

(maize weevil) and *Prostephanus truncatus* (larger grain borer), as well as maize field pests *Chilo partellus* (Spotted stem borer) and *Busseola fusca* (African stem borer) were identified. Additionally, bioinformatic analysis of some of the Xpt proteins involved in insecticidal activity was carried out. This revealed homology to already established entomotoxins, the Tc proteins of *Photorhabdus* spp., close relatives of *Xenorhabdus*. Isolation of Xpt genes/proteins is ongoing. Data collected has shown that *Xenorhabdus* spp. could be useful in the development of a cleaner, greener and sustainable crop pest control strategy. Products derived from this bacterium have shown potential for use in the control of these pests and thus could be of commercial value. Additionally, once the Xpt genes are isolated they will be transformed into *Metarhizium anisopliae*, an entomopathogenic fungus that parasitically grows on insects to create a 'super organism' that is expected to exhibit increased insecticidal activity and will provide an efficient toxin delivery system through its spores which can be formulated as a spray.

Antimicrobial Activity and Phytochemical Composition of Selected Medicinal Plants of Losho, Narok County, Kenya.

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In Kenya, microbial infections are a major cause of morbidity. Antibiotic effectiveness is threatened by increasing resistance of pathogenic microbes against most available drugs as new pathogens continue to emerge. Currently, herbal remedies offer hope considering they are readily and cheaply available. This study was designed to investigate antimicrobial activity, brine shrimp lethality and phytochemical composition of crude extracts of four selected plants namely *Schrebera alata* (Hochst.) Welw. (Oleaceae), *Ormocarpum kirkii* (Taub.) Engl. (Papilionoideae), *Helichrysum forskahlii* (J.F. Gmel.) Hilliard & B.L. Burttv (Asteraceae) and *Cussonia holstii* Harms ex Engl (Araliaceae) that are medicinally used by herbalists from Losho, Narok County Kenya for treatment of ear, nose and throat infections (ENT), gastrointestinal disorders and skin ailments. Qualitative antimicrobial susceptibility test against five microorganisms, methicillin resistant *Staphylococcus aureus* (MRSA), *Bacillus cereus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Candida albicans* was investigated using Agar diffusion methods to generate inhibition zones and data accrued analyzed using Analysis of variance (ANOVA). Minimum inhibitory concentrations (MICs) were determined by broth microdilution method. Toxicity of the extracts was investigated using brine shrimp lethality assay. Median lethal concentration fifty (LC50) was determined by analysis of data using Finney's computer program. Phytochemical screening for flavanoids, sterols, alkaloids, tannins, quinones and terpenoids and saponins was determined using standard procedures. It was observed that the organic crude extracts of *H. forskahlii* had the highest inhibition zone diameters against MRSA of 19.5 and 18.5 mm in agar well and agar disk diffusion respectively. Moreover, organic extracts of *H. forskahlii* revealed the highest antifungal inhibition zone value equal to 8.5 mm in agar well diffusion. Majority of the crude extracts had a MIC values of <15.625mg/ml. Organic crude extracts of *Helichrysum forskahlii* and *Cussonia holstii* were found to be highly toxic with LC50 of 9.21 µg/ml. All the crude extracts contained flavanoids, sterols, alkaloids, tannins, quinones and terpenoids.