Tittle

Antiviral Activity of the Crude Extracts and Phytochemical Fractions of Aloe Secundiflora against Newcastle Disease Virus

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Abstract

Crude extract of *Aloe secundiflora* (Aloeaceae), and three phytochemical (HPLC) fractions containing the major phenolic compounds were investigated for their effects on Newcastle Disease Virus (NDV) in embryonated specific pathogen free (SPF) chicken eggs. The three fractions used contained the major peaks within which the main compounds had been identified as aloenin, aloin and an aloinoside derivatives. The crude Aloe extract at 400 mg/ml exhibited antiviral effects at 100%, While 200 mg/ml resulted to 30% reduction in viral multiplication. Fraction containing aloenin (4 mg/ml = 4000 ppm) also showed 100% reduction effects of viral multiplication on NDV in nineday old embryonated chicken eggs (ECE). Fraction containing aloin (4 mg/ml = 4000 ppm) exhibited 50% reduction of viral multiplication while the fraction containing aloinside showed 70% reduction effects. The results of the study provided a justification on the ethnoveterinary use of the exudate in the prophylaxis / control of Newcastle Disease Virus.

Key words

Aloe secundiflora, Aloaceae Newcastle Disease Virus, Ethnoveterinary, anthraquinones, Aloenin, Aloin