

Phytochemical Investigation of *Tephrosia Pumila* Roots For Anti-Pain Principles.

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Abstract

In Africa and the rest of the world, pain is the most common reason for physician consultations. It is a major symptom in many medical conditions and can significantly interfere with a person's quality of life and general functioning. Experimental subjects challenged by acute pain or patients in chronic pain experience impairments in attention control, working memory, mental inflexibility, problem solving and information processing speed not excluding increased depression, anxiety, fear and anger.

Currently drugs such as opioids (morphine-type drugs) and anti-inflammatory drugs are among the drugs that can be prescribed to help in pain relieving, but information and medical research show that they have several side effects other than being expensive.

Ethno botanical survey and pharmacology have the history of *Tephrosia* genus having been used traditionally for the treatment of diseases such as; syphilis, rheumatic pains, dropsy, stomach-ache, diarrhea, asthma, abortifacient, respiratory disorders, laxative, diuretic and inflammations.

In an effort to address these challenges in finding an alternative anti-pains, the roots of *Tephrosia pumila* was investigated for anti-pain principles.

1:1 DCM/MeOH extraction of the root was carried out and the extracts subjected to chromatographic techniques. This resulted into isolation of three compounds, KOA -1A ,KOA-7B and KOA-10C .Bioassay is yet to be carried out and will be included in the final write- up.

The structures of these compounds were determined using NMR (^1H , ^{13}C , ^1H - ^{13}C HSQC,HSQC and HMBC) and MS spectroscopy. The structures respectively were:-

