New ursane-type triterpenes from the root bark of Calotropis procera

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Abstract:

As a part of our continuing interest in identifying anticancer drug leads from natural sources, we have investigated the in vitro growth inhibitory effects of the hexane fraction of the root bark of Calotropis procera (Ait) R. Br. (Asclepiadaceae). This study reports the isolation and structure elucidation of four new ursane-type triterpenes named calotroprocerol A (1), calotroproceryl acetate A (2), calotroprocerone A (3) and calotroproceryl acetate B (4) in addition to five known compounds including pseudotaraxasterol acetate (5), taraxasterol (6), calotropursenyl acetate B (7), stigmasterol (8) and (E)-octadec-7-enoic acid (9). Their structures were established on the basis of 1D and 2D NMR studies (1H□1H COSY,HSQC, and HMBC) and HRMS spectral data. The in vitro growth inhibitory activity of the isolated compounds was evaluated against three human cancer cell lines including the A549 non-small cell lung cancer (NSCLC), the U373 glioblastoma (GBM) and the PC-3 prostate cancer cell lines.

Keywords:

Calotropis procera Asclepiadaceae Calotroprocerol A Calotroproceryl acetate A Calotroprocerone A Calotroproceryl acetate B Cancer growth inhibitory activity

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