Non-Alkaloidal Compounds from the Bulbs of the Egyptian Plant Pancratium maritimum

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Abstract:

Phytochemical investigation of the cytotoxic fractions of fresh bulbs of Pancratium maritimum L. led to the isolation and structure identification of two new compounds, pancricin (1) and pancrichromone (4), together with four known compounds, including 2,4-dihydroxy-6-methoxy-3-methyl acetophenone (2), 5-formylfurfuryl acetate (3), 7-□-D-glucosyloxy-5-hydroxy-2-methylchromone (5), and ethyl-□-D-glucopyranoside (6). Their structures were established on the basis of 1D and 2D NMR spectroscopy (1H, 13C, COSY, HSQC, and HMBC), as well as HR mass spectral analyses. The compounds were evaluated for their antimigratory and antiproliferative activities against the highly metastatic human prostate cancer cell line (PC-3M). Compound 5 was the most active compound displaying good activity in the proliferation assay comparable to that of the positive control 4-hydroxyphenylmethylene hydantoin, while it displayed only weak antimigratory activity compared to the positive control 4-ethylmercaptophenylmethylene hydantoin.

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