i.c.v. ; $GABA_A$ antagonist) or phaclofen (10 μg, i.c.v. ; $GABA_B$ antagonist). In convulsion tests, MFs strengthened convulsion induced by bicuculline (0.3, 1, 3 μg, i.c.v.) in induction and duration time. MFs decreased the concentration of GABA in the hippocampus. MFs and bicuculline (1μg, i.c.v.) decreased the concentration of GABA than bicuculline alone treatment in the cortex, hippocampus and cerebellum. The present study suggests that MFs participate in hyperalgesia or convulsion which is mediated by benzodiazepine or GABA receptor, respectively.

[PA1-12] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

PK-PD modeling of antiplatelet and cardiovascular effect of cilostazol in humans

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The rationale for PK-PD modeling is to link PK and PD in order to establish and evaluate dose-concentration-response relationships and subsequently describe and predict the effect-time courses resulting from a drug dose. Cilostazol, PDE III inhibitor, inhibit platelet aggregation and increase cardiovascular function such as heart rate, myocardial contractile force, coronary blood flow, and ventricular automaticity in a dose-related fashion. The relationships between plasma concentration of cilostazol and its inhibitory effect on platelet aggregation and cardiovascular effect after single oral administration 100mg of cilostazol in healthy humans were analyzed using a PK-PD model. Plasma levels of cilostazol were measured by HPLC. Pharmacokinetic and pharmacodynamic parameters were estimated using the ADAPT II programs by weighted least squared method. Pharmacokinetics of cilostazol was explained by two compartment model with first-order absorbtion for the oral bolus route. Direct and indirect response models were applied for antiplatelet and cardiovascular effect of cilostazol.

[PA1-13] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Effect of Chondroitin Sulfate and Phelinus Linteus mushroom on melanin and skin-whitening

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This study was conducted to develop a new biomaterial to be used for skin whitening.
The melanin elimination effect of chondroitin sulfate and phelinus linteus mushroom in rabbit back skin were evaluated. Rabbit dorsum was exposed to chronic UV irradiation(320nm) once daily for 30 days after initial melanin injection (100mg/kg). And then, chondroitin sulfate and phelinus linteus mushroom at dose of 0.7g for 30days were applied on the zone. The dorsal skin was histologically examined. Furthermore, we investigated free-radical extinction effect, antioxidation and tyrosinase activity inhibition effects.
The histological study indicated that chondroitin sulfate and phelinus linteus mushroom decreasd melanine pigment significantly. As a result, chondroitin sulfate and phelinus linteus mushroom have a remarkable effect on the skin whitening by melanin elimination.

[PA1-14] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Studies on the antioxidative effect of Polygoni Raidx

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Polygoni Radix , the root of Polygonum cuspidatum (Polygonaceae),has been used as treatments of dermatitis, hyperlipemia, gonorrhea, favus athlete's foot, inflammation in traditional medicine.
Oxygen free radical injury and lipid peroxidation have been suggested as major causes of atherosclerosis, cancer, liver disease, and the aging process.
Oxidative modification of low density lipoprotein (LDL) has been recognized as an improtant process of atherosclerosis.
Methanol extract of Polygoni Radix showed antioxidant effect on LDL oxidation. In this study, we determined effect of ethylacetate fraction and subfractions (PE1-4) of Polygoni Radix on Cu^{++} induced oxidative modification of LDL using in vitro system such as agarose gel electrophoresis and TBA method.
The results showed that PE3 had a similar effect to ascorbic acid on oxidative modification of LDL.

[PA1-15] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Development of the specific therapeutic drugs for atrial arrhythmias from natural products

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The therapeutic potential of currently available antiarrhythmic drugs is limited by their tendency to induce proarrhythmic and extracardiac side effects. An ideal antiarrhythmic agent would selectively prolong the action potential duration more in extraordinarily depolarized cardiac myocytes than in normal cells, and show tissue selectively. Volatge-gated K+(Kv) channels play an important role in determining the length of the cardiac action potential and are the targets for antiarrhythmic drugs. Kv1.5, is one of the more cardiovascular-specific K+ channel isoforms identified to date and forms the molecular basis for an ultra-rapid delayed rectifier K+ current (Ikur) found in human atrium. Thus, the blocker of hKv1.5 is expected to be an ideal antiarrhythmic drug for atrial fibrillation. In the present study, we examined the effect of many kinds of plants extract on the hKv1.5 current expressed in Ltk-cells using whole cell mode of patch clamp techniques. We found out that isoquinoline alkaloid plants selectively inhibited the hKv1.5 current expressing predominantly in human atrium without affecting the HERG current expressing mainly in ventricle. Thus our results suggest that isoquinoline alkaloid plants would be one of the leading compound in developing the ideal antiarrhythmic drugs for atrial fibrillation.

[PA1-16] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Caffeic acid Phenethyl Ester Inhibits Inducible Nitric Oxide Synthase Gene Expression in RAW 264.7 Macrophages

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Nitric oxide (NO), a multifunctional mediator produced by and acting on various cells, participates in inflammatory and autoimmune-mediated tissue destruction. Modulation of NO synthesis and