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In vitro Antiviral Activity of Ocimum sanctum against Animal Viruses

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Abstract : Ocimum sanctum, a well known medicinal plant is used for various alignments in Ayurvedic medicines. It was found to be effective in treating the humans suffering from different viral infections like chicken pox, small pox, measles and influenza. In addition, curative effect of the plant in malignant patients was also reported. In the present study, leaves of this plant were screened against animal viruses i.e. Bovine Herpes Virus-type-1 (BHV-1), Foot and Mouth disease virus (FMDV) and Newcastle Disease Virus (NDV). BHV-1 and FMDV were screened in MDBK and BHK cell lines respectively using cytopathic inhibition test. While NDV was propagated in chick embryo fibroblast culture and tested by haemagglutination inhibition test. Maximum non toxic dose of aqueous extract of Ocimum sanctum leaves was calculated by MTT assay in all the cell cultures and nontoxic doses were used for antiviral activity against viruses. 98.4% and 85.3% protection were recorded against NDV and BHV-1 respectively. However, Ocimum sanctum extract failed to show any inhibitory effect on the cytopathic effect caused by FMD virus. It can be concluded that Ocimum sanctum is a very effective remedy for curing viral infections in animals also.

Keywords : bovine herpes virus-type-1, foot and mouth disease virus, newcastle disease virus, Ocimum sanctum
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