

## 2<sup>nd</sup> International Conference and Exhibition on **Pharmacognosy, Phytochemistry & Natural Products**

August 25-27, 2014 DoubleTree by Hilton Beijing, China

In-vitro antibacterial activity of Acacia etbanica against chloramphenicol resistant Staphylococcus aureus

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A cacia etbanica has been reported as being used traditionally to treat diseases of humans and domestic animals by local communities in Kilte Awulaelo District of Tigray Region, Ethiopia. Methanol extracts of leaf of Acacia etbanica was tested for in-vitro antibacterial activity against chloramphenicol resistant Staphylococcus aureus using agar disc diffusion method. The discs were loaded with 1000  $\mu$ g and 500  $\mu$ g of plant extract. The Minimum Inhibitory Concentration (MIC) of the plant was also determined using micro-dilution method in 96-well plates. It was found that mean zone of inhibition of 14.34 mm ( $\pm$ 0.64) and 11.95 mm ( $\pm$ 0.72) in diameter at a concentration of 1000  $\mu$ g and 500  $\mu$ g of plant extract respectively. The MIC of the plant was determined to be 0.038 mg/ml. The results suggest that the methanol extracts of Acacia etbanica could be a rich source of antibacterial compounds against chloramphenicol resistant Staphylococcus aureus. The results also provide an indication of merit in the plants ethnomedicine use by the local communities.

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