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Antimicrobial activity of extracts obtained from *Calotropis gigantea* Linn. (milkweed) leaves

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The well-documented problems regarding the harmful side effects and the continuous increase in the number of microorganisms that are resistant to the chemical antibiotics highlights the need for new strategies and new classes of antibiotics with low toxicity and high selectivity in their action. In the present study, aqueous and organic solvent extracts of the leaves of *Calotropis gigantea* L. were tested for their antimicrobial activity. For this purpose, the disc diffusion bioassay and the minimal inhibitory concentrations (MICs) of the tested botanicals were adopted. Results revealed considerable antimicrobial activities of the tested extracts. In all cases, the extraction solvent was a determinant factor for the extraction of antimicrobial agents. The leaf aqueous extract showed the strongest activities, where *Escherichia coli, Staphylococcus aureus, Bacillus subtilis, Pseudomonas aeruginosa, Candida albicans and Aspergillus niger* were effective. In these cases inhibition zones ranged between 6.0 to 17 mm and minimal inhibitory concentrations between 25 % to 100 %. All extracts showed biocidal activities against all of the tested fungal strains with diameters of inhibition zones ranged between 7.0 to 9.0 mm. The leaf aqueous extract was the most effective extract and the inhibition zones ranged from 8.0 to 17 mm against bacteria and 7.0 to 8.0 mm against *Candida albicans, and Aspergillus niger.* Present findings confer the utility of aqueous extract of leaves of *C. gigantea* in developing a novel antimicrobial biorationals of plant origin.