

# BACTERIAL SUSCEPTIBILITY TESTING FOR EVALUATION OF ANTIMICROBIAL ACTIVITY OF ETHANOLIC EXTRACT OBTAINED FROM *FICUS LYRATA* WARB. (MORACEAE) LEAVES

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*Ficus lyrata* Warb., commonly known as the fiddle-leaf fig, is a monoecious evergreen tree up to 15 m tall, native to western Africa (Berg and Wiebes, 1992). Its fruit, root and leaves are used in the native system of medicine in different disorders such as gastrointestinal (colic, indigestion, loss of appetite and diarrhea), respiratory (sore throats, coughs and bronchial problems), inflammatory and cardiovascular disorders (Bidarigh et al. 2011). The ethnomedicinal and traditional uses of the various part of *F. lyrata* plants in the treatment of aforementioned unhealthy symptoms suggest that these plants should possess antibacterial efficacy. On the basis of this background, *in vitro* antimicrobial activities of the ethanolic extract obtained from *F. lyrata* was tested against clinically important pathogens.

Antimicrobial activity was determined using the agar disk diffusion assay (Bauer et al., 1966). Gram-negative bacteria *Klebsiella pneumoniae* (ATCC 700603), *Pseudomonas aeruginosa* (ATCC 27853), and *Escherichia coli* (ATCC 25922), as well as Gram-positive bacteria *Staphylococcus aureus* (ATCC 25923), methicillin-resistant *Staphylococcus aureus* and *Streptococcus pneumoniae* (ATCC 49619) were used as test organisms.

Our results showed that the ethanolic extract of *F. lyrata* leaves exhibited moderate activity against the Gram-positive bacteria (11.3 mm of inhibition zone diameter for *Staphylococcus aureus*), and the Gram-negative bacteria (10.3 mm for *Escherichia coli*). *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, methicillin-resistant *Staphylococcus aureus* and *Streptococcus pneumoniae* appeared to be less sensitive to the extract, the diameters of inhibition zone were 8.9 mm, 8.5 mm, 8.9 mm, and 8.4 mm, respectively.

The ethanolic extract of *F. lyrata* has a moderate antimicrobial activities, attributed to its higher triterpenoids, flavonoids, and glycosides content, that confirm the traditional use of this plant for the treatment of diseases caused by pathogens. Further studies will be focused on the separation and purifying of active compounds and mechanisms of the pharmacological effects of *F. lyrata*. Screening of medicinal plants for antimicrobial activities are important for finding potential new compounds for therapeutic use.