

REVIEW ON JASMINUM MULTIFLOURAM

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ABSTRACT

Jasminum multiflorum is an ornamental flowering shrub, used local flora and fauna as a traditional medicine for their survival. Mostly leaves, roots, flowers and fruits are used as traditional medicines to maintain health and also treat fever, cough, indolent ulcer, abdominal distention, diarrhoea, lowering the blood glucose level, regulating menstrual flow, to clean kidney waste, inflamed and blood shot eyes. In modern world, the synthetic drugs are readily available and more effective in curing numerous diseases; there are people who still prefer using traditional folk medicines, because of their less harmful effects due to non-toxic in nature and easy availability at reasonable price. Therefore researchers are increasingly turning their attention to folk medicine, looking for new leads to develop better drugs.

INTRODUCTION

Jasminum multiflorum (J.M) is a species of jasmine commonly known as Indian jasmine, star jasmine^[1], Winter jasmine and Downy jasmine. It is an ornamental

flowering shrub native to India and South east Asia. In ancient age, people used local flora and fauna as a traditional medicine for their survival.

TOXONOMICAL CLASSIFICATION*Jasminum multiflorum* whole plant.*Jasminum multiflorum* Flowers.**Synonyms**

Nyctanthes multiflora (basionym), *Jasminum congestum*, *Jasminum gracillimum*, *Jasminum pubescens*, *Mogorium multiflorum*, *Mogorium pubescens*, *Nyctanthes pubescens*^[2]

SCIENTIFIC CLASSIFICATION^[3]

Kingdom: Plantae

Order: Lamiales

Family: Oleaceae

Genus: *Jasminum*Species: *J. multiflorum***PHYSICAL CHARACTERISTICS**

Jasminum multiflorum is an evergreen shrub with scrambling stems up to 16.4 feet (5 m) long that can

twine into the surrounding vegetation for support. Soft, downy hairs cover the deep green, oval leaves. Blooming occur throughout much of the year, as long as growing conditions are favorable, though in its native range, flowering is heaviest from fall to spring. The clusters of starchy, tubular, white flowers have a mild, sweet jasmine fragrance.

Plants are producing good source of secondary metabolites such as phenolic compounds, nitrogen containing compounds, vitamins and minerals. These compounds have antidiabetic, antitumor, antimicrobial, antioxidant, anti-acne activity etc. In India, traditional medicines are used for preparation of various cosmetics, colours and beautification.

USES OF DOWNY JASMINE

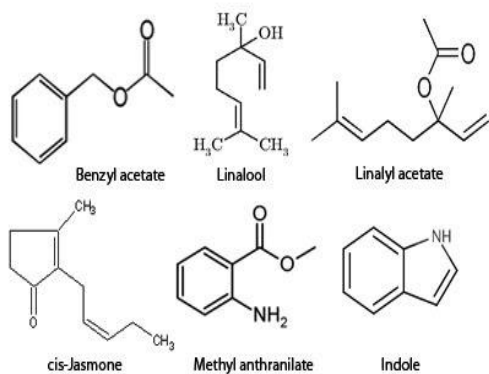
Medicinal use

- Flowers are used as beverage as these are rich source of polyphenolic compounds
- The flowers are applied as a lactifuge, emetic & Cardiac tonics.
- Flower or essential jasmine oil used as an aphrodisiac, a sedative, an antiseptic, antidepressant, antispasmodic, to increase immunity, to treat conjunctivitis and analgesic & head ache.
- Flowers are brewed and consumed as an herbal and remedial tea can be helpful in relieving stress and anxiety, used for people suffering from heat stroke or sunstroke, Used as a tincture to treat cuts and scrapes.
- An infusion of jasmine tea is known to be beneficial in treating fevers, urinary inflammation, and other infections.
- Jasmine juice is useful for treating corns and also used to treat various skin conditions including sun burn and rashes.
- Jasmine oil is an integral part of aromatherapy (Uplifting the mood) to treating depression
- The root is reportedly used as an emmenagogue, and as an antidote to snake bites.
- Dried leaves, soaked in water, used as poultice for indolent ulcers.
- Leaf paste is used for rheumatic pain, skin sores, allergic itches, inflammation.
- Poultice of Kunda leaves are applied over the wounds. It hastens the wound healing process.
- Plant used to treat fever, dysentery, stomach ache, stomach ulcers, and kidney stones.

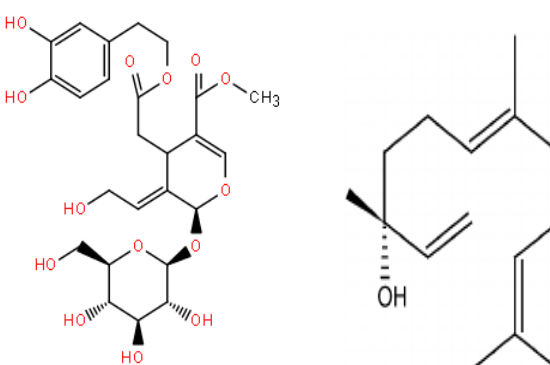
Other uses

Veterinary: Veterinary medicine for cattle is prepared from flowers of *J. multiflorum* are pounded with inflorescence of *Cocos nucifer* and pericarp of *Pyllanthus embilica* with vinegar added to the mixture and used for colicky pain, twice daily.

Ornamental^[4] use: Downy jasmine is used in foundation plantings, in hedges and borders, and in mass plantings in large landscapes. A favourite floral offering and adornment for altars.



(a) 10-hydroxyoleuropein



(b) nerolidol

Cosmetic

- Infusion of flowers used as a face wash because of its fragrance, cleansing and soothing properties.
- oil extraction from jasmine flowers in morning harvest used for massaging.^[5]
- Digestion with vegetable oil to make oil tinctures or liniments.

Edibility

- Flowers used to make jasmine tea
- Flowers yield a yellow pigment used as substitute for saffron.

CHEMICAL CONSTITUENTS

Flowers

1. Secoiridoids are major class of compounds presented in *J. multiflorum*.^[6]
2. The 10-hydroxy-oleo side derivatives like 10-hydroxyoleuropein, jusmultiside^[7] and multifloroside, multiflorine.^[8]
3. Flowers also contains newer acetylated phenolic derivative 2-*p*-acetoxy phenyl ethanol along with long chain saturated compounds *n*-tritetracontane and heptacosane.^[9]

Leaves

- Leaves of *J. Multiflorum* contain phenols, terpenoids and saponins.^[10]
- The active ingredients present are nerolidol, benzyl benzoate, and jasmolactone jasmone and hexyl benzoate, hexenyl benzoate, β -farnesene and α -cadinol.

Leaves and flowers: Contains four lactones, jasmolactone^[11] A, B, C and D which contain novel bicyclic-2-oxo-oxepano [4, 5-c] pyranring system.

Roots

Roots of *J. Multiflorum* contains glycoside, saponins, steroids, flavonoids, with absence of alkaloid, carbohydrate, gums and mucilage, proteins and amino acids, tannins and phenolic compounds.

PHARMACOLOGICAL ACTIONS**Cardio vascular activity****a. Anti hypertensive activity**

The water, acetone and ethanol extracts of leaves and flowers of *J.multiflorum*, studied for their ACE Inhibitory activity and cardio tonic potential. The water extract was found to inhibit 92 % of angiotensin converting enzyme.^[12]

b. Vasodilation effect

10-Hydroxyoleuropein and multifloroside were found to possess coronary dilating and cardio tropic activities

c. Antioxidant activity^[13]

The methanolic extract of flowers of *J.multiflorum* has been reported to scavenge DPPH radicals, that it can use as a natural reducing agent and free radical scavenger.^[14,15,16,17]

Toxicity of *J.multiflorum*: So far, no report available on the toxicity studies of *J.multiflorum*.

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