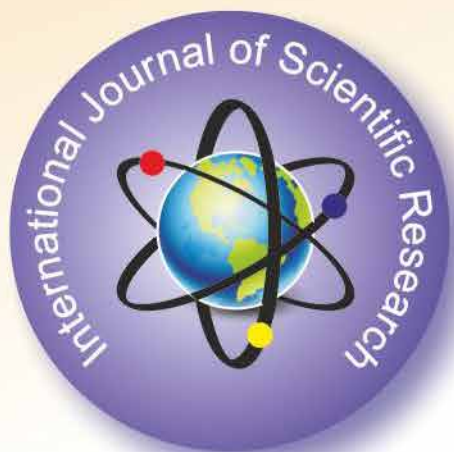


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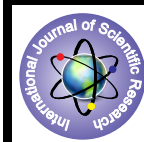
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Banyan, the National Tree of India



Commerce

KEYWORDS : regularization of Service, dispute with contractor, medical aid, privileges, delay

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ABSTRACT

The Banyan tree, Ficus Benghalensis as the botanists call it, is the National Tree of India. An evergreen tree that grows to a height of about a hundred feet or more, it has its aerial roots reaching to the ground. The tree is regarded every where, as a symbol of peace and harmony. It was planted by emperors of the time, Jain, Sanaatanists and Buddhist in Indian and outside, along pilgrimage and trade routes, to serve as sources of shelter for pilgrims and distance travelers. Wells and stone shelters were available nearby for rest and refreshment. Extracts obtained from various parts of the tree are cooling, alterative and demulcent. The power of astringency, resulting from the presence of tannins, varies from part to part. The latex is said to have an aphrodisiac action. In this paper chemical and medicinal properties of vat vriksha has been discussed.

BANAYAN- THE NATIONAL TREE OF INDIA

The Banyan tree, *Ficus Benghalensis* as the botanists call it, is the National Tree of India. An evergreen tree that grows to a height of about a hundred feet or more, it has its aerial roots reaching to the ground: the root tips penetrate the soil building independent root systems, while the aerial stems soon thicken into trunks giving rise to collateral young trees attached to the original. Old banyan trees are surrounded by many such off springs and many more hanging aerial roots reaching towards the ground. Such an immense composite tree can shelter over half-an-hectare of ground and is therefore called "sahasra-paada". The tree can survive for over a thousand years, carrying along with it a priceless live ecosystem, all its own, that reminds us of the famous pond and its surroundings described in Thoreau's "Walden".

The Banyan tree is indigenous to India and South Asia. It prefers humid air and moist soil, has broad oval leaves and a white latex exudes from the bark when injured.

SPIRITUAL COSMOLOGY & THE VATA VRIKSHA

Karaaravindena padaaravindam mukhaaravinde viniveshayantham vatasya pathrasya pute shayaanam baalam mukundam manasaa smaraami Bhaagvatha mythology describe the "birth" of God, at the end of every manvantara, as the "unconscious" babe, floating on the ocean of Cosmic Consciousness, waiting to be awakened. The babe rests on the surface of a fig leaf, unaware of itself, on this milky Ocean-the Ksheerasagara.

Time comes, when activated by Its original WHIM, the Babe instinctively raises Its left foot and holds it with Its right hand to suckle Its toe. At once, It is awakened to self consciousness. It becomes "HE" the PURUSHA, with a consciousness all His own.

This new found association of the Being with the Consciousness of Itself triggers a celestial fountain of ANANDA, the Bliss of Consciousness: This causes creation to unfold, in stages, in a progressive movement of infinite evolution within the cosmic parameters of space and time.

The evolving Universe and all its inhabitants, therefore, represent nothing more than the progressive crystallization of a movement that, originating as a mystic WHIM of a lone Babe, ended in the joy of Cosmic Creation!

This mythological concept of the "Babe on the Fig Leaf" harmonizes well with the concept of the "Beyond, Beyond God" that Avatar Meher Baba has described in "GOD SPEAKS", his magnum opus.

TRADITIONAL MEDICINE

Ancient night and modern pharmacopoeias of Indian Medicine contain much valuable information about the pharmacological properties of various parts of *Ficus Benghalensis*. The latex, root bark and stem bark are variously employed. Not only the tannin content of the bark but other unexplored phytochemical constituents may be partly or wholly responsible for these pharmacological actions. Such are also found in the young buds and

in the tips and terminal parts of the Aerial roots. Roots also have these constituents although to a lesser extent. Although tannins hold predominance in the study of the phytopharmacology of the *Ficus* genus, each individual species has its own characteristic action based on divergent catechin source in the different species.

Extracts obtained from various parts of the tree are cooling, alterative and demulcent. The power of astringency, resulting from the presence of tannins, varies from part to part. The latex is said to have an aphrodisiac action.

PHYTOCHEMICAL PROPERTIES

The bark contains leucopelargonidin-3-O-a-L rhamnoside and leuco cynidin-3-O-a-L galactosyl cellobioside, glucoside, beta glucoside, pentariacontan-5-one, beta sitosterol alpha-D-glucose 19-20. A glycoside of leucopelargonidin was also isolated from the bark and it has antidiabetic effects²¹. The leaves contain, crude protein, crude fibres, Cao, phosphorous, rutin, friedelin, taraxasterol, lupeol, B-amyrin along with psoralen, bergapten and B-sisterol, quercetin-3-galactoside²². Leucodelphinidin derivative²³, bengalensin, Aglucon²⁴, Leucopelargonin and leucocynidin derivatives. The latex contains caoytchou resin, albumin, cerin, sugar, and malic acid

RESEARCH

Two very important uses for which it is classically noted, both in classical traditions and in common folk lore, are the cardio tonic action of the ripe fruits and the use of the free ends of the aerial roots in dental hygiene. There is scope for research on both these actions for research workers not only in the different systems of alternative medicine but in modern Phytopharmacology as well.

PHARMACOGNOSTIC PROPERTIES

Anti-inflammatory activity

The ethanolic (300 mg) and petroleum ether extracts (600 mg/kg/day) of *Ficus bengalensis*, significantly reduced ($P < 0.05$) carrageenan-induced paw edema in rats. The ethanolic and petroleum ether extract showed a greater anti-inflammatory effect compared with the standard drug Indomethacin. The results indicated the ethanolic extract of *Ficus bengalensis* exhibited more significant activity than petroleum ether in the treatment of inflammation²⁷.

Anthelmintic activity

The extracts from *Ficus bengalensis* were found not only to paralyze but also to kill the earthworms. The aqueous and methanolic extract was found to be more effective to execute the earthworm when compared to anti helminthic drugs²⁸.

Antidiabetic and ameliorative activity

Oral administration of an aqueous extract to fed, fasted and glucose loaded diabetic rats significantly decreased the blood glucose level at 5 hrs and restored the levels of serum electrolytes, glycolytic enzymes and hepatic cytochrome P-450 dependent enzyme systems and decreased the formation of liver and kidney lipid peroxides at the end of 12 weeks.

Analgesic and antipyretic activity

The antipyretic activity of bark of *Ficus bengalensis* was studied in Brewer's yeast-induced pyrexia in rats. The extract at all the doses used and the Aspirin significantly inhibited both the analgesic activity for hot plate and tail immersion method also in the antipyretic activity for the method of Brewer's yeast-induced pyrexia in rats inflammation in manner that was not dose dependent. The higher analgesic effects or various extracts tested might back to the presence of flavonoids and phenolic compounds. These data suggest that the different extracts of the bark of *Ficus bengalensis* produce analgesic and antipyretic activities that could be due to the effects of bio active components in the extracts³⁰.

Anti bacterial activity

Extract from fruits exhibits antitumor activity in the potato disc bioassay. None of the tested extracts showed any marked inhibition on the uptake of calcium into rat pituitary cells GH4C1. The extracts of the four tested *Ficus* species had significant antibacterial activity³¹.

Antioxidant activity

The extract was investigated for its antioxidant activity by 1,1-diphenyl,2-picryl hydrazyl (DPPH) radical scavenging activity, hydroxyl radical scavenging activity, reducing capacity, hydrogen peroxide activity, total phenolic content using Folin-Ciocalteu's phenolic reagent. The extract showed maximum scavenging of DPPH radical (90.07%) at 250 µg mL⁻¹ concentration and hydrogen peroxide (69.23%) at 1000 µg mL⁻¹ concentration. The extract shows good results when compared with other compounds. This shows the scavenging activity of the extract³².

Antitumor activity

The extract from fruit exhibited anti-tumor activity in the potato disc bioassay. The other tested extracts showed no marked inhibition on the uptake of calcium in to rat pituitary cells GH4C1. The extracts of the four tested *Ficus* species had no significant antifungal activity. The results support the traditional use of these plants in folk medicine for respiratory disorders and certain skin disease³³.

Hypolipidaemic activity

Three groups of rabbits were fed with cholesterol suspended in ground nut oil to make hyper cholesterol condition (100gm/kg/day). Another group is fed with bark extract of *Ficus bengalensis* at a dose of 50mg/kg/day. Treatment with bark extract decreased the serum cholesterol level by 59%, triacylglycerol by 54% and a decrease in lipid per oxidation, significant increase in the activities of antioxidant enzymes/ superoxide dismutase, catalase, glutathione peroxidases which were depressed in other groups after cholesterol feeding. This results shows that the water extract of the bark of *Ficus bengalensis* has significant hypolipidaemic effects³⁴.

"Magha"

***Ficus benghalensis* Linn. MORACEAE.**

ENGLISH NAME:- Banyan Tree. Hindi-Br, Bargad

PARTS-USED:- Whole plant, Buds, Roots and latex.

DESCRIPTION:- Very large tree, with spreading branches, aerial prop roots, milky latex present in all parts, leaves ovate, obtuse and coriaceous, Flowers in receptacles; fig globose.

TASTE:- Astringent.

CHEMICAL CONSTITUENTS- Plant Contains: Glucoside; Bengalenoside and Talbutamide; Leucoantho cyanidins. Phytosterolin, Beta-sitosterol, Fredelin, Quercetin, Galactoside, Ticlic acid, Tannin.

ACTIONS:- Anti-emetic, Anti-inflammatory, Cooling, Styptic, Wound healing, anodyne, depurative, antiarthritic.

USED IN:- Infusion of Buds: useful in Diarrhoea and Dysentery. Tipsof young aerial roots: stops vomiting; Juice mixed with Sesamumoil: is applied on burns; Latex used in: Toothache, Genital diseases; Latex mixed with sugar is useful in cough, Bark: in Diabetes and Polyuria.

CHEMICAL COMPOSITION:- Its roots and stem have 10% tannin, glucoside, banglenoside, talbutamide, galactoside.

PROPERTIES

It cures kapha and pitta, relieves pain, cures ulcers and wounds, is a blood purifier, cures oedema, swelling and is beneficial for eyes. It helps cure bleeding diathesis, enhances semen production and cures uterine problems. It promotes physical strength. It is cool and dry and controls thirst, vomiting, drowsiness and bleeding diathesis.

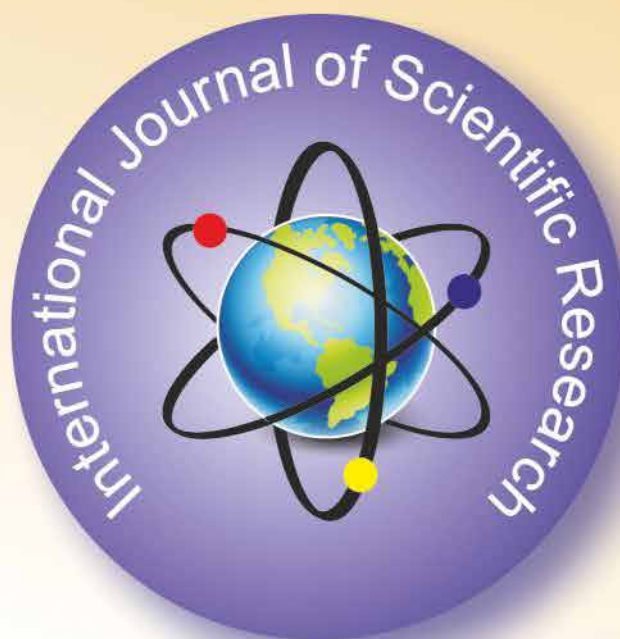
Conclusion

The various extracts of *Ficus Bengalese's* showed ant inflammatory effects similar to standard drugs. The presence of flavonoids may be responsible for the anti-inflammatory activity. The water extract of the bark of *Ficus Bengalensis* has significant hypolipidaemic effect. Fruit exhibit anti-tumor activity in the potato disc bioassay. It is widely used in the treatment of skin diseases with pitta and rakta predominance and also used in various ailments. Further investigations are processed to isolate and characterize the specific active components of this plant.

Ficus benghalensis is commonly called nyagrodha. Ancient nighantus and modern phasmacopoeias of Indian Medicine contain much valuable information about the pharmacological properties of various parts of *Ficus bengalensis*. The tree is regarded every where, as a symbol of peace and harmony. It was planted by emperors of the time, Jain, Sanaatanists and Buddhist in Indian and outside, along pilgrimage and trade routes, to serve as sources of shelter for pilgrims and distance travelers. Wells and stone shelters were available nearby for rest and refreshment. Small worshipping places were also built alongside for prayer or meditation. Banyan tree providing shade for visitors, cultural activities and community worship.

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