

Antibacterial Efficacy of Methanolic Leaf Extracts of Some Trees Against some Common Pathogenic Bacteria.

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Abstract - Majority of the world population cannot afford the allopathic drugs and have to depend upon the use of traditional medicines. Plants have variety and huge source of phytochemicals with proven potential of treating communicable infection with lesser side effects compared to the chemotherapeutic agents. The main aim of the present study was to evaluate and determine an *in-vitro* antibacterial efficacy of methanolic leaf extracts of some trees: *Albizia lebecke*, *Dillenia pentagyna*, *Kigelia pinnata*, *Parkia biglandulosa*, *Peltophorum pterocarpum* and *Pterospermum acerifolium* against some common pathogenic bacteria by agar-well diffusion method. Antibacterial potential of leaf extract was determined by measuring the zone of inhibition. It was concluded from the results that methanolic leaf extracts of trees were significant antibacterial efficacy. Therefore, the leaf extracts of this plant can be selected for further investigation to determine their therapeutic potential.

Keywords - antibacterial efficacy, leaf extract, agar well diffusion, zone of inhibition.

I. INTRODUCTION

There are so many evidence from the different countries around the world indicates an overall decrease in the total stock of antibiotic effectiveness: resistance to all the first line of drugs and last resort antibiotics is increasing. The patterns of which pathogenic bacteria are resistant to specific antibiotics differ region to region and country to country [1]. It is estimated that 58,000 neonatal sepsis deaths are attribute to drug resistant infections in India [2]. According to World Health Organization (WHO, 2014) *Escherichia coli*, *Klebsiella pneumoniae*, and *Staphylococcus aureus* are most recent worldwide estimated global antibiotic resistance, which are of the greatest concern, associated with both hospital and community acquired infections.

There is a continuous increase in antibiotic resistance & emerging threats globally [3]. This situation forced scientists to search for new alternative antimicrobial substances. Majority of the world population cannot afford the allopathic drugs and have to depend upon the use of traditional medicines. More than 30% of the entire plant species were used for medicinal purposes [4]. Plants have variety and huge source of phytochemicals with proven potential of treating communicable infection with lesser side effects compared to the chemotherapeutic agents. Recently much more emphasis has been given to biologically active compounds from plants used in the alternative medicine [5]. The main aim of the present study was to evaluate and determine the antibacterial efficacy of leaf extracts of some trees: *Albizia lebecke*, *Dillenia pentagyna*, *Kigelia pinnata*, *Parkia biglandulosa*, *Peltophorum pterocarpum* and *Pterospermum acerifolium* against some common pathogenic bacteria.