

Studies on constituents of *Dictamnus dasycarpus* Turcz.

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The root of *Dictamnus dasycarpus* Turcz. (Korean name "Baik-Seon-pi") (Rutaceae) has been used as a traditional Chinese medicine for the treatment of jaundice, cough, rheumatism, and skin diseases. Several chemical studies found that a variety of compounds such as limonoids, furanoquinoline alkaloids, sesterpenoids and flavonoids were present in this medicinal plant. Recently, W. M. Zhao reported the isolation and identification of six components inhibitory to the plant pathogenic fungus *Cladosporium ucumerinum* from the dichloromethane extract of *D. dasycarpus*. As a part of our study on the hydrophilic bioactive constituents from Chinese medicines.

The aim of this study was to fractionate the water extract of *D. dasycarpus* Turcz and to identify the chemical constituents in the bark of this plant. The dried root of *D. dasycarpus* Turcz (2.5kg) were extracted with H<sub>2</sub>O(25L) under reflux to obtain 300g of the solid extract. The H<sub>2</sub>O extract was suspended in H<sub>2</sub>O and then extracted successively with equal volumes of EtOAc(3×2L), and *n*-BuOH(5×2L). Each fraction was evaporated in vacuo to obtain EtOAc(5.2g), *n*-BuOH(21.9g), and H<sub>2</sub>O(251.6g) fractions. Fractionation of the *n*-BuOH fraction via medium pressure liquid chromatography (MPLC) over reversed-phase C-18 eluting with a gradient of increasing MeOH in water(0~30%) and further purified by preparative HPLC on a RP C-18 column give compounds 1 and 2.

Thus two compounds elucidated as adenosine(1) and 1-(3-methoxy-4-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-((2R,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyloxan-2-yl]oxy)methyl)oxan-2-yl]oxy)phenyl)ethan-1-one (2) by spectral analysis. These compounds are reported from this plant for the first time.

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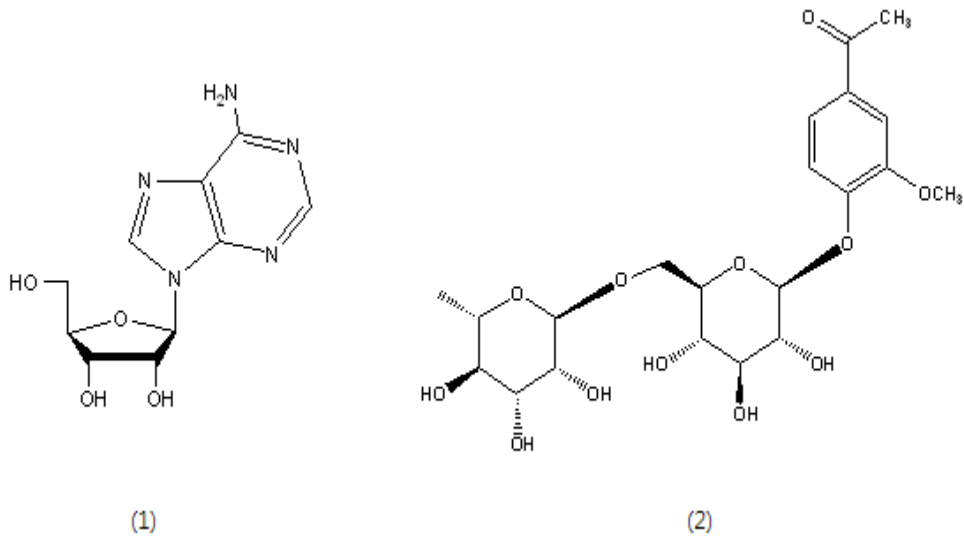


Figure.1 Structure of adenosine, 1-(3-methoxy-4 -{[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6({[(2R,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyloxan-2-yl]oxy)methyl]oxan-2-yl]oxy}phenyl)ethan-1-one