IJBAF, June, 2013, 1(6): 365-370

ISSN: 2320 – 0774

International Journal of Biotechnology and Allied Fields (IJBAF)

www.ijbaf.com

'Connecting Researchers...'

EVALUATION OF ANTIBACTERIAL PROPERTIES OF *Acacia nilotica*

KHAN JA[1*], SINGH AP[2], KUMAR M[2] AND SHARMA S[2]

1: R&D division, MRD LifeSciences, Lucknow, UP, India

2: SHIATS, Allahabad, UP, India

***Corresponding Author: E Mail:** jahir.mrdls@gmail.com

ABSTRACT

Acacia nilotica is a medicinal plant known for various medicinal uses. The present study was conducted to evaluate the antibacterial properties of leaves, stem, twig and bark of *Acacia nilotica* extracted using various solvents like water (room temperature and elevated temperature), 80% methanol (room temperature and elevated temperature),70% ethanol (room temperature and elevated temperature), acetone, ethyl acetate and hot mixture of solvents (methanol +ethanol). Extracts were used in a final concentration of 100 mg/ml for assessment of antibacterial properties against two gram negative bacteria namely ***Escherichia coli*, *Pseudomonas aeruginosa*** and a gram positive bacteria namely ***Staphylococcus aureus*** using agar well diffusion method. The standard antibiotic Tetracycline was used in a final concentration of 1mg/ml. Hot ethanolic extract of *Acacia nilotica* bark and hot mixture of solvent extract of leaves gave the maximum inhibitory zone among all the extracts prepared.

Keywords: ***Escherichia coli, Pseudomonas aeruginosa, Staphylococcus aureus, Acacia nilotica,* Agar Well Diffusion, Solvent Extraction, Zone of Inhibition**

INTRODUCTION

Acacia nilotica is the one of the most potent member of medicinal plants. It belongs to the Fabaceae family. *Acacia nilotica* is a medium sized tree with a dense spheric crown, stems, branches and fissured bark, grey pinkish slash, exuding a reddish low quality gum. It is found in dry part of Africa, India, Australia, Arabia and other area. *Acacia nilotica* is used in traditional African herbal medicine and in Ayurvedic and Siddha medicines, which are traditional healing system in India **[1]**.

Research studies are being conducted on many potential health benefits of *Acacia nilotica* confirming many phytochemicals present in the species which are responsible for its use in various disease **[2, 3]**. Ayurvedic medicines uses all of the parts of