

## ABSTRACT

### **Phytochemical Analysis and Antibacterial Activity of selected Kenyan Wild Orchids**

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The current study evaluated antibacterial activity of dichloromethane and methanol (DCM-MeOH) extracts of four Kenyan orchid species against three selected bacterial strains. Extracts of E1 (*Ansellia africana*), E2 (*Trydactylescottelli*), E3 (*Polystachyabella*) and E4 (*Liparis bowkeri*) were screened for antibacterial activity against *Staphylococcus aureus*, *Bacillus subtilis* and *Pseudomonas aeruginosa* using agar disc diffusion. Ampicillin was included as a positive control. Qualitative analysis revealed the presence of flavonoids, saponins, alkaloids, tannins, terpenoids, steroids and glycosides. *Trydactyle scottelli* and *Polystachyabella* extracts revealed stronger presence of tannins and steroids respectively compared to the others. All extracts showed varying levels of antibacterial activity against the test bacteria. However, extracts of *Polystachyabella* and *Liparis bowkeri* against *Bacillus subtilis* and *Ansellia africana* against *Pseudomonas aeruginosa* exhibited higher activities similar to that of Ampicillin. The study further showed that the DCM-MeOH extracts of the four orchids contain potential bioactive compounds that should be further analysed for conventional and traditional management of bacterial infections.

**Keywords:** Qualitative, infections, extracts, compounds, management