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Artabscoumarin, an unusual coumarin derivative from *Artemisia absinthium* with cytotoxic activity on cancer cells

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ABSTRACT Investigation of the chemical constituents in the aerial parts of *Artemisia absinthium* led to the isolation and identification of one unique coumarin featuring a rare 2-hydroxypropanoic acid side chain, named artabscoumarin (**1**), as well as four phenolic compounds identified as casticin (**2**), artemetin (**3**), 7-methoxy-isobiflorin (**4**), and diosmetin-7-*O*-β-D-glucopyranoside (**5**). Their structures were elucidated using extensive spectroscopic analysis and by comparison with data reported in the literature. Compound **4** was isolated from this plant for the 1st time. In the preliminary assays, artabscoumarin (**1**) was tested by MTT colorimetric assay method for cytotoxicity against breast cancer cell lines (MCF-7), colon cancer cell lines (HT-29), and hepatocellular carcinoma cell lines (HepG2). It exhibits moderate cytotoxic activity with IC_{50} values of 29.0, 28.6, and 54.4 µg/mL, respectively.

KEYWORDS *Artemisia absinthium*, Phenolics, Coumarins, Cytotoxic activity, NMR

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INTRODUCTION