

Schistosomicidal Evaluation of *Zanthoxylum naranjillo* and its Isolated Compounds against *Schistosoma mansoni* Adult Worms

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Chemical investigation of the EtOAc fraction (**EF**) obtained from the ethanolic extract of *Zanthoxylum naranjillo* (Rutaceae) leaves (**EE**) by preparative HPLC resulted in the isolation of protocatechuic acid (**1**), gallic acid (**2**), *p*-hydroxybenzoic acid (**3**), and 5-*O*-caffeoylshikimic acid (**4**). This is the first time that the presence of compounds **1–4** in *Z. naranjillo* has been reported. Compounds **1–4**, the **EE**, and **EF** were tested *in vitro* against *Schistosoma mansoni* adult worms. The results showed that the *S. mansoni* daily egg production decreased by 29.8%, 13.5%, 28.4%, 17.7%, 16.3%, and 6.4%, respectively. Compounds **1** and **3** were also able to separate adult worm pairs into male and female. This activity may be correlated with the reduction in egg production, since **1** and **3** showed better inhibitory properties compared with **2** and **4**.

Key words: *Zanthoxylum naranjillo*, Rutaceae, Schistosomicidal Activity