Antiviral Activity of *Solanum paniculatum* Extract and Constituents

Ydia M. Valadares[a], Geraldo C. Brandão[a], Erna G. Kroon[b], José D. Souza Filho[c], Alaíde B. Oliveira[a], and Fernão C. Braga[a,*]

[a] Faculty of Pharmacy, Department of Pharmaceutical Products, Federal University of Minas Gerais, Av. Antônio Carlos, 6627, CEP 31.270–901 Belo Horizonte, MG, Brazil. E-mail: fernao@netuno.lcc.ufmg.br

[b] Department of Microbiology, ICB, Federal University of Minas Gerais, Belo Horizonte, Brazil

[c] Department of Chemistry, ICEX, Federal University of Minas Gerais, Belo Horizonte, Brazil

* Author for correspondence and reprint requests

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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 $\varphi^{25(27)}$-tigogenin-3-*O*-*b*-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 ∂ 11.2) μg/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 ∂ 0.03) μg/ml], whereas **2** exhibited significant antiherpes [EC_{50} = (170.8 ∂ 1.7) μg/ml] and antivaccinia virus effects [EC_{50} = (177.0 ∂ 3.3) μg/ml], with low cytotoxicity (CC_{50} > 400 μg/ml). The results corroborate *Solanum paniculatum* as a source of cytotoxic and antiviral compounds.

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