

July 30-31, 2018  
Amsterdam, NetherlandsJ Org Inorg Chem 2018, Volume 4  
DOI: 10.21767/2472-1123-C3-009

# PHYTOCHEMICAL AND ANTIMICROBIAL ACTIVITY OF BIOACTIVE COMPOUND EXTRACTED FROM EMBELIA SCHIMPERI VATKE AGAINST HUMAN PATHOGENS

Tesfaye Wolde, Tamru Demsis, Shemsu Ligani and Tesfaye Hailemariam

Wolkite University, Wolkite, Ethiopia

**Background:** *Embelia schimperi* is among medicinal Mvrsinaceae plants found in Ethiopia which find a wide range of application in ethno-pharmacology as antimicrobials and antihelmentic. It has been used for the treatment of intestinal parasites especially tapeworm infestations for centuries in Ethiopia. This study has therefore evaluated the efficacy and phytochemical analysis of *E. schimperi* thereby generating relevant preclinical information.

**Methods:** The fruit berries of *E. schimperi* were extracted with cold methanol, n-hexane, ethanol, petroleum ether. The antihelmentic activity was evaluated on the earthworm *Pheretima posthuma* collected due to its anatomical and physiological resemblance with the intestinal round worm parasites of human. Antibacterial activity was carried out with the pure compounds against *Staphylococcus aureus* and *Salmonella typhi*.

**Results:** The paralysis causing concentration within 30 minutes of the crude extracts and Albendazole were 50 mg/ml and 25 mg/ml respectively. The crude extracts showed nematocidal activity against the earth worms whereas the nematocidal concentration required within 30 minute for the crude extracts and Albendazole were 100 mg/ml and 25 mg/ml. The crude extracts showed nearly similar activities against all the tested bacteria in the study. From zone inhibition diameters of compounds *Embelia schimperi* methanol and ethanol extract were compared on *S typhi* and *S. aureus*, both compounds were showed activity on *S. aureus* nearly in similar way. These compounds were reasonably active against *S typhi* and *S. aureus* it makes an appropriate candidate for further investigation in control of these multi-drug resistant bacteria.

**Conclusion:** Antibacterial activities vary with the test organisms, plant material and the solvents used. Thus, the result ascertains the value of plant used in the study could be of considerable interest to the development of new antimicrobial drugs.

tesfalem2002@gmail.com