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Practical Utility Of Indigenous Homoeopathic Drugs- Rauvolfia, Bael, Neem & Tulsi

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ABSTRACT: Plants are one the major source of drugs in all the medical systems. Indigenous plants are a plant which is local to that area and not available elsewhere. These plants have various phyto – chemicals which have properties to produce various symptoms. According to law of similia if that medicine use for curing the disease than undoubtedly prove very helpful. This article is trying to show the potential utility of the Indigenous Homoeopathic Drugs specially - Rauvolfia, Bael, Neem & Tulsi in the treatment of disease.

KEY WORDS: Bael, Homoeopathy, Indigenous plant, Neem, Phyto-chemical, Rauvolfia, Tulsi.

INTRODUCTION

Ancient history is available for the plants which have been a vital source of food, shelter, clothing, tools, and weapons for humankind. Early civilizations fight with illnesses and diseases mostly with natural products from native plants and fungi which were taken either in raw or partially processed form. Also these plants have been one of the vital sources of modern drugs and they are still play a significant role in the bio-discovery of chemical leads to developing novel therapeutic medicines. Globally 52,885 medicinal plants are identified but among them only about 15% species are reported with their phyto-chemical profiles.¹ Bio-discovery is an essential component for survival, economic wellbeing as well as dynamism of ecosystem.² Natural extracts study of medicinal plant has been increased since few years due to their bioactive compound found in different parts like polyphenols, vitamins and proteins among which phenolic compounds play an important role in pharmacological studies due to their biological effects because of the presence of the aromatic ring with one or more hydroxyl group which effects biological activity.³ Presence of these number of phyto -chemicals and metabolites help to boost immune system of human body and be effective against diseases such as Covid 19.³

World Health Organization acknowledged the importance of medicinal plants and has created various guidelines and strategies for its use.³ among all the species, the plants grow in a particular type of soil and environment bears remarkable affinity to the temperament and constitution of the individual inhabiting in that locality and found to be more suitable for disease of that region.⁴ This type of plants known as indigenous plant⁵ – “ A

plants and animals that grow or live naturally in a place, and have not been brought there from somewhere else”.

Hunter stated that⁴, “The Materia Medica of Hindus embrace a vast collection of drugs belonging to the mineral, vegetable and animal kingdoms, many of which have been adopted by European and American physicians.”

In recent years, Drs. P. N. Ray, P. C. Mazumdar, S. C. Ghosh, P. P. Biswas, K. K. Bhattacharya etc. added a few proving of this drugs in our Materia Medica on indigenous drugs but still many herbs and plants in India whose therapeutic virtues and identities are insufficiently known to us and if they will be thoroughly prepared & proved may turn to be very useful drugs of Homoeopathic Materia Medica.⁴ As Dr. Hahnemann in his Organon of Medicine said that according to law of Similia any substance which have a capacity to produce symptoms in its crude state can cure that symptom if given in dynamic form.⁶ This article is trying to give information about the affinity of this indigenous plants to cure various disease homeopathically because of their phyto-chemical properties.

RAUVOLFIA: - Rauvolfia also known as “SARPGANDHA” belongs to the Apocynaceae family which contain various phyto-chemical compounds or secondary metabolites - includes alkaloids like, reserpine, ajmaline, ajmalicine, deserpidine, serpentine, and yohimbine; phenols, tannins, flavonoids, and saponins.^{7, 8}

PHYTOCHEMICAL COMPOUND	ACTION
Reserpine	Natural tranquillizer Antihypertensive properties - acts on the central and peripheral nervous systems by depleting the storage of catecholamine's and serotonin, resulting in sedation and lowering of blood pressure Influences the concentration of glycogen, acetylcholine, gamma-amino butyric acid (GABA), nucleic acids, and anti-diuretic hormone Produce respiratory inhibition, stimulation of peristalsis, constriction of the pupils (myosis), relaxation of the nictitating membranes, and influence on the temperature-regulating center Increases the volume and acidity of gastric secretion
Ajmaline	Sodium channel blocker - stimulates respiration and intestinal movements and affects systemic and pulmonary blood pressure Used for diagnosing Brugada Syndrome
Ajmalicine	Treatment of circulatory diseases Affecting smooth muscle function and preventing strokes - helps in lowering blood pressure
Serpentine	Topo-isomerase inhibitor Antipsychotic properties
Rescinamine	Inhibits angiotensin converting enzyme and blocks the conversion of angiotensin I to angiotensin II - treatment of hypertension
Yohimbine	Alpha-adrenergic antagonist in the treatment of erectile dysfunction Dilates blood vessels and increases blood flow
Phenols	Toxic to pests and pathogens
Tannins	Astringent properties and aid in wound healing
Flavonoid	Antioxidants Anticancer activity
Saponins	Foaming properties Hemolytic action
Calcium	Aid in blood coagulation
Zinc	Diabetes management

Ascorbic acid - vitamin C	Wound healing and overall body function ⁸
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BAEL: - *Aegle marmelos* is a scientific name used for the Bael belongs to the family Rutaceae.⁹ It contains phytochemicals like, carotenoids, phenolic, alkaloids like alkaloids (aegeline, fragrine, aegelenine), coumarins (Marmin, Marmelide, Psoralen, Imperatorin), terpenoids (cineol, Caryophyllene), tannins, coumarins, flavonoids and terpenoids, Leaves - α and β sitosterol, Rutin, Flavone, Cineol Glycoside, O- Halfordiol, Marmeline, Lupeol, Citronellal, Marmesinin, Aeglin, Cuminaldehyde, Phenylethyl cinnamamides, Citral, Skimmianine, Eugenol, Isopentenylpectins, Fruit - Auraptene, Imperatorin, Psoralen, Tannin, Luvangetin, Bark - Fagarine, Marmin, Seed - Citral, A-D-phellandrene, Cineol, P-cymene, D-limonene, Cumin aldehyde, Citronellal.^{10,11} It is used for various clinical conditions like, managing asthma, fractures, anemia, wound healing, high blood pressure, jaundice, swollen joints, diarrhoea, and issues with typhoid during pregnancy.¹¹

PHYTOCHEMICAL COMPOUND	ACTION
Aegelin	Anti-diabetic
Auraptene	Inhibition of heart rate
Cineol	Expectorant, disinfectant
Citral	Anti-bacterial, Anti-fungal, and Anti-parasitic
Citronellal	Anti-cancer, Anti-septic
Cumin aldehyde	Insecticide
D-limonene	Dissolve cholesterol-containing gallstones
Eugenol	Anti-bacterial, Analgesic, and Anti-oxidant
Fagarine	Anti-plasmodial
Flavone	Anti-fungal
Imperatorin	Anti-viral ¹¹

Leaves – It is effective in treating fever, nausea, vomiting, swellings, dysentery, dyspepsia, seminal weakness, and intermittent fever. Root - Effective in treating urinary problems, preventing heart palpitations, curing fevers, and abdominal pain. Bark – Use to treat fever and cough. Flower - Anti-dysenteric, Anti-diabetic, diaphoretic action.¹¹

NEEM: - *Azadirachta indica* is a scientific name of the Neem which belongs to the family Meliaceae.¹² Neem leaves have proteins, carbohydrates, vitamin C, carotene etc. Various parts of *Azadirachta indica* tree have different bioactive compounds like, leaves - nimbosterol and quercetin, bark- nimbidin, flowers- kaempferol. The extracts of neem are known for curing various skin problems like dermatophytosis, atopic dermatitis and scabies. These compounds interact with the cell surface and prevent the cell from being infected by the viruses & do the diseases management through modulation of various genetic pathways and other activities.^{13,14} First polyphenolic flavonoids purified from fresh leaves of neem were Quercetin and β -sitosterol which are known for their antifungal and antibacterial activities.¹⁴ Leaves contain compounds like nimbin, nimbanene, 6-desacetylnimbinene, nimbandiol, nimbolide, ascorbic acid, n-hexacosanol and amino acid, 7-desacetyl-7-benzoylazadiradione, 7-desacetyl-7-benzoylgedunin, 17-hydroxyazadiradione and nimbio whereas seeds hold valuable constituents including gedunin and azadirachtin.¹⁴

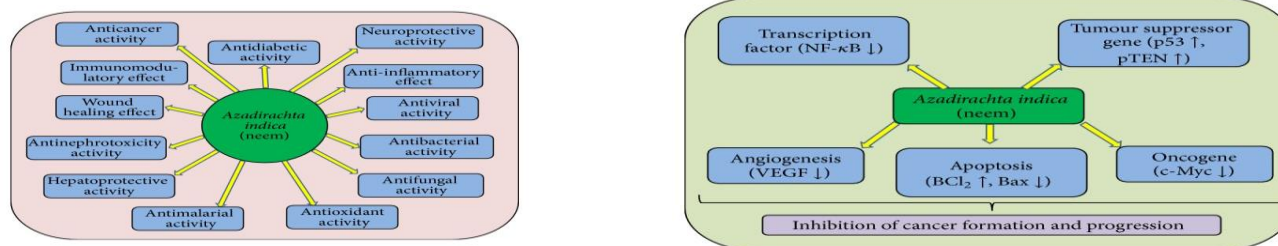


Fig. 1: Potential activity of the *Azadirachta indica*.¹⁴

Fig. 2: Presence of inhibitors of cancer formation and progression in *Azadirachta indica*.¹⁴

TULSI: Scientific name of Tulsi is “*OCIMUM SANCTUM*”, “*OCIMUM CANUM*” etc. which belongs to the family Lamiaceae. *Ocimum sanctum* contain phyto-chemicals like, Ursolic acid, Eugenol, Caryophyllene, Alkaloids, Glycosides, Saponins, Tanins, 1,8 cineole, E – beta ocimene, alpha humulene, methyl chavicol, germacrene – D, Beta bisabolene, A – bisabolene, etc. Leaves contain ascorbic acid, carotene, & essential plant oils.⁷

It have a capacity to produce symptom like, Forgetfulness, delirium, headache, apthae, nasal catarrh, painful throat, eructation, heaviness in abdomen, hepatic pain, diarrhoea, lochia, etc. high concentration of basil oil have carcinogenic, mutagenic & hypoglycemic effects.¹²

Ocimum canum contain Linalool, bergamotene, beta caryophyllene, oct – 1 – en – 3 – ol & 3 – octanol, nevadensin, salvigenin, hispidulin, circiliol, eupatorine epigenine, acacetin, genkwanin, cirsimaritin, ladanin, gardenin.⁷ It have a capacity to produce symptom like, Albuminuria, mastitis, bubo, renal calculi, diarrhea. Gynec problem.¹²

CONCLUSION: Indigenous drug have a vast potential for the various diseases but its use is still limiting. Same temperamental & a plant which grow in the same soil have a special affinity for the person residing in that same environment. So, the use of this plant can be very beneficial as compare to the foreign one. Large amount of homoeopathic medicines are belong to vegetable kingdom for curing the patient as a whole, but in this collection the indigenous plant are still not included in much extent. This article is trying to show the rich & exclusive qualities of the Indigenous plant – *Rauvolfia*, *Bael*, *Neem* & *Tulsi* which can be useful for the treatment of many diseases. If according to law of Similia this properties will use for treating patient than it can work like magic.

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