Phytochemical Constituents of Hylomecon vernale

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The constituents of *Hylomecon vernale* Max. (Papaveraceae) were studied phytochemically in order to investigate medicinal resources. This plant is perennial herb grown on damp shady regions in Korea. According to the ancient Chinese herbal literature, it is effective for the treatment of arthritis, edema and dysfunction of blood circulation. The chemical constituents of the genus *Hylomecon* were reported as benzophenanthridine alkaloids (chelerythrine, chelidonine, chelilutine, chelirubine, protopine, sanguinarine) and protoberberine alkaloids (coptisine, cryptopine, allocrytopine, berberine, tetrahydroberberine). However, only a few chemical investigations of *Hylomecon vernale* have been studied and its biological activities have not been reported. In the course of studies on chemical constituents, three compounds were isolated from the aerial parts of this plants by repeated silica gel column chromatograpy. The structure were identified on the basis of their physicochemical and spectroscopic data (UV, mass, 1^{X}H-NMR and 13^{X}C-NMR).

[PD1-36] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Benzophenanthridine Alkaloids from Hylomecon hylomecoides

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Hylomecon hylomecoides (Papaveraceae) is an indigeneous plant and distributed in southern part of Korea. Phytochemical studies were carried out from the alkaloid fraction of the root of H. hylomecoides. Four benzophenanthridine alkaloids were isolated from the repeated silicagel column chromatography. On the basis of spectral data, their structures were identified as 8-methoxydihydrosanguinaline, dihydrosanguinarine, 8-hydroxymethyldihydrosanguinarine and 8-acetonyl dihydrosanguinaline.

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Aldose Reductase Inhibition of Magnesium Lithospermate B isolated from the Root of Salvia Miltiorhiza

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Magnesium Lithospermate B was isolated from an aq. MeOH extract of Salvia Miltiorhiza (Dan-Shen, 丹蔘), and its subsequent purification by normal silica gel column chromatography with polar-eluent (Yield: 1g from Dan-Shen 100g). The in vitro effect of magnesium lithospermate B on rat mesangial cell line was assessed by spectrophotometry. We evaluated the activity of aldose reductase, which is considered to be a major enzyme of the signal transduction in the pathogenesis of not only diabetic neuropathy but also diabetic nephropathy. There was a tendency to decreased activity of aldose reductase in accordance with the increasing dosage of magnesium lithospermate B. The magnesium lithospermate B showed significant dose dependent effect on aldose reductase activity