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HEMIDESMUS INDICUS (L.) R.BR. (ANANTAMOOL) AN IMPORTANT MEDICINAL PLANT

***Dr. Prasanna Purohit**

*Department of Botany, Sarojini Naidu Govt. Girls P. G. Autonomous College, Shivaji Nagar Bhopal (M.P.)-492021 India.

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***Corresponding Author**
Dr. Prasanna Purohit
Department of Botany,
Sarojini Naidu Govt. Girls
P. G. Autonomous College,
Shivaji Nagar Bhopal
(M.P.)-492021 India.

ABSTRACT

Hemidesmus indicus L.R.Br. is one of most significant multipurpose wild plant. This is found in uncultivated soil and scrap forest. Ayruvdea is an ancient Indian medicinal system. Now a day's people believe toward this Indian medicine system. In this system each plant has a medicinal property. Hemidesmus indicus (L.) R.Br contains various phytochemicals which are used in allopathic and unani medicinal system. Plant roots and leaves are used in Ayurvadic medicinal system. These plants have bacteriostatic, anticancer, antiviral, antibiotic, ant filamentary and antibacterial property. Traditional uses of this plant roots are blood purifier, skin disease and urine related disease and fevers.

1.0 INTRODUCTION

Hemidesmus indicus (L.) R.Br. is known as Anantamool. It is placed in Asclepiadaceae family and it is creeper hedge plant. Hemidesmus indicus (L.) R.Br. is recognized as Sugandi in early years. It's high medicinal value known from 1000 years.

2.0 Vernacular Name

Bengali Name- Anantamul, English Name- Indian Sarsaparilla and Gujrati name- Sariva Hindi Name- Anantamul.

3.0 Taxonomy Classification

Kingdom - Planate.

Division - Magnoliophyta.

Order - Gentianales.

Family - Asclepiadaceae.

Genus - Hemidesmus.

Species - Indicuss.

Hemidesmus indicus (L.) R.Br. is placed in Asclepiadaceous. In recent times pollinial characters found in Plant, hence Hemidesmus indicus (L.) R.Br. is shifted in Periplocaceae.

4.0 Distribution

This plant is grows in mesophytic and semi dry conditions in the plains. This plant is found in all over Asia and this in Madhya Pradesh, West Bengal and Karnataka (Sasidharan and Siddique 2004 et al., Anonymous, 2005 and Nayar et al., 2006). Hemidesmus indicus (L.) R.Br. is established in all over southern Asia, however it is originated in India, wherever it is still primarily found growing wildly. Hemidesmus indicus (L.) R. Br. is produce in Malaysia, Indonesia and Srilanka. It is old medicinal plant, plant parts has been exported to world.

5.0 Botanical Characters

Hemidesmus indicus (L.) R. Br. is slender climber shrub. It is easily expressed in environment condition. Following character is below.

Leaves-The Leaves are trim, soft and oval shaped. They consistent prolong intense green color in all over year.

Stem-It is woody stem and woody stem color is dim red etc.

Flower-Flowers are beam bottle green surrounded by purple hue.

Flowering- Flowering of plant has continued all over the year.

Seeds-Seeds color is white and enclosed with small silver hairs.

Roots-Roots system is thin, linear and chief root is produces few aspect branches.

These roots odor is sweet, emitting a sweet scent adore mix of vanilla. Dried root woody, cylindrical some-what winding by crosswise spilted, 0.5 to 2 cm in diameter, seldom branched, lateral rootlets wiry, externally dark brown yellowish and brown in color. The taste is acrid.

6.0 Phytochemical

The entire plant has been present most significant chemical. Following chemical constituents is below.

Leaves-Tannins, Hemidesminine, Hemidesmin, Hemidesmin-1, Hemidesmin-2, Flavonoids, Cytoxin etc.

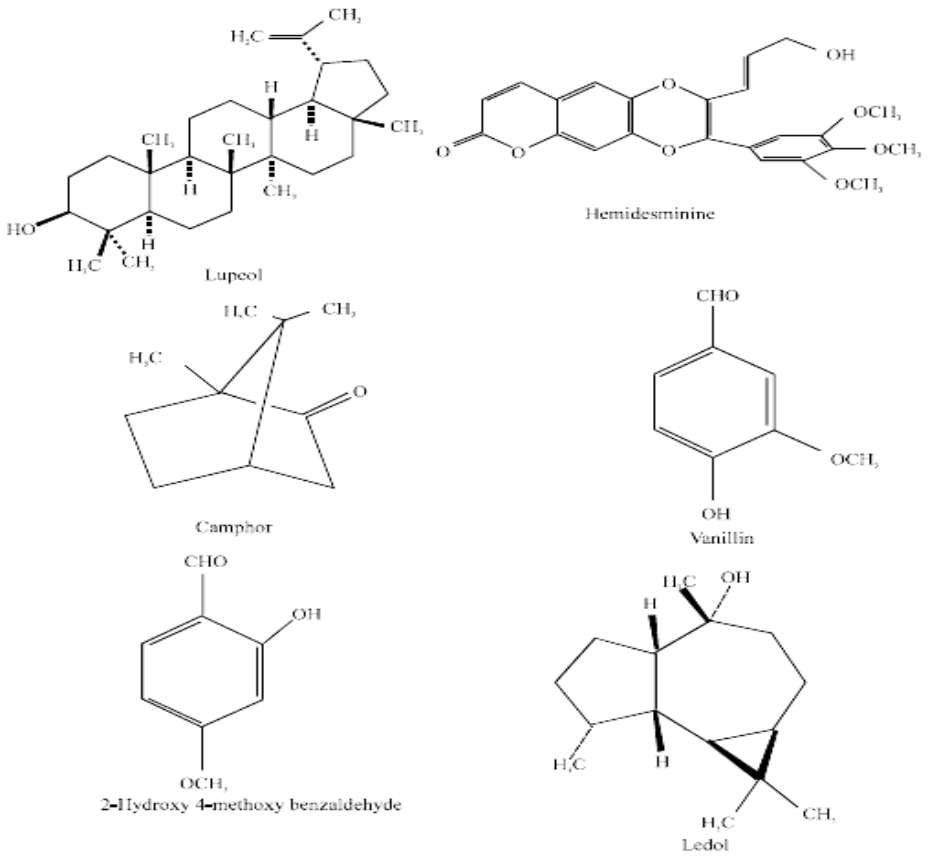
Stems-Glycoides, 4-hydroxy 3-methoxy benzaldehyde, 3-hydroxy 4-methoxy benzaldehyde, Emidine, hesminine steroid etc.

Flower- Flavanoid glycosides.

Root- 3-hydroxy 4-methoxy benzaldehyde, 4-hydroxy 3-methoxy benzaldehyde, lupeol, ledol, nerolidol, α-amyrin, β-Amyrin, hexatriconate acid, Sitosterol, β-3-0-β-D-oleandropyrnosyl, Phytosterols etc.

Fatty acid, Glycosides, Saponin, Resin Acid, Tetracyclic triteepene alcohols, Hexadecanoic acid, borneol, Camphor etc. Hemidesminine is chief compound of Hemidesmus indiocus (L.) R.Br.Currently Lupeol is used for much major medicine i.e. anticancer disease.

The pytochemical are repotted by Chatarjee and Bhattacharya,1955; Padhye et al., 1973; Mandal et al., 1991; Prakash et al., 1991; Das et al., 1992; Gupta et al., 1992; Chandra et al., 1994; Deepak et al., 1995; Sharma et al., 2000; Nagarajan et al., 2001., Nagarajan & Rao, 2003; Anonymous, 2005.



Structures of chief compounds present in Hemidesmus indicus (L.) R. Br.

7.0 Ethno botany/ Traditional Knowledge

Application of Hemidesmus indicus (L.) R.Br. is reported for many ethno medical practices (Karnick, 1977). Hemidesmus indicus (L.) R.Br. is used for leucorrhoea disease in Bargarh district in Orissa and rural community of Goa (Behera and Sen., 2000 and Kamat, 2001). Hemidesmus indicus (L.) R. Br. is applied for prevent or reduce of fever (Kumar & Singh, 1999). It is reported for hair and scalp preparation at Indian tribal's (Banerjee and Pal, 1994). Hemidesmus indicus (L.) R.Br. is used by rural communities of dist Ambikapur, Madhya Pradesh, Maharashtra and Uttar predesh (Kothari, Moorthy & Singh, 1994). Hemidesmus indicus (L.) R.Br. is utilized for menstrual problems in dist Dhemaji of Assam state of India (Bioassay & Sharma, 2003). Application of Hemidesmus indicus (L.) R.Br. is reported as a ophthalmic medicine in Phulbani, Orissa (Sahoo, 1995). Traditional use of Hemidesmus indicus by the tribals of Nallamalais reported by pullaiah et al, 1994. Hemidesmus indicus (L.) R.Br. is used for fever, headache, asthma, eye disease diarrhea, rheumatism and wound by Bangladesh (Siddique et al, 2004). Application of Hemidesmus indicus (L.) R.Br. is reported for traditional used in Karnataka, kani tribals, Kouthalai of Tirunelveli hills, Tamil Nadu and dist Amravati Maharashtra (Isaq et al 2004, Rajasab et al, 2004, Ayyanar & Ignacimuthu, 2005, Jagtap et al, 2006). Hemidesmus indicus (L.) R.Br. is mostly significant medicine in India and it is used from many years. Last 30 year, Hemidesmus indicus (L.) R.Br. has been related to wide-ranging clinical, Pharmacology and phytochemical investigation and lots of researches are reported in various area.

8.0 Medicinal property

Hemidesmus indicus (L.) R.Br. is reported for many disease i.e. spasmodic action, anti-inflammatory, Anti-bacterial, Hypotensive, Anti-fungal, Anti-viral, Anti-cancer and Bateriostatic. It is reported for blood clear, diicurectic, diaphoret, demulcent. There creamy latex are utilize for treatment of eye irritation. Plant is used for blood disorder, gout, loss appetite, breast milk purifier, and menorrhagia. It is used for dietary, syphilis, urinary related infection, skin disease. Roots power is used for combination of different medicines. Sarsaparillas are used in homeopathic for treatment of different-different disease. Roots are used for delicious super cooling drink recipe. Hemidesmus indicus (L.) R.Br roots power are used to encourage healthy skin and clear complexes. It is used for itching, fever, diabetes, sperm increasing, cold, bleeding disorder.

9.0 Antimicrobial Activity

Hemidesmus indicus (L.) R.Br is essential aromatic herb. It is used by traditional more than 1000 year. The whole series herb of conventional medicines and plants, which have been in use for thousands of years. This plant is known in Chhindwada of Madhya Pradesh key herb. Ahmad & Beg, 2001 are researched in antimicrobial property of Hemidesmus indicus (L.) R.Br, it is sensitivity against some medicine resistant microorganism. Francis and Sekar, 1998 are studied inhibitory nature of extracts of Hemidesmus indicus (L.) R.Br, it is against some fungus i.e. Trichophyton terrestre, Chrysosporium and keratinophilic fungus. Prabakan et al. (2000) by studied in rat, it is proactive effect against rifampicin and isoniazid induces hepatotoxicity. Hemidesmus indicus (L.) R.Br. roots power is used for oral treatment mix in ethanol extract to prevent against rifampicin and isoniazid induces hepatotoxicity in rat. Used of ether extract are effective on growth inhibitory of Escherichia coli. Leaves of H. indicus are used as a mouth freshner. Leaves can be use direct by chewing (Anonymous, 2001).

10.0 Propagation Vegetative / Seed

Warrier is studied on germ proliferation in 2000. Germ proliferation was 95.33. Albino seeding 1% is reported. Vegetative propagation method results are not satisfactory by stem cutting after treatment. Philip et al., 1991 are reported of vegetative propagation by means of stem and root cutting. Ramulu et al., 2005 is reported of vegetative propagation by stem cutting. Inter specific variability are reported to high occurrence rate. George et al. (2006) reported phytochemical studies of accessions from different agro climatic zones of India with studies of vegetative and reproductive characters on the basis of Micro and Macro morphological observations.

11.0 Market Prices

Sharma et al., 2000 is studied of market rate of Hemidesmus indicus (L.) R.Br. roots per kg 45 INR and power 90 INR per kg in 1999. Curent rate of Hemidesmus indicus (L.) R.Br. is 800 to 1200 INR per kg as per www.indianjadibooti.com.

Image of Plant Hemidesmus indicus (L.) R.Br.

Image of Roots of Hemidesmus indicus (L.) R.Br.

12.0 CONCLUSION

Hemidesmus indicus (L.) R.Br. is one of the most valuable important medicinal plants. Now these days these plants are used traditionally and commercially as a medicine. They produces various important phytoconsituents i.e. lupeol, ledol, hemidesmin, 2-Hydroxy 4-Methoxy Benzaldehyde, 4-Hydroxy 3 Methoxy Benazaldehyde, β-sitosterol, α and β amyrins, which are having high demand in domestic and international market.

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