In-vitro anti-inflammatory and anti-diabetic studies of *Myristica fatua var. magnifica* (Beddome) Sinclair, an endemic swamp species.

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Abstract

*Myristica fatua var. magnifica* belonging to family Myristicaceae, is an endemic tree confined to a very few Myristica swamps in the Western Ghats. The present study deals with the anti-inflammatory and anti-diabetic activities of different parts of *M. fatua*. Water extract of the leaf at the concentration of 20µg & 10µg showed 88% prevention against hypotonic solution-induced haemolysis on RBC membrane stabilisation. Ethyl acetate extract of aril exhibited a significantly good activity (90%) against inflammation, which is better than the action of standard drug sodium diclofenac (82%). Hexane extract of kernel inhibited α-amylase enzyme to an extent of 93% at 20µg while testa methanolic extract showed 95.36% of inhibition against α-amylase enzyme at 10µg. Kernel ethyl acetate extract showed 96.73% of inhibition against α-glucosidase enzyme at 20µg which is on par with the standard acarbose. From the present study it is clear that parts of *M. fatua* have anti-inflammatory as well as anti-diabetic property. Further study on these lines is in progress.

**Key words:** Myristica swamps, *Myristica fatua*, Anti-inflammatory, α-amylase, Anti-diabetic.