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MEDICINAL VALUES, BIOLOGICAL ACTIVITIES, TOXICITY STUDIES, AND PHYTOPHARMACOLOGICAL ACTIONS OF *VITEX NEGUNDO*

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ABSTRACT

In recent years, there has been a greater emphasis on plant research around the world, and a vast body of evidence has accumulated to demonstrate the enormous potential of medicinal plants employed in diverse traditional systems. Researches have focused on finding and validating plant-derived compounds for the treatment of numerous ailments throughout the last few years. Similarly, other sections of plants, such as leaves, fruits, seeds, and so on, have been shown to provide health and nutrition-promoting chemicals in human diets. Another Indian plant with extensive traditional applications against a variety of ailments is *Vitex negundo* linn. The purpose of this review is to assemble the medicinal values of *Vitex negundo* derived from research employing cutting-edge scientific methods and cutting-edge scientific technologies.

Keywords: *Vitex negundo*, Nirgundi, Pharmacological Activities, Medicinal Values

INTRODUCTION

Since ancient times, medicinal plants have been a primary source of therapeutic substances for curing human sickness. The resurgence of interest in natural medicines began in the last decade, owing to the assumption that green medicine is healthier than synthetic pharmaceuticals. Because of the growing interest in the use of medical plants around the world, which is expanding at a pace of 7-15 percent per year, there has been a significant increase in medicinal plant-based industries in recent years. Despite considerable improvements in modern medicine, the creation of novel medications derived from natural sources is still a priority. [1] Traditional treatments based on herbal medical principles have been tried and true for thousands of years and are widely accepted across all cultural and socioeconomic groups. However, clear standards for studying herbal chemicals are lacking, and only a small percentage of this vast potential drug-repertoire has been systematically examined to yet. As a result, scientific evidence-based validation of these agents is critical [2]. Plant products are evaluated for medicinal and therapeutic qualities, which serves as a platform for the discovery of novel drug compounds from various plant sources. *Vitex negundo* is an important plant that has been studied since the beginning of time. Nirgundi (Hindi) and five-leaved chaste tree are two common names for this Verbenaceae family plant (English). *Vitex negundo* L. (Sambhalu) is an aromatic big shrub or small slender tree with quadrangular branches that grows to around 3 metres in height. It grows in damp areas, frequently along river banks, throughout India up to a height of 1500 metres, and in Mediterranean regions and Central Asia. It is thought to have a variety of therapeutic characteristics, including anti-inflammatory, fungal disease, antioxidant, and hepatoprotective effects. [3 & 4]*Vitex negundo*, sometimes known as the chaste tree with five leaves. Herbal remedies are a type of complementary and alternative medicine made from plants and plant extracts. Herbal treatments have been used to treat illnesses and diseases, as well as psychological issues, for ages and were the forerunners of modern

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medicine. Plant leaves, bark, berries, flowers, and roots are among the natural resources used to make herbal treatments. Herbal medicine is still a popular alternative in India and the Far East, and it is becoming more popular in India. Herbalists and indigenous healers around the world have always employed botanicals to prevent and treat liver illness. The efficacy of numerous plants in the treatment of liver disease has been verified by clinical research in this century. The methods by which some plants achieve their medicinal properties have been discovered through basic scientific investigation. Many researchers have looked into the effects of plants that have been utilised traditionally by indigenous healers and herbalists to maintain liver function and treat liver illnesses in recent years. In most cases, research has corroborated traditional knowledge and wisdom by uncovering the mechanisms and modes of action of these plants and reaffirming the medicinal efficacy of specific plants or plant extracts in clinical trials.[5]

DISTRIBUTION:

The plant can be found in India, Ceylon, Afghanistan, tropical Africa, Madagascar, China, and the Philippines, among other places.[5] The plant can also be found in Bengal, Southern India, and Burma.[6] It can be found in waste areas near villages, river banks, damp areas, and deciduous forests.[7] It can be found all over India, from the coastal belt to the subtropical Western Himalayas and the Andaman Islands, and is particularly plentiful in the drier zones. It's more common in Karnataka and Tamilnadu (Wild as well as cultivated).

Morphology:

A tall shrub or small slender tree with thin, grey bark and quadrangular, whitish branchlets with a delicate tomentum. Leaflets lancoelate, acute, terminal leaflet 5-10 by 1.6-3.2 cm with a petiole 1-1.3 cm long, lateral leaflets smaller with a very short petiole, all virtually glaborous above, coated with a fine white tomentum beneath, base acute; common petioles 2.5-3.8 cm long. [3-5] Bracts 1.5-2.5 mm long, lancoelatecaduceus; flowers in pedunculate branched tomentose cymes, opposed along the quadrangular tomentose rachis of a huge terminal frequently compound pyramidal panicle (axillary peduncles in the top axils sometimes present). Teeth triangular, 0.8-1mm long; calyx 3 mm long, white tomentose. The ovary is glaborous, the style is glaborous, and the stigma is forked. Drupe with a diameter of less than 6 mm that becomes black when ripe. (3), (5), (7), (8) The plant has a pungent, bitter, acrid taste; it is hot, astringent, stomachic, and anthelmintic, and it encourages hair development. It is good for eye disease, consumption, inflammation, leucoderma, spleen enlargement, bronchitis, asthma, biliousness, and difficult teething in children. The root is a snake venom antidote. The root is used for otalgia, arthritis, dyspepsia, colic, rheumatism, leprosy, verminosis, flatulence, diarrhoea, urinary problems, wounds, ulcers, bronchitis, cough, malarial fever, haemorrhoids, dysmenorrhoea, leprosy, skin illnesses, and general debility, among other things. Expectorant, carminative, digestive, anodyne, antiseptic, alterant, antipyretic, diuretic, emmenagogue, depurative, rejuvenating, ophthalmic, vulnerary, and tonic properties have been described for the plant. [7] The leaves have a pleasant scent and are tonic and vermifuge. [5, 6] In catarrhal fever with heaviness of head and dullness of hearing, a decoction of Nirgundi leaves is given with the addition of long pepper. For headache relief, a pillow packed with Nirgundi leaves is placed beneath the head.

The leaves' juice is reported to be effective at removing foetid discharges and worms from ulcers. [3,5,6] Diarrhoea, cholera, fever, haemorrhages, hepatopathy, and heart problems are all treated with the flowers. The leaves and bark are used to treat scorpion stings, while the seeds, in the form of anjan, are used to treat eye disorders.[7] In situations of irritable bladder and rheumatism, a tincture of root bark in 1 to 2 dr. dosages is advised. For piles and dysentery, powdered root is used as a demulcent. Dyspepsia, colic, rheumatism, worms, boils, and leprosy are all treated with root. (3), (6) The leaves are useful in dispersing swelling of the joints caused by acute rheumatism and swelling of the testes caused by repressed gonorrhoea. The dried fruit has a vermifuge effect. (5), (6) The fruit is nervine, cephalic, and emmenagogue; the dried fruits are a vermifuge; and the flowers are astringent and cool [6].

Characters with Unique Qualities:

Leaflets feature several minute happy spots and branchlets have large auxiliary spines. Many stamens can be found in the fragrant white blossoms. The fruits resemble those of a wood apple. The leaves and tender shoots are exceedingly fragile.

Characters in Powder:

Grey to grayish-brown cork cells with thick walls and angular cells, numerous prismatic calcium oxalate crystals, crystal fibres, starch grains simple, 5-19 India, mostly round to oval with certric hilum; compound starch grains with 2-3 components, fragments of xylem vessels with bordered pits and thick-walled xylem fibres

Collection of Preparation:

During the months of December and January, the leaves of *Vitex negundo* Linn, which is generally found in dry areas, were taken from Uthamaseeli, near Kallanai Dam, Tiruchirappalli district, Tamil Nadu, India.

Seeds and grafts are used to propagate the plant.

Medicina The therapeutic properties of the roots, bark, leaves, and fruits are well-known. Dasmula arista contains roots, which are used to treat colitis, dysentery, diarrhoea, flatulence, fever, vomiting, and colic.

Roots and barks are used to treat intermittent fevers, thirst, and body aches.

Leaves:

Leaf juices are used to treat ophthalmia, deafness, indigestion, piles, and jaundice, as well as catarrh and fever. Tender fruits are bitter astringents, antilaxatives, and digestive aids. They can also help with diarrhoea and dysentery.

Ripe Fruits:

Nutritious and refreshing, they are used to alleviate dyspepsia and improve vision.

Consitutents of Chemicals:

The alkaloid nishidine, flavonoids such as flavones, luteolin-7-glucoside, casticin, iridoid glycoside, an essential oil, and other elements such as vitamin C, carotene, benzoic acid, -sitosterol, and C-glycoside can all be found in the leaves (Hussain et al, 1992). Hydrocarbons, -sitosterol, benzoic acid, and phthalic acid are found in seeds (Hussain et al, 1992), as well as anti-inflammatory diterpenes, flavonoids, artemisin, and triterpenoids (Chawla et al, 1991, 1992). The yields of stem bark Hussain et al., 1992; Chopra et al., 1956) are leucoanthrocyanidins.n-Tritriacontane, nhentriacontanol, nhentricontane, n-pentatricontane, nnonacosane, -sitosterol, phydroxybenzoic acid, and 5- oxyisophthalic acid were obtained from the seeds of *Vitex negundo* by N.K. Basu et al. (1944), G.S. Gupta et [9,10,11] Friedelin, vitamin C, carotene, casticin, and artemetin were isolated from leaves by U.K. Rao (1977). [12]G.S. Misra and P.M. Subramanian (1980) discovered three novel flavone glycosides: 3,6,7,3',4'-Pentamethoxy-5-Oglucopyranosyl-rhamnoside, vitexin cafeate, and 4'-O-methyl myricetin-3-O-[4"-O—Dgalactosyl]-β-D-galactopyranoside.[13] G. Gu et al. (1986) discovered four lipids in *Vitex negundo*: lionleic acid, oleic acid, stearic acid, and palmitic acid.[14] S. Li et al. (1987), S. Chandra et al. (1987), J. Banerji et al. (1988), P.T. Kosankar et al. (2000) discovered a stilbene derivative, 4,4'- dimethoxy-trans-stilbene, in the leaves and twigs of *Vitex negundo*, as well as five flavones, 5,6,7,8,3'4' pentame (corymbosin). [15-18] terpinen-4-ol, -terpineol, sabenine, globulol, spathulenol, -farnesene, farnesol, bis (1,1dimethyl) methylphenol, -pinene, linalool, terpinyl acetate, caryophyllene epoxide, caryophyllene epoxide, caryophyllene [19-22] -copaene, -caryophyllene, -elemene, camphene, -thujene, -pinene, sebinene, linalool, stearic acid, and behenic acid were discovered by Pradeep Singh et al. (2010). [23] L. Sun (1989), J. X. Pan (1989), R. Gopal Mallvarapu (1994), V. Singh (1999), and R. Dayal (2000) reported the isolation of -elemene, -elemene, -eudesmol, camphor, camphene, careen, 1,8-cineol, 1-oceten-3-ol, -terpinine, phellendrene, -phellendrene, a [24-28] Leaves were also used to extract Vitexicarpin. [22] The flavones 5,7,3'-trihydroxyflavone and 6,8,4'- trimethoxyflavone were isolated by S.K. Bhargava (1989) and R.S. Telang et al. (1999). 29,30 A flavonoid called artemetin was discovered by A.S. Chawla et al. in 1991. [30] A.S. Chawla et al. (1992) and D.S. Hebbalkar et al. (1992) reported triterpenoids 3-acetoxyolean-12-en-27-oic acid, 2,3-dihydroxyoleana-5,12-dien-28-oicacid, 2,3diacetoxyoleana-5,12-dien-28-oic acid, 2,3diacet. From the seeds of *Vitex negundo*, A.S. Chawla et al. (1992) and M. Ono et al. (2004) isolated a new phenyldihydronaphthalene-type lignan, vitedoin A, a new phenylnaphthalene-type lignan, vitedoamine A, and a new trinorlabdane-type diterpene, vitedoin B, as well NMR and MS data were mostly used to establish their chemical structures. [24, 25] M. F. Dariyat et al. (1994) discovered four iridoids in the pharmacologically active portion of *Vitex negundo* L. leaves, which they named 2'-phydroxybenzoyl mussaenosidic acid, agnuside, and lagundinin. The information discovered for 2'-phydroxybenzoyl mussaenosidic acid changes a previous identification, whilst lagundinin is a new iridoid. Glucosyl and p-hydroxybenzoic acid are present in three of the iridoids. In addition to the four iridoids identified, two more iridoids, aucubin and nishindaside, were found in the leaves of *Vitex negundo*. [16] The structure of vitexilactone and casticin was elucidated by J.A. Rideout et al. (1999) using a chloroform extract of *Vitex negundo* leaves. This is the first study on the isolation and structure elucidation of vitexilactone from *Vitex negundo* using NMR. Casticin was previously identified as a component of V. negundo. [17] From the heartwood of *Vitex negundo*, V. Krishna et al. (2002) extracted -amyrin, epifriedelinol, and oleanolic acid. [8] V. Singh et al. (2003) isolated and characterised the twelve pure compounds viridiflorol, squalene, 5-hydroxy-3,6,7,3',4'- pentamethoxy flavones, 5-hydroxy-3,7,3',4'-tetramethoxy flavones, 5,3-dihydroxy- 7,8,4- trimethoxy flavanone, phydroxybenzoic acid, 3,4-dihydroxybenzo The presence of squalene in the leaves of V. negundo is reported for the first time. This is the first time squalene has been isolated from leaves. [19]

F. Diaz et al. (2003) discovered six new acylated derivatives of vitexicarpin, including 3'-Benzoyloxy-5-hydroxy-3,6,7,4'- tetramethoxyflavone, 5,3'-Dibenzoyloxy-3,6,7,4'- tetramethoxyflavone, 5,3'-Dipropanoyloxy-3,6,7,4'- te [20] R. D. Manohar et al. (2003) discovered two pentacyclic triterpenoids in *Vitex negundo* leaves: betulinic acid (3-hydroxylup-20- (29)-en-28-oic acid) and ursolic acid (2-hydroxyurs-12-en-28-oic acid), as well as three additional compounds: an aliphatic alcohol, n-hentriacontanol, and phydroxybenzoic acid.[11] A. Haq et al. (2004) and R. Dayal et al. (2004) discovered Vitexoside, a novel flavonoid glycoside and agnuside, R-dalbergiphenol, from the root of *Vitex negundo*. [22 and 23] A. Malik et al. (2006) extracted eight lignans from methanolic preparations of the roots, which they named negundin A, negundin B, 6- hydroxyl-4-(4-hydroxy-3-methoxy)-3- hydroxymethyl-7-methoxy-3,4-dihydro-2-naphthaledehyde, vitrofolal E, and vitrofolal F. (+)-

lyoniresinol, (+)-lyoniresinol-3-O-Dglucose, (+)-(-)-pinoresinol, and (+)-diasyringaresinol are all examples of lyoniresinol. [14] R. Maurya et al. (2007) isolated new flavones glycoside along with five recognised compounds from the ethanolic extract of *Vitex negundo* leaves, which was identified as 4',5,7- trihydroxy-3'-O—D-glucuronic acid-6''-methyl ester, a new naturally occurring molecule dubbed vitexoside. [15] Bark was used to isolate vanillic acid, p-hydroxybenzoic acid, and luteolin; two novel leucoanthocyanidins were recovered from stem bark, and their structures were identified to be 6, 8- di-O-methylleucocyanidin-7 Orhamnoglucoside.[10]

A furanoeremophilane is found in the roots. The flavonoids, 6-C-glycosyl-5-Orhamnopyranosyl trimethoxy wogonin and acerosin-5-glucoside monoacetate, as well as the flavonones, leucodelphinidin methyl esters and leucoanthocyanidins-7-Orhamnoglucoside and the flavonoids, 6-C-glycosyl-5-Orhamnopyranosyl trimethoxy wogon 6-glucopyranosyl-7-hydroxy3',4',5',8 tetramethoxyflavone-5-O—Lrhamnopyranoside; 3',7-dihydroxy-4',6,8 trimethoxy flavone-5-O- (6''-Oacetyl—D-glucopyranoside); 3,3',4',6,7- pentamethoxyflavone-5-O The iridoid glycosides 2-phydroxybenzoylmussaenosidic acid, 6' phydroxybenzoylmussaenosidic acid, negundoside (C23H28O12), and nishindaside can be found in the leaves (C15H24O9). They also contain 5,3-dihydroxy-7,8,4-trimethoxy flavanone and 5,3-dihydroxy-6,7,4-trimethoxy flavanone, which are isomeric flavanones. They also contain casticin and the glucosides leutolin-7-glucoside (C21H20O11) and -D-glucoside of a tetrahydroxy monomethoxy flavone (C22H24O12, m.p. 2450), as well as casticin. 5,3'-dihydroxy-6,7,4'- trimethoxy flavone (m.p.135-1360), 3',4',5,5',6,7,8- heptamethoxyflavone, 3-O-desmethylartemetin, 5- Odesmethylnobiletin are all found in the leaves and twigs. 5-oxyisophthalic acid and vitextriterpine are found in the seeds (C30H50O8). The diterpene 5-hydro-8,11,13-abietatrien6-ol, the triterpene lanostan-8, 25-dien-3-ol, and the triterpenoids 3-acetoxyolean-12-en-27-oic acid, 2, 3dihydroxyoleana-5,12-dien-28-oic acid, 2, 3diacetoxyoleana-5,12-dien-28-o (C20H20O6, m.p. 126-127). (16-15)

Formulation of Importance

Manasa Amrtarista, Dantyadyarista, Agastya Haritak, Rasayana, Dasamularista, Dasamula Kwatha Churna, Bilvadi Letha, Mitra Vataka, Amrtarista, Dantyadyarista, Agastya Haritak, Rasayana, Dasamularista, Dasamula Kwatha Churna, Bilvadi Letha Ayurvedic formulations (n.d.)Vatavyadhi, Sotha, Sula, Agnimandya, Chardi, Mutrakreehra, Amavata, Vatavyadhi, Sotha, Sula, Agnimandya, Chardi, Mutrakreehra, Amavata

ACTIONS OF PHARMACOLOGY

Analgesic Effects

Ravishankar et al. (1985, 1986) discovered that intraperitoneal administration of various leaf and root extracts in various solvents had analgesic effect. M.G. Dharmasiri et al. (2003) used hot plate, tail flick, and formalin tests to assess analgesic efficacy of an aqueous extract of fresh leaves of *Vitex negundo* in female Wistar rats. Aspirin (100 mg/kg) was the standard medication utilised in hot plate and tail flick studies. [16]

Anti-inflammatory and anti-arthritic properties:

Different parts of the plant, particularly the leaves, fruits, roots, and seeds, have been shown to have anti-inflammatory and anti-arthritic activity in experimental studies using various animal models (Chaturvedi & Singh, 1965; ravishankar et al, 1985, 1986; Chawla et al, 1991, 1992; Tamhankar & Saraf, 1994; Jana et al, 1999). In carrageenan-induced rat paw edoema, A.S. Chawla et al. (1992) evaluated anti-inflammatory efficacy of chloroform extract of seeds of *Vitex negundo* in Sprague-Dawley male rats using Ibuprofen as a reference medication. [30] Antiinflammatory activity of *Vitex negundo* bark, seeds, seed oil, and essential oil has been documented by U.K. Rao et al. (1977), M.B. Ahmad et al. (1989), A.S. Chawla et al. (1991), and E. Nyligira et al. (2004).), [12] *Vitex negundo*, combined with Zingiber officianale and Tinospora cordifolia, was found to have early anti-inflammatory effects in albino rats by U. Jana et al. (1999). [5] M.G. Dharmasiri et al. (2003) evaluated antiinflammatory efficacy of *Vitex negundo* leaves aqueous extract in Wistar rats (male) using carrageenan- and formaldehyde-induced rat paw oedema and indomethacin as a control. In an inversely dose-dependent manner, the early phase of carrageenan-induced rat paw oedema was dramatically decreased. [26] Using carrageenan-induced rat paw oedema and cotton pellet granuloma models, R.K. Gupta et al. (2006) found anti-inflammatory effectiveness from the ethanolic extract of *Vitex negundo* leaves in albino rats (of either sex) using phenylbutazone (10-100 mg) and ibuprofen (10-200 mg) as standards. [7] The antiinflammatory efficacy of an ethanolic extract of roots was found by Pradeep Singh et al. (2009). Activity against hyperpigmentationUsing a SpectraMax 340 microplate reader, A. Malik et al. (2006) studied the tyrosinase inhibitory ability of lignans extracted from the methanolic extract of *Vitex negundo* roots.[24] Immunostimulant Action; D.D. Singh et al. (2005) found that extracts of *Vitex negundo* have immunostimulatory activity in an oxyburst phagocytic experiment utilising human polymorph nuclear cells.[18] J.L. Suri et al. discovered that two iridoid glucosoides from *Vitex negundo* leaves have immunostimulatory properties.

Hepatoprotective Properties :

A. Prabhakar et al. looked into the hepatoprotective properties of *Vitex negundo*side and agundoside. Both substances were combined with one or more pharmaceutical additives that were used to prevent and cure liver disorders. [26,27]M. Gupta et al. (1997, 1999) investigated the CNS activity and anticonvulsant

properties of petroleum ether and methanolic extracts of *Vitex negundo* in mice. [24, 25]

Anti-androgenic Properties:

Various flavonoids from the seeds of Vitexnegundo have been shown to have antiandrogenic activity by S.K. Bhargava (1984, 1986) and R.P. Samy et al. (1998). The flavonoids 5, 7, 3'-trihydroxy and 6, 8, 4'-trihydroxy flavones have estrogenic effects as well as anti-implantation capabilities. [26, 27, 28]

Activity of Enzyme Inhibition

Negundin B and Vitrofolal F, according to A.Haq et al. (2004), have anti-lipoxygenase and anti-butyrylcholinesterase properties. [21]

Mosquito repellents are used to keep mosquitoes at bay.

Aqueous extracts of *Vitex negundo* leaves were investigated for mosquito repellent efficacy by P.K. Amancharla et al. (1999). The activity of a novel chemical called 'rotundial' was investigated. Anticonvulsant Activity [22]

The leaf extracts of petroleum and butanol have showed protection against maximum electroshock (MES) seizures, but none of the root extracts have. Only Leptazole indused convulsions were protected by petroleum root extract (Raviahnkar et al, 1985, 1986)83-88, whereas Strychnine and Leptazole indused convulsions were protected by methanolic leaf extract (Gupta et al, 1999) [25].

Activity of Antioxidants:

Vitedoin A, Vitedoin B, and other lignans derivatives from the seeds of *Vitex negundo* have been shown to have antioxidant potential by G. Zheng et al. (1999) & G. Zheng and Z. Luo (1999), M. Onu et al. (2004). [22] V. Tondon and R.K. Gupta (2005) discovered that Vitexin, a novel chemical, has anti-oxidant properties. [12] O.P. Tiwari and Y.B. Tripathi (2007) used multiple invitro systems to test the antioxidant properties of different fractions of *Vitex negundo*, including 2, 2'-azino-bis3-ethyl benzothiazioline-6-sulfuric acid (ABTS), Lipid peroxides (LPO), Superoxide, Hydroxyl radical scavenging, and iron chelation. The assay was used to measure total antioxidant capacity based on the conducted radical monocation ABTS. Egg yolk homogenates were used as lipid rich media to analyse LPO in terms of thiobarbituric acid reactive compounds. [23]

Activities that are insecticidal and pesticidal :

V.negundo plant products have been shown to have insecticidal activity against stored product pests, mosquito larvae, house flies, and tobacco leaf chewing larvae, among other things. The plant's leaf oil has been demonstrated to resist pests in stored products (Deshmukh et al, 1982; Prakash & Mathur, 1985; Hebbalkar et al, 1992).

Toxicity:

Tandon and Gupta (2004) conducted a preliminary acute toxicity analysis of ethanolic leaf extract in albino rats via oral route and found it to be practically harmless, with an LD50 level of 7.5 g/kg/wt. In any of the doses of the extract tested, there were no histomorphological changes in the stomach. The heart, liver, and lung specimens, on the other hand, showed dose-dependent histomorphological changes [22].

Dosage Recommended:

Almost all of its parts are used medicinally, including the leaves, roots, bark, fruits, flowers, and seeds, and can be taken as a powder, decoction, juice, oil, tincture, sugar/water/honey paste, or dry extract. Adults should take 10-20ml of juice, 50-100ml of decoction, 1.5-3g of leaves powder, and 300-600mg of dry leaves extract (Chaundhary, 1996).

CONCLUSION:

Many experimental experiments have shown that V. negundo has a wide range of biological activity. It is a type of herbal medication with a solid conceptual foundation for its application. As a result, this plant has a lot of potential to be developed as a medicine by pharmaceutical companies, but before they propose it for therapeutic usage in certain conditions, clinical trials must be conducted to verify its clinical utility.Medicinal plants, which are the foundation of traditional medicine, have been the topic of extensive pharmacological research in the last few decades, with the usefulness of medicinal plants as possible sources of new therapeutic chemicals and as sources of lead compounds in drug development. As a result, there is a need to screen medicinal plants for bioactive chemicals as a foundation for subsequent pharmacological research. According to a careful review of the existing literature, the relevance of Nirgundi in traditional medicine is evident. Herbal remedies are made from almost every component of the plant. The plant is known to have anticancer, antimicrobial, antifeedant, antiinflammatory, antihyperpigmentation, hepatoprotective, antihistaminic, analgesic, and other anticancer, antimicrobial, antifeedant, antiinflammatory, antihyperpigmentation,antihyperpigmentation,hepatoprotective, antihistaminic, analgesic, and related properties. Extensive scientific reports on the plant, its therapeutic characteristics, and active chemical constituents play a part in the treatment of a variety of human illnesses. This review aims to cover all of the literature on *Vitex negundo*, including traditional usage, chemical ingredients, and an overview of its numerous pharmacological properties.

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