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Phytochemical screening of the exudate of *Aloe otallensis* and its effect on *Leishmania donovani* Parasite

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Antibiotic resistance is one of the biggest hazards globally that is leading to prolonged hospital stay, inflated medical expenditures and increased morbidity and mortality. Many natural compounds have intrinsic antibacterial activity which needs to be exploited for their clinical use. Given its nutritional value, Date palm is considered as an essential nourishing source in many countries while the Date seed beverage is consumed locally to promote the health. Due to increase in the number of microorganisms resistant to drugs and antibiotics, there is an urgent need of modification of existing antibiotics and antifungal agents, updating of antimicrobial form or formula, and adding new antimicrobial agents for use in the clinics. The aim of our research is to assess the active constituents from date palm seed cake for their antimicrobial activity. Method: extraction of the date seed powder using high polarity solvents i.e. hexane and ethyl-acetate using cold extraction method. The isolates were later assessed for antibacterial activity against Gram-positive and Gram-negative bacteria using agar-well diffusion method. The ethyl-acetate extract in a 10% Dimethyl sulfoxide exhibited effective inhibition of bacterial growth in comparison with gentamycin. Findings: the gram-positive bacteria showed a significantly higher sensitivity to the date palm seed extract, while the gram-negative bacteria were less susceptible. The MRSA showed the strong susceptibility as indicated by a large zone of growth inhibition of 20 mm diameter as compared to the positive control (gentamycin) followed by *E. faecalis*. Conclusion: our results show the antibacterial properties of the date seed cake extract against a wide spectrum of bacteria. Among the tested bacteria, gram-positive bacteria MRSA showed the highest sensitivity. The results of MRSA are very encouraging as the extract was more effective than the control antibiotic (gentamycin). On the other hand, although the extract showed little effectiveness against gram-negative bacteria in general.

Biography

Currently, I am working as a Senior Clinical Pharmacist at Addis Ababa University, college of Health Science, Black Lion specialized Teaching Hospital in Mentoring under graduate pharmacy students who are coming to the hospital for clinical attachment both at the ward and dispensary area. I am also participating in some of Clinical research which is under go in the Hospital beside the routine work.

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