



**ETHNOMEDICINAL AND PHARMACOGNOSTIC DESCRIPTION OF SOME PLANT
POSSESSED THERAPEUTIC IMPORTANCE**

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ABSTRACT

Ayurveda is an ancient system of health care in India. Ayurveda involves five elements ether or space, air, fire, water and earth as foundation of body. These elements contribute towards the basic contents of health *Doshas*: *Vata*, *Pitta* and *kapha*. These *Doshas* responsible for physiological functioning of body and any disturbances in these essential elements may lead disease condition. Ayurveda suggest that elimination of toxins and reestablishment of constitutional balance retain optimal health and this can be achieved by proper nutritional supply and balanced life style, other than this use of herbs as medicine also help to maintain good health; thus as per Ayurveda plant based herbs or herbal formulation play significant towards the maintenance of optimal health and considering this fact this article summarizing pharmacognostic descriptions of some plants which possessed therapeutic value.

KEYWORDS: *Alstonia scholaris*, *Butea monosperma*, *Ailanthus excelsa*, *Clerodendrum serratum*, *Acacia nilotica*.

INTRODUCTION

Plants and plant derived medicines have made large contribution to human health. Various medicinal plants have been identified and used from the time of civilization. The constituents present in plants possess ability to perform many biological functions and to defend against diseases, use of plant materials as a source of medicines increases due to the various factors such as; population rise, prohibitive cost of treatments, inadequate supply of drugs, side effects of synthetic drugs and development of resistance towards the synthetic drugs for infectious diseases. The large number of medicinal and aromatic plants have been systematically identified and used for therapeutic purpose and more than 8,000 herbal remedies have been codified by AYUSH, even WHO (World Health Organization) also emphasized importance of herbal medicines and mentioned that large number of population world widely believe on herbal medicines.^[1-3] This article describes pharmacognostic properties of some plants which may be used therapeutically to maintain normal health function namely; *Alstonia scholaris*, *Butea monosperma*, *Ailanthus excelsa*, *Clerodendrum serratum*, *Acacia nilotica*.

Alstonia scholaris

Alstonia scholaris is belongs from *Apocynaceae* is tropical tree found in Indian and South East Asia, having

grayish rough bark. It is also known as Devils tree, *Dita* Bark tree. The plant is a growing up to 17–20 m in height and about 110 cm in diameter. It also called as; *Chattin*, *Chatium*, *Satiani*, *Satuparni*, *Saptaparna* and *Pala*.



Figure 1. Plant of *Alstonia scholaris*

SCIENTIFIC CLASSIFICATION

Kingdom: Plantae

Order: Gentianales

Family: Apocynaceae

Genus: *Alstonia*

Species: *A. scholaris*

Alstonia scholaris used as aphrodisiac, bitter tonic, febrifuge, expectorant, stimulant, anti-periodic, astringent and stomachic^[4], the plant parts also used in the treatment of chronic diarrhea, fevers and dysentery. Ayurveda mentioned that the plant bark may be used as alterative, tonic and gastro-intestinal sedative; also as alternative to quinine.

The bark extract useful for asthma, lung cancer, hypertension and pneumonia while the leaf extracts used against fever.^[5] It is also effective against boils and ulcers; the application of milky latex or young leave as poultice over affected area offer relief in boils and ulcers.

The bark of *A. Scholaris* is also given to lactating mothers to increase lactation and overcome some of the major post delivery weakness and digestion. Fresh ginger roots or zedoary mixed with leaves juice is given to women after confinement.^[4]

It contains alkaloids, coumarins, leucoanthocyanins, sugars, steroids and saponins. Various refreshers proved it's antiamebic, antidiarrheal, hepatoprotective, immunomodulatory, antiasthmatic, antioxidant, analgesic, antiulcer and antifertility activities. Bark is grayish brown, rough, bitter in taste secreting. The bark also called *Dita* Bark and used for bacterial infection, toothache, snakebite, rheumatism, dysentery and bowl disorder, etc.^[6-8]

Butea monosperma

Butea monosperma also known as *Palash*, belongs to the family *Fabaceae*, traditionally termed as *Palas*, *Mutthuga*, *Palash*, *Dhak*, *Bijasneha*, *Khakara* and *Chichra*. The *Butea* genus encompasses *Butea monosperma*, *Butea parviflora*, *Butea minor* and *Butea superb*.

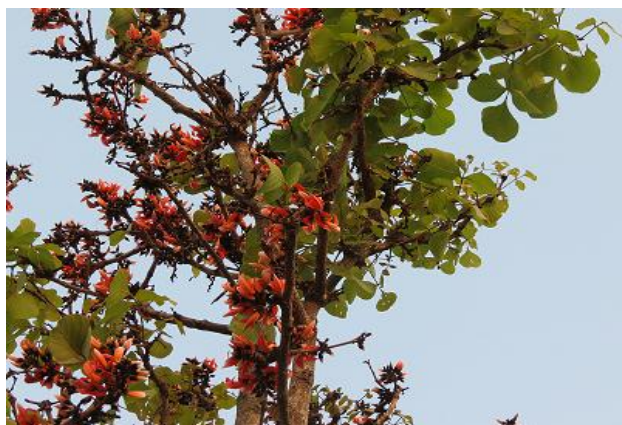


Figure 2. Plant of *Butea monosperma*

SCIENTIFIC CLASSIFICATION

Kingdom: Plantae

Division: Magnoliophyta

Class: Magnoliopsida

Order: Fabales

Family: Fabaceae

Genus: *Butea*

Species: *B. Monosperma*

The fresh juice offer relief in ulcers, congested and septic sore throats. The gum is used astringent when given internally for diarrhea, dysentery, phthisis and hemorrhage from stomach and the bladder, in leucorrhoea, ringworm and as a substitute for gum Kino.^[9]

It is 12-15 m in height with irregular branches, rough bark, leaves are 10-15 cm long, stipules linear lanceolate. Chemically it contains flavonoids, sugars, amino acids and gallic acid, it also possess; anti conceptive, anthelmintic, anti diabetic, anticonvulsive, anti diarrhoeal, anti estrogenic and anti fertility, antimicrobial, anti inflammatory, antifungal, antibacterial, anti stress, chemo preventive, haem agglutinating, hepato protective, anti peroxidative, radical scavenging and hypoglycemic effects.^[10,11]

Bark

Bark is bitter and acrid used as appetizer, aphrodisiac, anthelmintic and laxative also used in dysentery, ulcers, piles and tumours.

Ailanthus Excelsa

Ailanthus excelsa is a tree belonging to the family *Simaroubaceae*, distributed in Asia and north Australia and India. Used asanthelmintic, expectorant and also used in asthma & dysentery, useful in cough, fever and postnatal complaint.



Figure 3. Plant of *Ailanthus excelsa*.

SCIENTIFIC CLASSIFICATION

Kingdom:	Plantae
Order:	Sapindales
Family:	Simaroubaceae
Genus:	<i>Ailanthus</i>
Species:	<i>A. excelsa</i>

It is up to 10 m in height, straight trunk and 60-80 cm in diameter. Leaves are pinnately, large, leaflets 8-14 or

more pairs, ovate, long pointed, and edges coarsely toothed and often lobed. Flower shorter than leaves, flowers many, much branched, short stalked, greenish-yellow. It contains sterols and triterpenes; quassinoids, alkaloids; canthin-6-one and flavones.

Bark

Bark is light grey and smooth, rough, aromatic and slightly bitter. It is used for its anthelmintic, antispasmodic, expectorant, antipyretic, anti-fertility and antifungal activities.^[12,13]

Clerodendrum serratum

It is a shrub belonging to the family of *Verbenaceae*, also known as *Brahmanayashatika*, *Angaravalli*, *Phanji*, *Bhrugubhavaa* and *Gardhabashaaka*. As per Ayurveda it possesses *Tikata Rasa*, *Ushna Veerya*, *Katu Vipak*, *Ruksha* and *Laghu Guna*. It is a woody shrub with bluntly stems; leaves are usually three at node, 3-8 inch long with sharp thorns & oval in shape, flowers grow in bunches, slightly fragrant and pale blue pinkish in color. Fruits are purple black.



Figure 4. Plant of *Clerodendrum serratum*.

SCIENTIFIC CLASSIFICATION

Kingdom:	Plantae
Order:	Lamiales
Family:	<i>Lamiaceae</i>
Subfamily:	Teucrioideae
Genus:	<i>Clerodendrum</i>

Chemically it contains various minerals such as; Na, Mg, Al, Ca etc. It also possesses saponins, terpenoids and D-mannitol. It is used for inflammations, anorexia, cough, asthma, tubercular, colic, flatulence, helminthiasis, leucoderma and skin diseases etc.^[14,15]

Acacia nilotica

Acacia nilotica is a woody plant with woody vines and shrubs belonging from *Mimosaceae* family. It is widely distributed throughout Africa, Egypt and India. It is a medium size thorny tree has yellow flowers and long grey pods. The bark and branches are dark and branches bear spikes.



Figure 5. Plant of *Acacia nilotica*

SCIENTIFIC CLASSIFICATION

Kingdom:	Plantae
Order:	Fabales
Family:	Fabaceae
Genus:	<i>Vachellia</i>
Species:	<i>V. nilotica</i>

It contains alkaloids, carbohydrate, amino acids, proteins, saponin, anthraquinone, tannin, flavonoids, fixed oils and fats.

The bark is used for treating acutediarrhea, colds, bronchitis, bleeding piles, diarrhea, leucoderma and antibacterial activity.^[16,17]

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