

and writing tests in the rat. Although the three derivatives of caffeic acid exhibited significant anti-nociceptive effects at 10 mg/kg dose (i.p.), compound 3 was the most potent (activity potency:3>2>1). These results suggest that compound 1 is responsible for at least rheumatoid arthritis, and chemical modification of active moiety, caffeoyl group, may increase the activity potency.

[PD2-61] [10/17/2002 (Thr) 09:30 – 12:30 / Hall C]

Two new acylated neoline derivatives from Aconiti Tuber

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Aconiti Tuber (*Aconitum spp.* tuber, Ranunculaceae) which contains bioactive but toxic alkaloids has been used as analgesic, cardiotoxic, diuretic, and stimulant.

We have previously reported two new C-19 norditerpenoid alkaloids and five known norditerpenoid alkaloids. Further study has now led to the isolation of two new norditerpenoid alkaloids, 14-O-anisoylneoline and 14-O-veratroylneoline.

The structures of these compounds were characterized by spectroscopic methods.

[PD2-62] [10/17/2002 (Thr) 09:30 – 12:30 / Hall C]

Anti-Oxidative compounds from *Quercus salicina* bark

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Quercus species have been used for diarrhea, dysentery, dermatitis, haemoptoe, and haemorrhagia in Korean folk medicine. Specially *Quercus salicina* have been used for diuretic, anti-inflammatory, antiedemic, and litholytic agent.

In order to investigate the efficacy of antioxidative activity, the activity guided fraction and isolation of physiologically active substance were performed. Its 30%, 60%, 100% MeOH, H₂O, and CHCl₃ fractions were examined antioxidative activity by DPPH method. It was revealed that H₂O, 30% MeOH fractions have significant antioxidative activity.

From 30% MeOH fraction, four phenolic compounds were isolated and elucidated gallic acid, 6"-galloyl salidroside, 2-(4-hydroxyphenyl)-ethyl-(6-O-caffeoyl)-β-D-glucopyranoside, and 4",6"-hexahydroxydiphenoyl salidroside through their physicochemical data and spectroscopic methods.

To investigate the antioxidative activities of each compound, we were measured radical scavenging activity with DPPH method. Gallic acid, 6"-galloyl salidroside, and 4",6"-hexahydroxydiphenoyl salidroside showed significant radical scavenging activity against DPPH radical.

Poster Presentations – Field D3. Oriental Medicine

[PD3-1] [10/18/2002 (Fri) 13:30 – 16:30 / Hall C]

Development of Quantitative Extraction Method of Amygdalin without Enzymatic Hydrolysis from Kyonin(Armeniaceae Semen) by High Performance Liquid Chromatography

Kim DongMin^O, Hong SeonPyo

Kyonin(Armeniaca Semen)is the herb medicine that contains amygdalin as a major ingredient. Amygdalin in water is decomposed into benzaldehyde, HCN, and glucose by emulsin, a hydrolysis enzyme in kyonin. A useful and practical method for the optimum extraction condition of amygdalin without enzymatic hydrolysis is required. The extraction yield of amygdalin of natural formula kyonin was 0.5% from crude powers, 0.7% from small pieces, 1.2% from half pieces and 2.7% from whole pieces. The extraction yield of amygdalin of outer shell-eliminated kyonin was 1.9% from crude powders, 2.6% from small pieces, and 4.7% from half pieces and 4.9% from whole pieces respectively. The extraction yield of amygdalin was most high when using whole pieces.

[PD3-2] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Simultaneous Determination of Curcumin and Glycyrrhizin Contents by High-performance Liquid Chromatography in Two Different Oriental Herbal Preparations of Kamijadowhan

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A high-performance liquid chromatographic method was developed to determine the quantities of curcumin and glycyrrhizin in two different oriental herbal preparations of Kamijadowhan (KMD, NKMD). Two compounds were separated in less than 10 min with a Nova-Pak C₁₈ column (3.9 x 150 mm, 5 μ m particle size) by linear gradient elution using 0.03% (v/v) phosphoric acid-acetonitrile (60:40, v/v% at 0 min; 40:60 v/v% at 6 min) as the mobile phase at a flow-rate of 0.8 ml min⁻¹. A photodiode array detector was used and the wavelength was set at the range of 190-450 nm. The curcumin and glycyrrhizin were detected at 420 and 250 nm, respectively. When 0.03% (v/v) phosphoric acid in mobile phase was used, the peak area of two compounds was about 2.5-fold higher compared to 0.01% (v/v) phosphoric acid. Calibration curves showed a good linearity ($r^2 > 0.9992$). The accuracy and reproducibility (RSD) both in within-day and day-to-day of the method was 93.1-101.9% (RSD < 0.9%) for curcumin, and 95.1-105.9% (RSD < 3.8%) for glycyrrhizin. In KMD and NKMD preparations, curcumin was found at 4.15 ± 0.22 mg/g (0.04%) and 2.68 ± 0.06 mg/g (2.7%), respectively. Glycyrrhizin contents in NKMD was 35.80 ± 0.67 mg/g (3.6%). No glycyrrhizin was found in KMD. These results suggest that the method is appropriate to the simultaneous quantitation of curcumin and glycyrrhizin in the oriental herbal medicine.

[PD3-3] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Development of Quantitative Extraction Method of Amygdalin without Enzymatic Hydrolysis from Tonin(Persicae Semen) by High Performance Liquid Chromatography

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Tonin(Persicae Semen)is the herb medicine that contains amygdalin as a major ingredient. Amygdalin in water is decomposed into benzaldehyde, HCN, and glucose by emulsin, a hydrolysis enzyme in tonin. A useful and practical method for the optimum extraction condition of amygdalin without enzymatic hydrolysis is required. The extraction yield of amygdalin of natural formula tonin was 0.1% from crude powers, 1.4% from small pieces, 3.5% from half pieces and 2.4% from whole pieces. The extraction yield of amygdalin of outer shell-eliminated tonin was 0.3% from crude powders, 1.4% from small pieces, and 3.5% from half pieces and whole pieces respectively. The extraction yield of amygdalin was most high when using the size larger than half.

[PD3-4] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]