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KEY WORD : HERPES SIMPLEX VIRUS/THAI MEDICINAL PLANTS

CHUTINUN KANTASUK : PRELIMINARY TEST FOR ANTI-HERPES SIMPLEX VIRUS  
ACTIVITY OF EXTRACTS FROM SOME THAI MEDICINAL PLANTS. THESIS

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A preliminary test for anti-herpes simplex virus activity was performed to study 10 Thai medicinal plants that included Lagenaria leucantha Rusby., Gynura pseudochina Dc. var. hispida Thv., Clinacanthus nutans (Burm. f.) Lindau., Barleria lupulina Lindl., Curcuma domestica L., Cassia alata L., Mangifera indica L., Annona squamosa L., Centella asiatica L., Cudrania javanensis Frec. Water and alcoholic extracts were determined for 50% cytotoxic concentration in Vero cells and effects on both types of herpes simplex virus investigated by plaque reduction assay. The extracts were added into cell culture either with the virus or after viral adsorption. The results demonstrated that water extracts from leaves of Lagenaria leucantha Rusby. (Cucurbitaceae) and Clinacanthus nutans (Burm. f.) Lindau. (Acanthaceae) have direct virucidal effects on HSV-1 and HSV-2 before viral adsorption onto cells. While alcoholic extracts from leaves of Cassia alata L. (Leguminosae), Lagenaria leucantha Rusby. and Centella asiatica L. (Umbelliferae) have only virucidal effects on HSV-2 before viral adsorption. The water extracts from leaves and branches of Mangifera indica L. (Anacardiaceae), leaves of Centella asiatica L. and woods of Cudrania javanensis Frec. (Moraceae) appeared to inhibit HSV-1 and HSV-2 not only before viral adsorption but also intracellular viral replication as well. However, these extracts did not inhibit plaque formation by poliovirus type-2 in Vero cells. Results of inhibitory doses of these extracts were also compared with that of acyclovir. The antiviral activity of acyclovir was better than those of crude extracts because of its lower inhibitory concentration.