

E-E2-41**Flavonoids from *Myriophyllum spicatum* L.**

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Myriophyllum spicatum (spiked water-milfoil or Eurasian water milfoil) is a specie of *Myriophyllum* native to Europe, Asia, and north Africa. It is a submerged aquatic plant, growing in still or slow-moving water, with slender stems up to 3 m long. The leaves are borne in whorls of four, bipinnate, with the numerous leaflets thread-like, 4-13 mm long. The flowers are produced in the leaf axils on a spike 5-15 cm long held vertically above the water surface, each flower is inconspicuous, orange-red, 4-6 mm long. *M. spicatum* is known to cause allelopathic growth inhibition of the cyanobacterium *Microcystis aeruginosa*. Nonanoic, *cis*-6-octadecenoic, and *cis*-9-octadecenoic acids from *M. spicatum* significantly inhibited the growth of *M. aeruginosa*, as anti-cyanobacterial effects. And Four polyphenols, gallic acid, ellagic acid, pyrogallallic acid, and (+)-catechin, released from *M. spicatum*, are anti-algal allelochemicals. Except them, there is rare report about biological and phytochemical research on this plant. *M. spicatum* was extracted with 80% aqueous MeOH, and the concentrated extract was partitioned with EtOAc, *n*-BuOH and H₂O, successively. From the *n*-BuOH fraction, several flavonoids were isolated through the repeated silica gel column chromatographies and their chemical structures of the flavonoids were determined by the results of physico-chemical data including NMR, MS and IR. These flavonoids were expected to show anti-cyanobacterial effects like four polyphenol because of structural similarity

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E-E2-42**Sterols from the *Rhizopus oryzae* KSD-815 inhibited migratory activity**

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Rhizopus oryzae KSD-815 was an alcohol-fermenting *Nuruk* used for manufacturing traditional alcoholic beverages. The authors isolated some sterols from the *Rhizopus oryzae* KSD-815, identified their structures, and evaluated their pharmacological activities. The dried and powdered *Nuruk* (8 kg) were extracted with 80% aqueous MeOH at room temperature. The extracts were partitioned with water, EtOAc and *n*-BuOH, successively. And then, the EtOAc extract was suspended in 80% MeOH and partitioned repeatedly with *n*-hexane. From the *n*-hexane and *n*-BuOH fraction, four sterols were isolated through the repeated silica gel and ODS column chromatographies. According to the results of spectroscopic data including NMR, GC/MS and IR, the chemical structures of the compounds were determined as 5 α ,8 α -epidioxyergosta-6,22-dien-3 β -ol (1), stigmast-4-en-3,6-diol (2), daucosterol (3) and ergosta-7,22-diene-3 β ,5 α ,6 β ,9 α -tetraol (4). They were the first to be isolated from *Rhizopus oryzae* KSD-815. The isolated compounds were tested anti-migratory activity on MDA-MB-231 and SK-HEP-1 cells. Our results suggest that the compounds isolated from *Rhizopus oryzae* KSD-815 have the potent anti-cancer activity.

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