

# Natural pain relief from poisonous shrub

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An extract of the poisonous shrub *Jatropha curcas* acts as a strong painkiller and may have a mode of action different from conventional analgesics, such as morphine and other pharmaceuticals. Details of tests are reported in the current issue of the *International Journal of Biomedical Engineering and Technology*.

Omeh Yusuf and Ezeja Maxwell of the Micheal Okpara University of Agriculture in Umudike, Nigeria, explain how *J. curcas*, also known as the "physic nut" is a perennial shrub that grows to 5 meters in height and belongs to the *Euphobiaceace* family. It is native to Central America but grows widely in other tropical and subtropical countries of Africa and Asia. The plant's fruit is combined with the stem bark of *Cochlospermum planchonii* in Nigerian medicine for treating [diabetes mellitus](#) and is also used traditionally as a painkiller. Other medicinal activities have been reported. The plant's seeds have been used for making soap, candles, detergents, lubricants and dyes and the seed oil is used in biodiesel.

The researchers extracted what they believed to be the physiologically active components of the leaves of *J. curcas* using methanol as solvent. They compared the effects of this extract at 100, 200 and 400 milligrams per kilogram of body mass, against 400 mg/kg of acetylsalicylic acid (aspirin) in standard laboratory animal tests for assessing the strength of [painkillers](#).

They found that 100 mg/kg was an inadequate dose, however, 200 and 400 mg/kg doses produced analgesia comparable to aspirin, affirming the use of the plant for pain relief in traditional medicine. The team

suspect that the extract may be acting through both peripheral and central pain mechanisms. Yusuf and Maxwell are now carrying out more work on isolating and characterizing the [active ingredient](#) in the extract and in determining the precise mode of action.

The search for novel analgesic drugs that have a different side-effect profile and lack the tolerance and addiction problems associated with morphine and other opiates is an important avenue of research in drug discovery science. Very few leads from traditional and herbal medicine are successful in generating a new product, but it should be remembered that aspirin and morphine themselves were both originally derived from natural sources.

**More information:** "The evaluation of the analgesic activity of the methanolic leaf extract of *Jatropha curcas* (Linn) in experimental animals" in Int. J. Biomedical Engineering and Technology, 2011, 6, 200-207.

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