

AN OVERVIEW ON *MIMOSA PUDICA* (TOUCH-ME-NOT PLANT)Vijay D. Havaldar*¹, Savita S. Mali¹, Kailas K. Mali², Snehal S. Shinde¹ and Nilam Y. Jadhav¹¹Adarsh Institute of Pharmacy, Vita, Sangli 415311, Maharashtra, India.²Adarsh College of Pharmacy, Vita, Sangli 415311, Maharashtra, India.

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ABSTRACT

Mimosa pudica is short-lived evergreen shrub commonly known as the “touch-me-not” plant, Chui Mui, Shame plant. Its various parts have therapeutic value. The roots of *Mimosa pudica* are bitter, astringent, acrid and cooling. They are used in the treatment of ulcers, inflammations, asthma, diarrhea, urinary complaints and fistulas. The plant contains the alkaloid mimosine, and extract of its leaves contains adrenaline-like substance. It has promising pharmacological profile like antibacterial, antivenom, antifertility, anticonvulsant, antidepressant, aphrodisiac etc. The herb has been used traditionally in the treatment of urogenital disorders, dysentery, sinus, and also applied on wounds. The juice of freshly crushed leaves is used internally and externally in piles, to treat cuts and wounds. It is also applied externally to fissures, skin wounds and ulcers. The hemostatic property of *Mimosa pudica* helps to control bleeding in piles. It is commonly distributed in open-spaces, especially road side, cultivated land and waste area. It has prickly stems and small, fluffy, ball-shaped pink flowers in summer. Its anti-inflammatory activity reduces inflammation and helps to control secondary infections. This paper is an attempt to explore and compile different pharmacognostic aspects of the plant *M. pudica*.

KEYWORDS: Aphrodisiac, diuretic, *Mimosa pudica*, seismonastic nyctinastic movement.

INTRODUCTION

‘*Mimosa pudica*’ is a creeping annual or perennial herb.^[1] It was first described by Carl Linnaeus in *Species Plantarum* in 1753. ‘Mimosa’ is a Greek word means mimic and ‘pudica’ is a latin word which has a meaning, shy. Folding movement observed by this plant leaves after external physical disturbances or contact. It undergoes changes in leaf orientation at night called as nyctinastic movement, which is controlled by a biological clock. It is often grown for its curiosity value. The compound leaves fold inward and droop when touched or shaken, defending themselves from harm, and re-open a few minutes later called as seismonastic movement. The plant has 500 species and about 50-70 cm in height.^[2] It has been identified as lajjalu in Ayurveda and found to have high ornamental value. The leaves of sensitive plant *M. pudica* can adapt their closing response to electrical and mechanical stimulation. The foliage closes during darkness and reopens in light. This was first studied by French scientist Jean-Jacques d’Ortous de Mairan³. Due to Mimosa’s unique response to touch, it became an ideal plant for many experiments regarding plant habituation and memory. It is used for various medicinal purposes such as phytochemical studies. Those studies on *M. pudica* revealed the presence of alkaloids, non-protein amino acid (mimosine), flavonoids, C-glycosides,

sterols, terpenoids, tannins, and fatty acids.^[4] *M. pudica* is known to possess anticonvulsants antiasthmatic, aphrodisiac, analgesic and antidepressant, sedative, emetic, and tonic properties and has been used traditionally in the treatment of piles, alopecia, diarrhea, dysentery, diuretics, insomnia, tumor, and various urogenital infections. It helps in managing blood sugar levels by increasing insulin secretion due to its antioxidant properties.^[5] Lajvanti paste can be used for quicker wound heal in reducing pain and swelling due to its antioxidant, antimicrobial anti-inflammatory property. The use of a paste of Lajvanti on the forehead is also used to relieve migraine. It is a mysterious element not only because of its drooping reaction when touched but also because of its abundant nutrients and therapeutic properties.^[6]

Synonyms^[1,4,5,7,8]

Sanskrit: Lajja, English: Sensitive plant, Hindi: Lajalu, chui mui, Bengali: Lajjavati, Gudjrat: Reesamani, Tamil: Tottalavadi, Telugu – Attapatti, Kannada: Nachika.

Scientific Classification^[9]**Kingdom:** Plantae**Division:** Magnoliophyta**Class:** Magnoliopsida**Order:** Fabales**Family:** Fabaceae

Genous: Mimosa

Species: *Mimosa pudica*

Geographical Distribution^[10]

The species is native to the Brazil, Caribbean and South and Central America, but is now a pantropical weed. Now it can found in the Southern United States, South Asia, East Asia, Micronesia, Australia and South Africa as well found all over India.

Morphology^[11]

Colour, Size and Shape

Root: Roots of *M. pudica* are cylindrical, tapering with secondary and tertiary branches, varying in length up to 2 cm thick. It has longitudinally wrinkled surface with hard and woody fracture, more or less rough; grayish-brown to brown.

Stem: The stem is cylindrical, branched, about 1.5 m in length and up to 2.5 cm in diameter, longitudinally grooved, external surface light brown, internal surface grey. The stem is erect in young plants, but becomes creeping with age.

Leaf: The plant has bipinnate, compound sessile five primary leaves with petiolate, stipulate, linear lanceolate. There are 10–20 pairs of secondary leaflets which are 0.6 - 1.2 cm long, 0.3 - 0.4 cm broad. Leaves are arranged symmetrically and close after touch hence it is called as sensitive tree.

Flower: Flowers are pink, spherical in globose head arise from the leaf axils in mid-summer, 8 - 10 mm in diameter, 0.5 mm height. It shows radial symmetry and is four lobed, with four stamens, sessile ovary as well as numerous ovules. It forms blossoms in rainy seasons. Pollens have globose to ovoid heads and are circular with approximately 8 microns diameter and pollinated by insect and wind.

Fruit: Fruits are leguminous, simple, dry, 1 – 1.6 cm long, 0.4 – 0.5 cm broad having two to five seeds, The fruit consists of clusters of two to eight pods, these being prickly on the margins. The pods break into two to five segments and contain pale brown seeds about 2.5 mm long.

Seed: Seeds are compressed, oval-elliptic, and brown to gray in color,. The seeds are 0 - 0.3 cm long and 2.5 mm broad. The seeds have hard seed coats which restrict germination.

Odour: Distinct

Taste: Astringent, bitter, pungent

Part of plant used: Whole plant or roots.

Verities

The *Mimosa pigra* and *Mimosa diplotricha* have an upright growth pattern. *M. pudica*, with a spreading growth pattern, remains flat and lying on the ground

throughout its lifetime. *M. pudica* has only 1-2 pairs of branches while the *M. pigra* and *M. diplotricha* var. *diplotricha* each has 6 - 16 and 4 - 9 pairs respectively.

Dose^[12]

Fresh juice: 10 - 20 ml.

Decoction: 50 - 100 ml in divided doses per day. 10–20 g of drug for decoction.

Capsule: 1 - 2 capsules daily or as directed by a physician.

Preparations of Formulations^[13]

1. *Mimosa Pudica* Poultice to Heal Wounds

For the preparation of poultice, take a handful of the fresh leaves and pound it along with little quantity of water to get a paste.

2. *Mimosa Pudica* Tea for Diarrhea

In order to prepare tea, boil a cup of water along with a small bunch of freshly picked *M. pudica* leaves till the color of the water changes then strain it. This tea can reduce blood sugar levels, reduce anxiety as well as depression and also treat stomach ulcer.

3. *Mimosa Pudica* Oil

Heat a cup of unrefined sesame oil in a pan then add in 1/4 cup of *Mimosa pudica* leaves and mudakathan keerai leaves in equal quantities in order to make the oil. Heat the oil till the sizzling sound stops which indicates that the moisture is completely removed and then stop heating. This oil can be used as massage oil for treating all kinds of aches and pains.

Ayurvedic formulations

1. Kutaja avaleha
2. Ural BPH capsule
3. Selip tablet and syrup
4. Samangadi churna
5. Palsineuron capsules.
6. Lakshadi churna
7. Pilocure tablet
8. Samangaadi Churna
9. Kutajavaleha,
10. Pusanug Churna,
11. Bhret Gangadhara Churna.

Propagation: It is propagated by seeds and vegetative methods.

Toxicity: *M. pudica* does not show any significant toxicity but sometime it may show dose dependent constipation.

Precautions: The precautions should be taken while using Lajvanti in breast feeding mother and in pregnancy. The patient should be advised to consult a physician before taking the formulations in such conditions.

Agriculture Impact:^[14] The species can act as a weed for tropical crops like cotton, soybeans, tomatoes, upland

rice, bananas, sugarcane, coffee, oil palms, papayas, coconuts, and rubber. But it may become headache to farmer due to its thorns and woody roots. The variety in "Hawaii" is reported to be toxic to livestock. It can change the physico-chemical properties of the soil at the place where it invades. It extracts heavy metals such as copper, lead, tin, and zinc from polluted soils. It can form root nodules that convert atmospheric nitrogen into a form that is usable by the plant by nitrogen-fixing bacteria. The roots of *Mimosa pudica* create carbon disulfide, which prevents certain pathogenic and mycorrhizal fungi from growing within the plant's rhizosphere. It acts as a food for some animals.

Majors taken to prevent spread of *M. pudica*

- Physical Method: burning of plant.
- Chemical Method: use of herbicide like Picloram and Triclopyr but these are ineffective when leaves are closed.
- Biological Method: Use of coir dust, a waste product from coconut processing and sheep grazing.

Habitat:^[15] *M. pudica* is mostly found in plantation crops, disturbed sites, pastures, waste areas, parks, lawns, gardens and along roadsides.

Seismonastic Movement of leaves^[15]

When the plants are shaken they respond immediately by folding their leaves such leaf movements can be mediated by specialized motor organs, the pulvini, a swelling at the base of a leafstalk. The pulvini cells changes in its turgor pressure due to water moving in and out of these cells, and multiple ion concentrations play a role in the manipulation of water movement. The parenchymatous motor cells in the pulvini are the units of contractibility in the response; it also contains water and nutrient conducting strands. Upon some physical stimulations like touch, wind, heat and extreme light, electrical signals are triggered, translated to chemical signal which generate action potential and migration of potassium from the motor cell to intercellular spaces in the various pulvini and decreases trigger pressure. Calcium ions, mainly located in the tannin vacuole released upon stimulation. This causes contraction and influence water movement and water accumulate on one side of the pulvini. Thus, stimulation action potential generated is transmitted to pulvinus and from there to the pulvini of other leaflets, which run along the length of the leaf is called as seismonastic movement of leaves. Closing of leaves occurs for 4 - 5 seconds but reopening process requires 600 seconds. The information passed along can control which genes are turned on and which genes are turned off, which could act as a mode for long term memory. It indicates that plants were not ignoring the dropping stimulation due to exhaustion and has the capability for habitual learning.

Nyctinastic Movement: After evening leaflets are folded and reopen at morning. This occurs due to inherent

rhythm or biological clock present in plant. Such physical behavior is called as nyctinastic movement.

Requirements:^[16]

- Altitude: It should be less than 1300 m above sea level.
- Light: It requires full sun or light shade.
- Temperature: Intolerant to frost.
- Annual rainfall: 1000 to over 2000 mm
- Soil: It can grow on poor soils due to its ability to fix nitrogen and prefers well drained soils.

Reasons for bending movement of *M. Pudica*^[17]

- Upon closing of leaves spines on plant appears more obvious and deter grazing animals for going near and consume it or it becomes less attractive for them.
- Closed leaves desiccate to less transfer of heat and water to environment.
- Animals may be afraid of a fast moving plant and would rather eat a less active one.
- The sudden movement dislodges harmful insects.

Different mechanisms involved in movement of *M. pudica* leaves^[15]

- The bending movement of the pulvinus of *M. pudica* is caused by a rapid change in volume of the abaxial motor cell, in response to various environmental stimuli. The actin filaments in the motor cells are fragmented in response to electrical stimulation. The depolarization of the actin cytoskeleton in pulvinus motor cells in response to electrical signals results in increased levels of calcium. The bending of the pulvinus is retarded by treatments with actin-affecting reagents and calcium channel inhibitors.
- On comparing the cell cytoskeleton by immunofluorescence analysis before and after movement and evaluation of the effects of actin and microtubule targeted drugs by injecting them into the cut pulvinus, it is seen that fragmentation of actin filaments and microtubule occurs during bending, actin cables become loose after bending.
- On injecting phosphatase inhibitors into several pulvinus to examine the effects of such inhibitors, it is seen that changes in actin isoforms, fragmentation of actin filaments and the bending movements are all inhibited after injecting a tyrosine phosphatase inhibitor.
- Special red cells are found on the axial surface of the tertiary pulvini of *M. pudica*. Using anatomical and electrophysiological techniques it has been demonstrated that these red cells are the real mechanoreceptor cells. They can generate receptor potential following mechanical stimuli and they are in connection with excitable motor cells.
- Important proteins like H⁺-ATPase, aquaporin, and actin aid in the redistribution of ions in pulvini, especially during a seismonastic response. H⁺-ATPase and aquaporin aid in the direct movement of water molecules, while actin's role has a more

biochemical explanation. Actin is composed of many phosphorylated tyrosine molecules, which directly correlates to how much the *M. pudica* leaves drop.

6. High concentrations of potassium, chloride, and calcium led to a rapid decrease in water in the pulvini, which results in the drooping of the *M. pudica* leaves. Mitigation of this gradient resulted in less reaction and movement of the leaves.
7. When the plant is stimulated it releases a surge of calcium ions that are sensed by the protein calmodulin which stimulate voltage gated ion channels and cause electrical signals, which could be the base of plant's long term memory.
8. The plant cells act similarly to neural cells by creating electrical gradients by opening and closing ion channels and passing it along cell junctions.
9. Folding movement of leaves interferes with the process of photosynthesis.
10. It was postulated that the neurohumor acetylcholine might mediate movement in *Mimosa*. Since no acetylcholine is present in *Mimosa* two amines, serotonin and norepinephrine were assayed in various "sensitive" plant. *Mimosa* contained only norepinephrine which may be responsible for the movement.

Research related to *Mimosa Pudica*^[16,17]

Wilhelm Pfeffer, a German botanist during the 17th century, used *Mimosa* in one of the first experiments testing plant habituation.

In 1965, when Holmes and Gruenberg discovered that *Mimosa* could distinguish between two stimuli, a water drop and a finger touch. Their findings also demonstrated that the habituated behavior was not due to fatigue since the leaf-folding response returned when another stimulus was presented.

Electrical signaling experiments were conducted on *Mimosa pudica* where 1.3 - 1.5 volts and 2 - 10 μC of charge acted as the threshold to induce closing of the leaves.

Further in 2017, Neuroscientist Greg Gage who connected electrical wiring to *Mimosa pudica* and linked to an electrocardiogram. The results showed that *M. pudica* causes an action potential in one plant led to an electrical response leading to response in another plants. Experiments were carried on animals to compare the effect of local anaesthetic with the *Mimosa pudica*. These experiments showed that anesthetics cause narcosis of the motor organs, which was observed by the application of volatile ether, chloroform, carbon tetrachloride, hydrogen sulfide, ammonia, formaldehyde, and other substances.

In a preclinical study, methanolic extract of *Mimosa pudica* showed a significant antidiabetic and anti

hyperlipidemic activities in streptozotocin-induced diabetic rats.

In 2018, two research groups from the Universities of Palermo (Italy) and Lugano (Switzerland) demonstrated the feasibility of using such plant as a building block for creating plant-based controllable two-color displays, exploiting air jets instead of electrical or touch-based stimulation.

Study regarding investigation of sustained release properties of *M. pudica* seed mucilage reveals that as proportion of mucilage in the matrix increased, release of drug decreased.

Robin G^[18] et al studied the movement of calcium, potassium, and chloride ions in pulvini cells and analyzed to understand how ion and water flux affect *M. pudica* leaves drooping. They concluded that the ions do not have similar functional importance in regulation of pulvinar movements.

Chemical constituents^[19,20]

The preliminary phytochemical screening of *M. pudica* leaf extract showed the presence of bioactive components such as terpenoids, acetone extract contains flavonoids, quinines, phenols, tannins, saponin and coumarins. Chloroform extract of leaves contain alkaloids Mimosine, 4-O-gallic acid contains a wide range of carbon to mineral content. Roots of plant contain 10% tannins and 55 % ash. It also contain sac-like structures that release organic and organo sulfur compounds including SO_2 , phytosterol, alkaloids, amino acids, glycoside, and fatty acids methylsulfinic acid, pyruvic acid, lactic acid, ethane sulfinic acid, propane sulfinic acid, 2-mercaptoaniline, S-propyl propane, 1-thiosulfinate, and thio-formaldehyde. Seeds contain mucilage made up of D-glucuronic acid and D-xylose. Benzene extract contains crocetin-dimethyl ester, tubulin, and green-yellow fatty oils. A new class of phyto hormone turgorines, which are derivatives of gallic acid 4-O-(β -D-glucopyranosyl-6'-sulfate). Fresh tissues give nor-epinephrine, d-pinitol (3-mono-methyl ether of inositol) and b-sitosterol.

Uses

M. pudica has a variety of uses in the following conditions Hypolipidemic:^[12] Chloroform extract of *M. pudica* shows hypolipidemic activity due to presence of glycosides, flavonides and alkaloids.

Migraine:^[1,5] Migraine is a condition that occurs due to the aggravation of pitta, dosha. Lajvanti paste is applied on the forehead to provide relief from migraine due to its pitta balancing.

High Blood pressure:^[7] Crush leaves, prepare juice and use this 15 ml twice a day.

Piles:^[21] Piles are known as arsh in Ayurveda caused due to unhealthy diet and a sedentary lifestyle. In this

condition, there is impairment in tridoshas, mainly vata which causes a low digestive fire leading to constipation. There is swelling in the veins in the rectum area leading to piles mass and symptoms like pain, itching, or burning. Lajvanti helps to manage the piles due to its pitta and kapha balancing properties. It also reduces burning sensation and discomfort. Decoction made from roots: 10-15 ml in divided doses per day used in bleeding piles or 1 tablespoon powder in a glass of milk used twice daily.

Antipyretics and Antimalarial:^[22] Leaf extract of *Mimosa pudica* in methanol, ethanol, and chloroform shows significant reduction in temperature of mice comparing to the standard drug paracetamol. Some constituents like terpenoids, flavonoids and alkaloids present in leaf possess antimalarial activity.

Tooth Ache:^[22] Gargle with decoction made from roots of this plant to maintain mouth hygiene and reduce tooth ache. The paste of root fried in ghee is applied on caries teeth for relief from toothache.

Antiviral: It also has activity against *Vibrio cholerae* and in control of cholera.

Spasmogenic: Ethanol extracts (50%) of the whole plant exhibited spasmogenic activity in isolated guinea pig ileum.

Diuretic: Decoction of leaves of *M. pudica* in doses of 200, 500, 1000, and 2000 mg/kg exhibited diuretic activity. The drug can be combined as a moderate diuretic with any modern synthetic diuretic causing potassium loss.

Contraceptive: It has spermicidal property and reduces testosterone, therefore used as contraceptive. Its fresh juice in dose of 10-15 ml is used to treat menorrhagia. Aqueous extracts of root powder can be used to treat uterine bleeding dysfunction.

Premature Ejaculation: Mix seeds with equal quantity of sugar and use 2 tablespoonful with milk at night.

Convulsion: The decoction of *M. pudica* leaves may be used intraperitoneally at a dose of 1000-4000 mg/kg protected mice against pentylene tetrazole and strychnine-induced seizures.

Diarrhea and Dysentery^[23]: Diarrhea and Dysentery occurs due to improper food, impure water, toxins, mental stress and weak digestive fire, which aggravates vatta leading to the formation of ama which may cause diarrhea. Lajvanti helps to digest ama and improve digestion, thereby managing diarrhea due to its kapha balancing property.

Dose: 30 ml Juice from the leaves of this plant and decoction made from roots helps to treat diarrhea. This

antidiarrheal property is due to presence of tannins and flavonoids.

Depression: Aqueous extracts from dried leaves of *M. pudica* is used as anti-depressant similar to tricyclic anti-depressants. It increases serotonin level so used as antidepressant, sedative and in Alzheimer disease to reduce stress, tiredness and fatigue.

Alopecia:^[24] Alopecia generally occurs due to imbalanced pitta dosha which makes the hair roots weak and leads to hair fall. Lajvanti helps to prevent the aggravation of pitta dosha and avoid the weakening of hair roots, thereby managing unnatural hair fall. Seeds and other parts of sensitive plant contain mimosine, an amino acid by promoting new hair cells. Herbal shampoo of *M. pudica* extract is used in alopecia.

Helminthes: Alcoholic extract and aqueous extracts of seeds shows significantly paralysis and death of worms in dose dependent manner. While petroleum ether extracts show weak anthelmintic effect. Decoction made from root and the leaf paste with honey is also prescribed intestinal worms.

Snake bite: The aqueous root extract of *M. pudica* dose dependently inhibited the hyaluronidase and protease activities of Indian snake's venom. An aqueous extract of *M. pudica* root inhibits the activity of cobra venom. Lajvanti helps to neutralize the venom in the blood before it reaches the target site, thus acting as anti-venom.

Uplift the breast: Paste of this plant along with ashwagandha roots is used to avoid surgery and uplift the breast.

Uterine tonic:^[25] It is used to maintain the balance of the hormones in body and thus gives relief from the heavy bleeding of menstruation. Grind the leaves of this plant and filter out the juice, mix it with honey and drink this once or twice a day. Now it can be used to control child birth.

Spasmogenic: Ethanol extracts (50%) of the whole plant exhibited spasmogenetic activity in isolated guinea pig ileum.

Diuretic: Decoction of leaves of *M. pudica* in doses of 200, 500, 1000, and 2000 mg/kg exhibited diuretic activity. The drug can be used as a moderate diuretic by combining with any modern synthetic diuretic.

Contraceptive:^[26] It has spermicidal property and reduces testosterone, therefore used as contraceptive. It's fresh juice in dose of 10 - 15 ml is used to treat menorrhagia. Aqueous extracts of root powder can be used to treat uterine bleeding dysfunction.

Premature Ejaculation: Mix seeds with equal quantity of sugar and 2 tablespoonful used at night with milk.

Antifertility: Air-dried *M. pudica* roots methanolic extract prolongs the estrous cycle, disturbs the secretion of gonadotropin hormone and decreases follicle stimulating hormone (FSH) level thus indicating antifertility effect.

Aphrodisiac: The ethanolic extract of roots of *M. pudica* Linn. produces a significant increase in the aphrodisiac activity of normal male mice, without any adverse effects.

Cough and asthma:^[27] It is also used to treat whooping cough, asthma, chronic respiratory disorders. Juice of this plant 15 ml twice a day.

Insect bite: Grind the leaves and stem of this plant on affected area twice a day.

Antihepatotoxic and antioxidant potential: Methanolic leaf extract of *M. pudica* shows antioxidant activity and ethanolic extract shows effective against carbon tetrachloride induced hepatotoxicity.

Antimicrobial:^[29] *M. pudica* whole plant extract in petroleum ether, chloroform, ethyl acetate, methanol, and water possesses good antimicrobial activity against Gram positive and Gram negative bacterial. This activity is due to presence of phytoconstituents like terpenoids, flavonoids, glycosides, phenols, quinine, tannins, saponins, coumarin and alkaloids.

Antifungal: The methanolic extract and aqueous extract of 100, 200, and 500 mg were tested against different fungal pathogens for their antifungal activity.

Dose: 30 ml juice early morning and evening for 7-10 days.

Kidney stones:^[30] The decoction of the root in a dose of 45-50 ml is taken to get relief from renal stones, urinary complaints.

Analgesic and Antiinflammation:^[31] The ethanolic extracts shows significant anti-inflammatory activity and useful particularly in acute and chronic inflammation due to presence of flavonoids.

Anti-diabetic:^[32] Ethanolic extract of leaves has been proven to possess antidiabetic activity due to alteration of carbohydrate metabolizing enzymes activity and insulin secretion.

Minor cut and Wound: Root paste is used to get relief from wounds. The paste of root fried in castor oil is applied on deep cut wounds to stop bleeding and for healing. It reduces nasal bleeding and inflammation which is probably due to phenols constituents. Juice from crushed leaves or paste of plant applied on fresh wound to stop bleeding and to treat skin disorder and adding

sesame oil to it is used as antiseptic. In Western medicine, *Mimosa* root can be used to treat hemorrhage and urinary infection and to purify blood. The warmed leaf paste is applied around furuncle, abscess, and boils to burst and release of pus, itches for quick healing.

Some other Uses^[15]

1. Uterine prolapse, the leaves together with leaves from other medicinal plants is used in treating hemorrhoids and urinary infections and relieving the symptoms of rheumatoid arthritis.
2. The juice is used in sinus, sores, piles, and fistula, burning sensation of eye, skin diseases.
3. Decoction made from roots is used in syphilis, leprosy, venereal diseases, insect bite, insomnia, nervousness, and piles.
4. Its paste should be applied as politics to reduce vaginal or anal prolapsed and to treat fracture of bone.
5. Because of ability of *Mimosa* to promote healthy cell growth, it is used in shampoos, creams, capsules, and soaps it also helps in collagen formation and regeneration of new skin cells.
6. In Ayurvedic and Unani medicine, *Mimosa pudica* root is used to treat jaundice, leprosy, leucoderma, and blood disease.

CONCLUSION

This review presents a brief biological profile of *M. pudica*. It has been used in the various traditional system of medicine since ancient times to treat a wide range of diseases. The literature claims that this herb has significant therapeutics profile. It can be used for developing new medicines in pharmaceutical industries as it is economical and due to its easy availability. But there is a need to give more emphasis on exploration of their natural resources like medicinal plants for the benefits of humanity.

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