine, oxyberberine, berbamine, aromoline, karachine, palmatine, oxyacanthine and taxilamine as main constituents. Protoberberine and bis isoquinoline are two type of alkaloid which are isolated from the extracts. The root extracts are highly rich in the alkaloidal contents. It is used in the microbial infections, fever, bitter to improve appetite. It effects central nervous system activities, by inhibiting the MAO and also prevent depletion of the norepinephrine and serotonin (5-HT) [7].

10. KAFAL

Kafal trees are found on hills between the altitudes of one and two thousand meters above sea level. It is a reddish colored fruit on maturity. Kafal is mostly known as *Myrica esculenta*, but also referred as *Myrica Integrifolia* and *Myrica nagi*. The medicinal properties of the Kafal lies in the bark portion of the plant. Bark chiefly contains the chemical Myricitin [8].

11. PUTHKANDA

Achyranthes Aspera commonly called as "Puthkanda" in Hindi, is widely being used as herbal drug since ages. It has antifertility, antimicrobial, anti-inflammatory and also used as an immune stimulator. It is used in the formulations for stones in the kidney ; however, no scientific basis has been formulated for its anti-urolithiatic potency [9].

12. PUDINA

Pudina (*Mentha arvensis*) extensively used in the various food items and found to improve the

digestion [10]. It contains the flavonoids, triterpenes and essential oils. *Pudina* possesses the antibacterial effects and found to improve the lipid function and kidney function in the humans [11,12].

13. BANASKA

Viola odorata has been used in the traditional formulations for treating the headache, fever & bacterial infections. It was found to be very effective in the respiratory problems and used in the antitussive, febrifuge, analgesic, anti-inflammatory and anti-infectious formulations. Banaska has been found to be effective in the cancer and auto immune response. It also has aspirin like chemical moieties and effective in the migraine and headache. The complete plant possesses anti-inflammatory, anti-cancer, diaphoretic, diuretic, emollient, expectorant, and laxative properties. It is used in the treatment of bronchitis, cough, asthma, breast cancer, lungs cancer or digestive tract diseases. It is useful in improving the oral hygiene.

14. CONCLUSION

These plants are immunomodulatory, anticancer and improves the body functions. Various parts of plants like roots, barks, leaves and fruits are used in the food and medicines by local peoples.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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