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[Lab. of Pharmacognosy]

Three New Phenolic Compounds from the Roots of *Sophora leachiana*.

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In previous studies, we reported the structures of flavanones with a C₁₀ alkyl side chain, exclusively a lavanduly group, named leachianones A-E, in the roots of *Sophora leachiana*. By further investigation of the root constituents of *S. leachiana*, eight phenolic compounds including two new flavanones and a new benzochromone, were isolated. The structures were established by means of spectroscopic analysis.

[Shoyakugaku Zasshi, 47, 295-300 (1993)]

[Lab. of Pharmacognosy]

Antiviral and Antitumor Activities of Some Western North American Plants with Surface Exudated (1). Inhibitory Effects on HIV-1 Reverse Transcriptase.TSUTOMU NAKANISH, AKIRA INADA, HIROKO MURATA, MUNEKAZU IINUMA*,
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Acetone, ethanol and/or warm 70% aqueous ethanol extracts of three lichens and 83 species of higher plants from Oregon and California were tested for their inhibitory effects on HIV-1 reverse transcriptase. Ethanol extracts of *Polygonum majus*, *Purshia tridentata*, *Potentilla gracilis*, *Ceanothus integerrimus*, *Arctostaphylos viscida* and *Grindellia nana* showed more than 20% inhibition at 0.5 μg/ml concentration.

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[Lab. of Molecular Biology]

Pharmacological Induction of Physiologically Active Nerve Growth Factor in Rat Peripheral Nervous System.KYOSUKE KAECHI, YOSHIKO FURUKAWA, RYOSUKE IKEGAMI, NOBUYUKI NAKAMURA,
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Intraperitoneal administration of 4-methylcatechol, which is one of the potent stimulators of nerve growth factor (NGF) synthesis *in vitro*, induced an increase in NGF protein and NGF mRNA in the adult rat heart and submaxillary gland. The increase in NGF protein was successively translocated from the sciatic nerve to sensory or sympathetic ganglia. Repetitive administration of 1,2-diacetoxypropylbenzene, an acetylated form of 4-methylcatechol analog, caused significant elevations of substance P levels in sensory ganglia and tyrosine hydroxylase activity in superior cervical ganglia of infant rats. These observations suggest that both compounds could stimulate NGF synthesis *in vivo* and that the induced NGF had physiological effects on peripheral neurons.