Laevifonol : a unique dimer oligostilbene from the stem bark of Vatica odorata.

Abstract

The isolation of laevifonol (dimerstilbene) in Vatica odorata is the second time for its present in Vatica sp. This compound is a unique oligostilbene formed from a condensation between -viniferin and ascorbic acid and was firstly isolated from Shorea laevifonia and recently from Vatica umbonata. The structure of laevifonol was established on the basis of their spectral data, including UV, IR and NMR spectra and also in comparison with the previously reported data. Cytotoxic properties was evaluated against murine leukimia P-388 cells and Artemia salina which resulting not strongly inhibited with IC50 values of 60.5 μM and > 796.2 μM, respectively. Antibacterial activity also was screened against two gram positive bacteria (Bacillus subtilis and Staphylococcus aeureus) and one gram negative bacteria (Escherichia coli). The antibacterial testing was carried out by using the disc diffusion method. Blanc disc of 6mm diameter was loaded with 1000 μg/ml of the compound applied to the inoculate plate. The compound showed moderate activity against all the bacteria with inhibition zones of 0.5 mm against E.coli and B.subtilis and 0.1 mm against S. aerues compared to positive control (Erythromycin 60 μg) with 0.13 mm, 0.03 mm and 0.1 mm each. The present investigation is apart of our ongoing studies on the oligostilbene of Malaysian Dipterocarpacaeae in which no phytochemical data was recorded on V. odorata.

Keyword: Oligostilbene; Dipterocarpaceae; Vatica odorata; Laevifonol; Biological activity.