Antiviral Activity of *Solanum paniculatum* Extract and Constituents

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*Solanum* species are traditionally employed as antiherpes and anticancer agents in different countries. *S. paniculatum* has widespread ethnomedical uses in Brazil, including the treatment of viral infections. This paper reports on the isolation of neotigogenin (1) and the new compound $\delta^{25(27)}$-tigogenin-3-$\delta$-D-glucopyranoside (2), obtained as a mixture of $R$ and $S$ diastereoisomers at C22 from an ethanol extract of *S. paniculatum* leaves, along with the determination of their cytotoxicity against Vero cells and antiviral effect against human herpes virus type 1 (HHV-1), murine encephalomyocarditis virus (EMCV), and vaccinia virus strain Western Reserve (VACV-WR). The extract of *S. paniculatum* inhibited HHV-1 replication [$EC_{50} = (298.0 \pm 11.2) \mu g/ml$] and showed no effect on EMCV and VACV-WR. On its turn, 1 was inactive against the assayed strains but presented high cytotoxicity [$CC_{50} = (2.03 \pm 0.03) \mu g/ml$], whereas 2 exhibited significant antiherpes [$EC_{50} = (170.8 \pm 1.7) \mu g/ml$] and antivaccinia virus effects [$EC_{50} = (177.0 \pm 3.3) \mu g/ml$], with low cytotoxicity ($CC_{50} > 400 \mu g/ml$). The results corroborate *Solanum paniculatum* as a source of cytotoxic and antiviral compounds.

*Key words: Solanum paniculatum, $\delta^{25(27)}$-Tigogenin-3-$\delta$-D-glucopyranoside, Antiviral Activity*