

해동피(Kalopanax Cortex)로부터 이차대사산물의 분리 및 동정
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Isolation and Identification of Secondary Metabolites from the Kalopanax Cortex

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Objectives

Kalopanax Cortex is the stem bark of *Kalopanax pictum* Nakai in the family of Araliaceae, which is distributed mainly in Korea. It has been used as a traditional Korean medicine for the remedies of paralysis, arthritis, neuralgia, lumbago, antidiabetes and tonic. On the continuing study to search for anti-cancer compounds, we initiated this study to isolated and identified single active compounds from EtOH extracts of Kalopanax Cortex which showed significant anti-cancer activity.

Materials and Methods

○ Materials

Kalopanax Cortex was purchased from Kyungdong Market, Seoul, Korea, in June 2006. IR spectra were obtained with a Perkin Elmer Spectrum One FT-IR spectrometer. EI-MS was recorded on a JEOL JMSAX-505-WA. ¹H-NMR (400 MHz) and ¹³C-NMR (100 MHz) spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer.

○ Methods

The Kalopanax Cortex (10 kg) was extracted with 80% aqueous EtOH and the concentrated EtOH extracts were partitioned with EtOAc, *n*-BuOH and water, successively. Among them, EtOAc fraction which showed significant anti-cancer activity was applied to repeated silica gel and ODS column chromatographies.

Results

From the result of spectroscopic data including NMR, MS and IR, the chemical structures of isolated four compounds were determined as stigmasterol (1), syringaresinol (2), *a*-Hederin (3), liquiritin (4), respectively. Compounds 1, 2, 4 have been first isolated from Kalopanax Cortex in this study. and the isolated compounds will be evaluated for the VRK1 (vaccinia related kinase 1) kinase inhibition activity.

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Table 1. Isolation Procedure of Kalopanax Cortex.

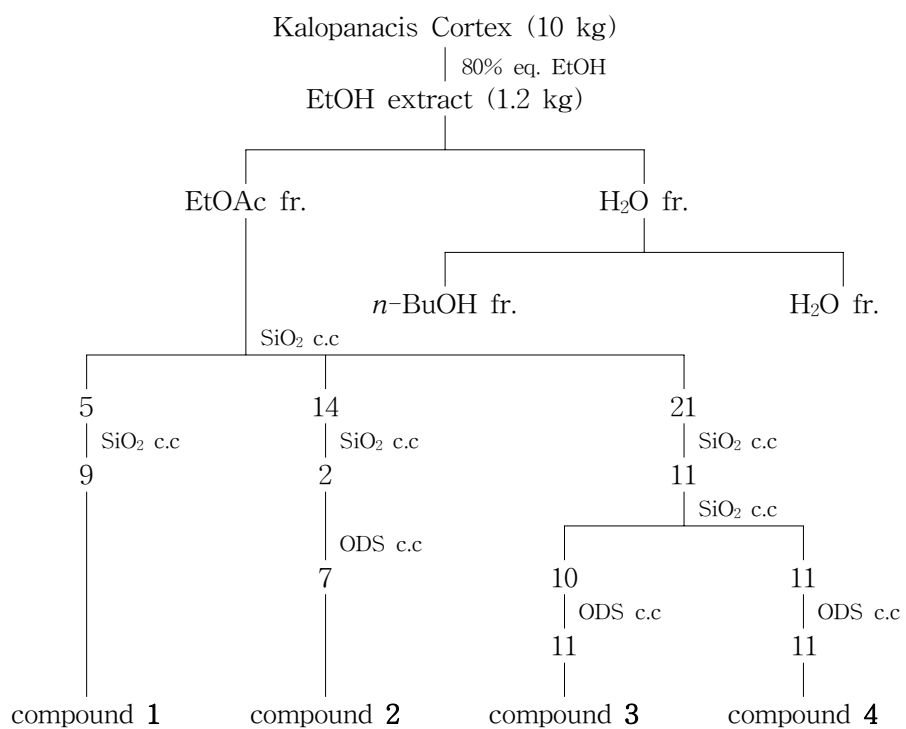


Fig. 1. compounds from Kalopanax Cortex.

