



**POTENTIAL OF THE PATHOGENIC MICROORGANISMS
MITIGATION USING RHIZOME EXTRACT OF *ACORUS CALAMUS*
AS A MEDICINAL HERB**

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ABSTRACT

Acorus calamus exhibits polyploidy and phytochemical composition also depends upon the ploidy. Scented leaves and rhizomes have been traditionally used in Ayurveda medicine for bronchitis, cough, fever, asthma and digestive problems. Pharmacological studies have revealed that *Acorus calamus* and its major constituents, particularly β -asarone and α -asarone possesses a wide range of amazing pharmacological activities such as anticonvulsant, acetylcholinesterase inhibitory, memory enhancing, anti-inflammatory, antioxidant, sedative, CNS depressant, behavioral changes, anticancer, cardiovascular, cytoprotective, antidiarrheal, and immunosuppressive activities. In addition to the above-mentioned pharmacological actions,

antibacterial, antifungal, antiviral, anthelmintic and insecticidal activities are also reported. This review is an effort prominently to explore antibacterial, antifungal, anthelmintic, antiviral and insecticidal activities of the phytochemicals of *Acorus calamus* rhizome and investigate the actions against disease forming microorganisms which found critical anti-bacteria effect of rhizome extract on enteropathogenic bacteria and essential oil performed inhibition reactions on both Gram-positive and Gram-negative bacteria species. Especially, β -asarone which is major tetraploid in the plant has a potency to act as an anti-bacterial, anti-viral agent as well as insecticide. β -asarone and alcoholic extract of *Acorus calamus* exhibit strong inhibitory activities against Herpes simplex virus while ethanol extract of *Acorus*