

WOUND CARE, WOUND NURSING TISSUE REPAIR & REGENERATIVE MEDICINE

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Antibacterial Potentials of the Leaf Extracts of Siam Weed (*Chromolaena odorata*) on Wound Isolates

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The antimicrobial activity of aqueous, ethanolic and methanolic extracts of *Chromolaena odorata* (Siam weed) was evaluated against four wound isolates: *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* at the concentrations of 200mg/ml, 100mg/ml, 50mg/ml and 25mg/ml respectively. *Staphylococcus aureus* and *E. coli* showed high susceptibility to the various extracts than the other test isolates. The aqueous extract showed activity against *Staphylococcus aureus* with a mean diameter of zone of inhibition of 16 ± 3.00 at concentration of 200mg/ml and as low as 8 ± 0.00 at concentration of 25mg/ml; *E. coli* showed susceptibility with a mean diameter of zone of inhibition of 18 ± 2.00 and 10 ± 0.00 at a concentration of 200mg/ml and 25mg/ml respectively. *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* were resistant to the aqueous extract. Methanol extract showed activity against *Staphylococcus aureus* with a mean diameter of zone of inhibition at 28 ± 4.00 and 12 ± 2.30 at a concentration of 200mg/ml and 25mg/ml respectively; while *E. coli* was susceptible with mean diameter of zone of inhibition of 18 ± 2.00 and as low as 12 ± 0.00 at a concentration of 200mg/ml and 50mg/ml respectively, *Pseudomonas aeruginosa* showed considerable susceptibility with mean diameter of zone of inhibition of 13 ± 1.00 and 12 ± 0.00 at a concentration of 200mg/ml and 100mg/ml respectively. The ethanol extract showed activity against *S. aureus* with a mean diameter zone of inhibition of 15 ± 2.00 and 9 ± 0.00 at a concentration of 200mg/ml and 25mg/ml respectively; *E. coli* showed susceptibility with a mean diameter zone of inhibition of 20 ± 4.00 and 13 ± 2.00 at a concentration of 200mg/ml and 25mg/ml respectively. *Pseudomonas aeruginosa* showed considerable susceptibility with a mean diameter zone of inhibition of 13 ± 1.00 and 9 ± 0.00 at a concentration of 200mg/ml and 100mg/ml respectively. The results above indicate the efficacy and potency of the crude extracts of *Chromolaena odorata* leaf on the tested wound isolates.

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