

## **In vitro Susceptibility of *Madurella mycetomatis* to the Extracts of *Anogeissus leiocarpus* Leaves**

**Authors :** Ikram Mohamed Eltayeb Elsidig, Abdel Khalig Muddather, Hiba Abdel Rahman Ali, Saad Mohamed Hussein Ayoub

**Abstract :** *Anogeissus leiocarpus* (Combretaceae) is well known for its medicinal uses in African traditional medicine, for treating many human diseases mainly skin diseases and infections. Mycetoma disease is a fungal and/ or bacterial skin infection, mainly cause by *Madurella mycetomatis* fungus. This study was carried out in vitro to investigate the antifungal activity of *Anogeissus leiocarpus* leaf extracts against the isolated pathogenic *Madurella mycetomatis*, by using the NCCLS modified method compared to Ketoconazole standard drug and MTT assay. The bioactive fraction was subjected to chemical analysis implementing different chromatographic analytical methods (TLC, HPLC, and LC-MS/MS). The results showed significance antifungal activity of *A. leiocarpus* leaf extracts against the isolated pathogenic *M. mycetomatis*, compared to negative and positive controls. The chloroform fraction showed the highest antifungal activity. The chromatographic analysis of the chloroform fraction with the highest activity showed the presence of important bioactive compounds such as ellagic and flavellagic acids derivatives, flavonoids and stilbenoid, which are well known for their antifungal activity.

**Keywords :** *Anogeissus leiocarpus*, crude extracts and fractions of *Anogeissus leiocarpus*, in vitro susceptibility of *Madurella mycetomatis*, *Madurella mycetomatis*

**Conference Title :** ICMAP 2015 : International Conference on Medicinal and Aromatic Plants

**Conference Location :** Penang, Malaysia

**Conference Dates :** December 03-04, 2015