P-111

일본목련(Magnolia obovata) 열매로부터 신규 네오리그난의 분리 및 구조동정

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New neolignan from the fruits of *Magnolia obovata*

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Objectives

Magnolia obovata (Magnoliaceae), a deciduous tree growing up to 20 m high, which is widely distributed in Korea, China, and Japan. This plant has been used for the treatment of fever, headache, darrhea, anxety, and relief of asthma in Chinese medicine. Its fruits have been reported to have anti-platelet aggregation, prevention and treatment of neurodegenerative disease, and anti-oxidation activities. However, up to now, only few chemical constituents, such as magnolol, honokiol, obovatol, methyl caffeate, and syringin have been isolated from *Magnolia obovata* fruits. The fruits of *Magnolia obovata* were extracted and partitioned with solvents. One new neolignan was evaluated for skin whitening activity. Their present poster describes the isolation, structural characterization and inhibition activity on whitening effect of these compounds.

Materials and Methods

- Materials

The fruits of *Magnolia obovata* were collected by Kyung Hee University. ^{1}H-NMR (400 MHz), ^{13}C-NMR (100 MHz) and 2D-NMR spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer.

- Methods

The fruits of *Magnolia obovata* were extracted with 80% aqueous MeOH, and the concentrated extract was partitioned with EtOAc, *n*-BuOH, and H_2O, successively. From the EtOAc fraction, one new neolignan, two neolignans were isolated through the repeated SiO_2, ODS column chromatographies.

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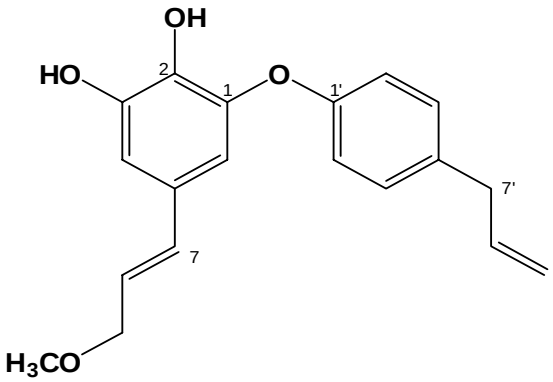
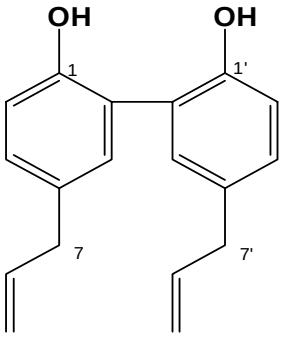
Results

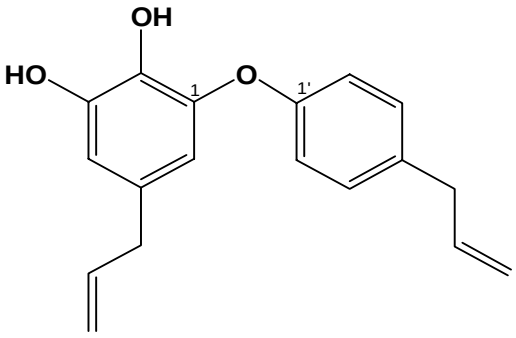
Our phytochemical study on the fruits of *Magnolia obovata* led to isolation and identification of new compound (**1**), magnolol (**2**), and obovatol (**3**) from the results of spectroscopic data including ^{1}H-NMR, ^{13}C-NMR, DEPT and 2D-NMR (COSY, HSQC, HMBC). Compound (**1**) was isolated for the first time from the fruits of *Magnolia obovata*.



New Compound (**1**)



magnolol (**2**)



obovataol (**3**)