

of 40 µg/ml. Activity-guided purification of *Populus maximowiczii* resulted in two acyl phenol glucosides as active components. Their structures were elucidated as salicortin (1) and salicortin-6'-benzoate (2) by the spectroscopic analysis. Salicortin inhibited the production of NO with IC₅₀ values (the concentration required inhibiting the production of NO by 50%) of 15 µM. In Western blot assay, they also inhibited the expression of inducible nitric oxide synthase (iNOS). These new inhibitors of iNOS expression may have potential in the treatment of endotoxemia and inflammation accompanied by the overproduction of NO.

[PD2-46] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Quantitative analysis of 5-hydroxymethyl-2-furaldehyde (5-HMF) in the commercial *Rehmanniae Radix Preparata*

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Rehmanniae Radix Preparata attributes good blood circulation and it has been used for the treatment of dizziness, men's sterility, excessive loss of blood and weakness. On the quality control of the commercial *Rehmanniae Radix Preparata*, quantitative determination of 5-hydroxymethyl-2-furaldehyde (5-HMF) using HPLC method has been conducted. Quantitative analysis of 5-HMF in *Rehmanniae Radix Preparata* showered average 0.121±0.063% in 14 samples collected throughout the regions of Korea. Contents of loss on drying, residue on ignition and residue on acid insoluble ighnition showered average 14.084±2.804%, 3.415±0.790% and 0.807±0.474% respectively.

[PD2-47] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Preparation of Alginate-Chitosan Microcapsules and Enteric Coated Granules of Mistletoe Lectin for Oral Administration

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The aqueous extract of European mistletoe (*Viscum album*, L.) has been used in cancer therapy. The purified mistletoe lectins, main components of mistletoe, have demonstrated cytotoxic and immune-system-stimulating activities. Korean mistletoe (*Viscum album* L. *coloratum*), a subspecies of European mistletoe, has also been reported to possess anticancer and immunological activities. A galactose- and N-acetyl-D-galactosamine-specific lectin (*Viscum album* L. *coloratum* agglutinin, VCA) with Mr 60 kDa was isolated from Korean mistletoe. Mistletoe preparations have been given subcutaneously due to the low stability of lectin in the gastrointestinal (GI) tract. In the present study, we investigated the possibility of alginate-chitosan microcapsules as a tool for oral delivery of mistletoe lectin. In addition, our strategy has been to develop a system composed of stabilizing cores (granules), which contain mistletoe lectin, extract or powder, coated by a biodegradable polymer wall. Our results indicated that successful incorporation of VCA into alginate-chitosan microcapsules has been achieved and that the alginate-chitosan microcapsule protected the VCA from degradation at acidic pH values. And coating the VCA with polyacrylic polymers, Eudragit, produced outstanding results with ideal release profiles and only minimal losses of cytotoxicity after manufacturing step. The granules prepared with extract or whole plant produced the best results due to the stability in the extract or whole plant during manufacturing process.

[PD2-48] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

New Components from the Thorns of *Gleditsia sinensis* and Their Antimutagenic Activities

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Antimutagenic activity-guided fractionation of an extract prepared from the thorns of *Gleditsia sinensis* Lam.