Cytotoxic tirucallane triterpenes from the stem of Luvungia scandens

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Abstract

Two tirucallane triterpenes, namely flindissol (1) and 3-oxotirucalla-7,24-dien-21-ol-acid (2), were isolated from the dichloromethane extract of the stem of Luvungia scandens (Roxb.) Buch-Ham ex Wight & Arn, Rutaceae. This is the first report of their isolation from this plant. Their structures were constructed by high resolution mass and 2D NMR spectroscopic data. The cytotoxic potential of the two pure compounds 1 and 2 were determined by MTT assay against human breast adenocarcinoma cell line (MCF-7). Compounds 1 and 2 showed potent cytotoxicity against MCF-7 cell line with IC50 values of 13.8 μM and 27.5 μM, respectively. This result suggested their potential activity as antitumor agents. © 2014 Sociedade Brasileira de Farmacognosia. Published by Elsevier Editora Ltda. All rights reserved.

Author keywords

- Cytotoxicity
- Luvungia scandens
- Tirucallane
- Triterpenes

Indexed keywords

- EMTREE drug terms: 1 Oroxinccalla 7,24-dien-21-ol acid, flindissol, Luvungia scandens extract, plant extract, triterpenes
- unclassified drug
- antineoplastic activity, Article, cancer cell culture, cell viability, controlled study, cytotoxicity, extraction and extracts, human, human cell, IC50, in vitro study, isolation procedure, MCF-7 cell line, MTT assay, quantitative assay, spectroscopy

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