

***Ruta graveolens* L: A Medicinal Herb**

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Abstract

Ruta graveolens L. is a member belonging to family Rutaceae. It is strongly odoriferous evergreen herb, distributed throughout the world. It is vernacularly known as Satap, Sadab, and Garden Rue. In traditional system of medicine, Ruta is used to cure cough, cold and fever. It possesses many medicinally important properties; hence the present review is undertaken to evaluate the medicinal properties of the Ruta.

Key words- *Ruta graveolens, Rue, Satap, Medicinal herb.*

*Ruta graveolens L. is commonly known as Rue which is important perennial herb. [1]. This aromatic plant belongs to family Rutaceae, considered indigenous in South Europe and North Africa, also commonly cultivated in India. It is traditionally used in medicine as a stimulant (drugs that speed up the messages between the brain and the body), emmenagogue (a substance that stimulates or increases menstrual flow), diuretic, abortifacient (drug that causes abortion) and resolvent. [2]. Ruta is semiwoody, scented and glabrous herb that reaches up to a meter in height. It is with slender, smooth stem bears green, alternate, pinnately compound leaves. Its flowers are bisexual, terminal, greenish yellow in color. Fruits are hard, dry, roundish lobed [3]. This plant *Ruta* is used to treat muscular pains, injuries, sprains, joint and bone pain, headache, reproductive disorders, tooth ache, arthritis, rheumatism.[15] [16].*

*The plant extract with different solvents shows the presence of alkaloids, flavonoids, betacyanin, saponins and resins. The ethanolic and methanolic extracts show the antibacterial activity against *Escherichia coli* and *Staphylococcus aureus*.*

*The maximum zone of inhibition has been noted against the *S. aureus* that is 23mm with ethanolic extract [4]. The volatile oils obtained from the leaves of *Ruta* by hydro distillation using Clevenger apparatus showed the antimicrobial activity against many common human pathogenic bacteria and fungus *Candida albicans*[5]. This volatile oil is composed of seven compounds in which two main compounds are 2-nonanone (39.17%) and 2-undecanone(42.21%). Bacteria *Bacillus cereus* and *Staphylococcus aureus* are found to be more susceptible [6]. Methanolic extract and leaf oil of Rue is effective against pathogenic fungi *Candida albicans*, *Cryptococcus neoformans* and *Aspergillums niger*. So this plant can be used for the preparation of drugs and for the treatment of infectious diseases [7].*

The extract also exhibits inhibitory activity against *Bacillus subtilis*, *Listeria monocytogenes*, *Staphylococcus aureus* and *Streptococcus pyogenes*. Results had revealed that it possesses strong cytotoxic activity for the MeOH, EtOAc and petroleum ether extracts and moderate for H₂O/MeOH extract [8]. Microbe *K. pneumonia* [9] and *S.typhi* [10] also showed the zone of inhibition [9]. However *Pseudomonas fluorescens* and *Micrococcus luteus* were found resistant to the leaf extract [10].

R. graveolens also has a significant potential as a natural antioxidant. When the alcoholic extract was tested and compared with the Butylated Hydroxy Anisole (BHA), it showed the presence of antioxidant activity. It was done by the DPPH scavenging assay [10][11]. *Ruta* has anticancerous potential which was determined by MTT assay against MCF7 breast cancer line [10]. Anti-inflammatory activity also has been discovered in the *Ruta graveolens*. The plant *Ruta* contains more than 210 a pharmaceutically active compound among which 'rutin' is an important flavanol glycoside [13]. Rutin is active bioconstituent which protects against diethylnitrosamine (DEN) induced renal toxicity in albino rats [14].

Conclusion-

The objective of this Review was to reveal the medicinal importance of the *Ruta graveolens* L. It is evident that *Ruta* has pharmacological potential that it can be useful for the development of new drugs to treat many diseases. This article provides basis for the researchers who are interested in the development of remedies from traditionally used medicinal plants to cure diseases of today's world.

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