

Evaluation of Antifungal and Antibacterial Activity of Newly Developed Licorice Varieties

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Glycyrrhizae radix, commonly known as licorice, is a perennial herb belonging to Leguminosae and also includes various components such as, glycyrrhizin, liquiritin, liquiritigenin and isoliquiritigenin etc. Licorice has been widely used in East Asia as a medicine having pharmacological effects like antioxidants, anti-bacterial, anti-inflammatory, anti-cancer and immune modulatory activities. Among various licorice, *Glycyrrhiza (G.) uralensis G. glabra* and *G. inflata* are used for pharmaceutical purposes in Korea. However, cultivation of licorice has some problems such as low quality, low productivity, and early leaf drop. Korea Rural Development Administration developed new cultivars Wongam and Sinwongam, which are improved in cultivation and quality. To register the newly developed cultivar(s) on Ministry of Food and Drug Safety in Korea as a medicine, it is necessary to prove the similarity and difference through the comparative studies between already-registered species and new cultivars. Some fungi and bacteria usually in the human oral cavity and intestines exist as harmless state in human body. Also, the skin and genital infections by fungi can lead to toxic systemic infections and are accompanied by flushing, rashes, burning or painful sensation. The influences of licorice varieties on fungi and bacteria might be an evidence to prove the outstanding effect of newly developed licorice variety. In this study, the antifungal and antibacterial activity was investigated using newly developed licorice varieties Wongam, and Sinwongam against various fungi and bacteria. These results means newly developed licorice could be used as a replacement of already-registered species in terms of antifungal and antibacterial application.

Key words: Newly developed liquorice, Fungi, Antibacterial activity, Wongam, Antifungal activity

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