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ANTIFUNGAL CONSTITUENTS OF EUPATORIUM RIPARIUM

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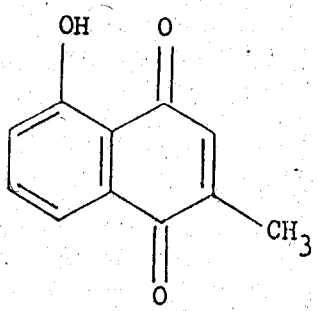
Eupatorium riparium, Regel, also known as Ageratina riparia (Compositae) is a troublesome and invasive weed found in Sri Lanka, Mexico, West Indies, India and Java [1].

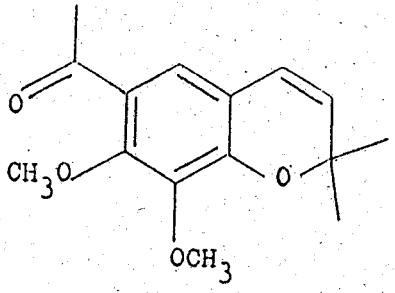
Powdered roots of E. riparium were extracted with hot hexane. This extract was tested for antifungal activity against Cladosporium cladosporioides using the TLC-bioassay technique[2] and was found to be active. Bio-assay monitored fractionation of the hexane extract using chromatographic techniques yielded two antifungal compounds, which were identified as 5-hydroxy-2-methyl-1, 4-naphthoquinone 1 (plumbagin)[3,4] and 6-acetyl-7,8-dimethoxy-2,2-dimethyl-chromene 2[5] (UV, IR, ^{1}H NMR & Mass).

These two compounds also displayed activity against the following fungi: Colletotrichum gloeosporioides, Gloeosporium mangiferae, Aspergillus sp., Alternaria tenuis, Cercospora nicotianae, Fusarium sp. & Botridiplodia theobromae.

Quantitative antifungal assay (slide germination technique) on these compounds was carried out using the plant pathogenic fungus, Colletotrichum gloeosporioides.



Plumbagin (1)



6-acetyl-7,8-dimethoxy-2,2-dimethylchromene (2)

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