

Antimicrobial Effects of Aqueous Seed Extract of *Strychnos potatorum*

Kalaichelvi S¹, Thavaranjit AC², Tharmila S², Sivarangini S¹

¹ Unit of Siddha Medicine, University of Jaffna, Sri Lanka

² Department of Botany, University of Jaffna, Sri Lanka

Biologically active compounds in plant extracts play an important role in herbal medicine through their antimicrobial properties. *Strychnus potatorum* belongs to the family Loganiaceae. Seeds are alterative tonic, stomachic, demulcent, mild expectorant, astringent to the bowels, and diuretic, aphrodisiac emetic properties. The present study was conducted to evaluate the antimicrobial properties of seeds of *Strychnus potatorum*. Seeds were ground into fine powder and different concentrations (10 mg/100 μ l, 30 mg/100 μ l, 50 mg/100 μ l) of aqueous extracts were prepared by dilution method using sterile distilled water. Antibacterial activity was studied by agar well diffusion method and inhibition zone was measured against Gram positive bacteria, *Staphylococcus aureus* and Gram negative bacteria, such as *Escherichia coli*, *Pseudomonas aeruginosa* and *Klebsiella* spp. Hence, antifungal activity was determined by agar disc method against *Aspergillus* sp, *Fusarium* spp and *Penicillium* spp. Streptomycin and sterile distilled water were used as standard and control respectively and the results were subjected to analysis of variance (ANOVA) ($P < 0.05$) followed by Turkey test. Antibacterial activity increased with increasing concentration of aqueous extracts of seeds. *Klebsiella* spp was highly inhibited (13 mm) than the other tested bacteria where there was no inhibition on *P. aeruginosa*. Standard showed the highest inhibition in all tested bacteria except *P. aeruginosa*. Growth of *Fusarium* spp was significantly inhibited (12 mm) while there was no inhibition on the growth of *Aspergillus* spp. The present study proved the *in vitro* control of tested microorganisms by aqueous extracts of seeds of *S. potatorum*.

Keywords: Seed aqueous extract, Antibacterial activity, Antifungal activity