International Journal of Drug Research and Technology

Available online at http://www.ijdrt.com

Perspective

ETHNOMEDICINAL PROPERTIES OF FICUS HISPIDA

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PERSPECTIVE

Ficus hispida is also known as the fig tree is a small but widely distributed tropical fig species. Male and female flowers grow on distinct individuals, making it dioecious. It can be found in various parts of Asia, as well as as far south as Australia. Local common names come in a wide range of forms. The leaves, like those of many ficus, are sandpapery to the touch. The figs that hang on long stems are an uncommon feature.

Ficus hispida L. is a member of the Moraceae family and is utilised as an indigenous traditional medicine by the maaiba trible (indigenous medicine - Manipur, India). The current work focuses on the sequential extraction of Ficus hispida aerial components and in-vitro anti-oxidant and anti-microbial activity testing. Secondary metabolite classes such as alkaloid, phenolic compounds, flavonoid, glycosides, protein, and others were found in the methanol extract of Ficus hispida. Because phenolic compounds are abundant in both food and non-edible plants and are responsible for a variety of medical activities, our research is focused on determining antioxidant and anti-microbial activity. To better understand the effect, we also assessed the total flavonoid and total phenolic content of each sample.

Herbal plants are likely to make resurgence as sources of ethnic health products, owing to the widespread desire to synthesis complex combinations of structurally diverse substances, which should provide a safer alternative to a more holistic approach to illness cure and prevention. *Ficus hispida* (FH) Linn is a member of the Moraceae family with pharmacognostic characteristics. Ficus is an important tree family, not only because of its enormous medical use, but also because of their growth habits and religious significance. Almost every portion of those plants is old as a traditional belief in treatment due to Indian traditional healers' treatment of a variety of diseases.

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Ethnomedicinal properties

The usage of FH can be traced back to the time of Charaka, who recommended combining fig juice with jaggery as a sramsana (light purgative) for the treatment of switra (vitiligo). The unripe fruit is used to make curry by Meghalayan tribals. Fruit juices, in combination with honey, are effective anti-hemorrhagics. Dysentery, ulcers, biliousness, psoriasis, anaemia, piles, and jaundice are all treated using this plant's caustic, astringent, bitter, and cooling properties. Furthermore, the fruit is used as an aphrodisiac, tonic, lactagogue, and emetic. The leaves are chewed by rural people in the villages of Khatra, Bankura, West Bengal, India, to treat diarrhoea. Various major pharmacological actions such as antioxidant, cardioprotective, hepatoprotective, anticancer, anti-inflammatory, and others have been linked to distinct sections of FH, according to a literature review. Furthermore, the mechanism of action behind the activities must be determined, which will aid in the development of bioactives for therapeutic use. Keeping these factors in mind, we're working to figure out how FH's documented pharmacological activity and therapeutic activity are linked.

Hypoglycemic activity

Scientists have successfully demonstrated the hypoglycemic activity of FH bark in diabetic albino rats. They reported that water soluble portion of ethanolic extract of the bark showed significant reduction of blood glucose level, increase in the uptake of glucose and increase in the glycogen content of liver, skeletal muscle and cardiac muscle. They also revealed the interaction of the constituent of the extract with insulin on concomitant administration, but the compound involved is not yet established.

Cardioprotective effect

The cardioprotective effect of FH leaf extract on cyclophosphamide-mediated myocardial damage caused by oxidative stress in the rat heart was investigated. The extract inhibited lipid peroxidation and improved the levels of superoxide dismutase, catalase, glutathione peroxidase, glutathione reductase, glutathione-S-transferase, and glutathione activity in cardiac tissue caused by cyclophosphamide, according to this study

Antidiarrheal activity

The antidiarrheal activity of extracts from the leaves of FH in rats was tested against castor-oil-induced diarrhoea and PEG2-induced interpooling in rats. When given orally, the methanolic extract of leaves had a significant and dose-dependent antidiarrheal effect, as well as reducing the propulsion of charcoal meal through the gastrointestinal tract. They also determined the extract dose, discovering that 600 mg/kg provided the same response as 5 mg/kg diphenoxylate.

Antiulcerogenic effect

In a study on the methanolic extract of FH root in aspirin ulcerated rats, researchers discovered that doses of 200 and 400 mg/kg dramatically reduced the incidence of ulcers, improved ulcer healing, and lowered free and total acidity.

Sedative and anticonvulsant effects

In swiss albino mice, scientists used a methanolic extract of leaves at doses of 200 and 400 mg/kg to study phenobarbitone-induced sleeping time and hole-board exploring behaviour for a sedation test, as well as strychnine, picrotoxin, and phenylenetetrazole-induced convulsion. The results showed that phenobarbitone evoked a significant and dose-dependent reduction in the onset and lengthening of sleep duration. In addition, it was observed that exploratory action was suppressed. Furthermore, at a dose of 400 mg/kg, full suppression of seizures caused by picrotoxin and strychnine was observed, as well as considerable extension of both clonic and tonic seizures.

Neuroprotective effects

In mice, scientists discovered that a methanolic extract of FH leaves had a neuroprotective effect against b-amyloid-induced cognitive impairments and oxidative damage. The extract inhibits cognitive activity and memory deficits while suppressing the elevated level of thiobarbituric acid reactive species in the brain, according to the study. Antioxidant enzymes including glutathione peroxidase, glutathione reductase, and superoxide dismutase also showed higher activity in the study. These exercises may be beneficial in the treatment of Alzheimer's disease and other agerelated cognitive deficits in a holistic manner.

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Received: 04 March 2022, Manuscript No. IJDRT-22-56110; **Editor Assigned:** 07 March 2022, PreQC No. P-56110; **Reviewed:** 17 March 2022, QC No. Q-56110; **Revised:** 22 March 2022, Manuscript No. R-56110; **Published:** 29 March 2022, DOI: 10.37421/2277-1506.22.11.344

Cite This Article: Li W (2021) "Ethnomedicinal Properties of Ficus hispida" International Journal of Drug Research and Technology Vol. 11 (2), 1-4.

INTERNATIONAL JOURNAL OF DRUG RESEARCH AND TECHNOLOGY