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[Lab. of Pharmacognosy]

Localization of Prenylated Flavonoids in *Sophora flavescens* var. *angustifolia* Plant.

HIROBUMI YAMAMOTO*, MASAHIKO ICHIMURA, NORIKO ISHIKAWA, TOSHIYUKI TANAKA,
MUNEKAZU IINUMA, MIZUO MIZUNO

A histochemical analysis was carried out on the distribution of flavonoid derivatives in *Sophora flavescens* var. *angustifolia* plant. Prenylated flavonoids such as kushenol I, kurarinone were mainly localized in the periderm (cork layers, and cork layer-like tissues scattered in parenchymatous tissues of the root system). Pterocarpan derivatives were distributed in the cortex, cambium and pith as an glucoside ester form. In the aerial parts of the plant, neither pterocarpan nor prenylated flavonoid derivatives, but only flavone monoglucosides such as luteolin-7-*O*-glucoside and apigenin-7-*O*-glucoside were detected.

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[Lab. of Molecular Biology]

Development Changes in Nerve Growth Factor Level in Rat Serum.

KATSUHITO MURASE, RIE TAKEUCHI, ETSUKO IWATA, YOSHIKO FURUKAWA,
SHOEI FURUKAWA, KYOZO HAYASHI*

In serum, nerve growth factor (NGF) forms a complex with α_2 -macroglobulin (α_2 M), which formation inhibits the immunoreactivity between NGF and its antibodies. For measuring the serum level of NGF, it is thus necessary to liberates NGF from the NGF- α_2 M complex and prevent reformation of such complex. The pretreatment of rat serum with 1M guanidine hydrochloride for a few hours and operation of the enzyme immunoassay (EIA) in the presence of guanidine hydrochloride provided a reliable means for determination of the NGF level in serum. In the present study the results suggested that serum NGF level may reflect the demand for this molecule during establishment of the peripheral nervous system.

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[Lab. of Molecular Biology]

Purification and Amino Acid Sequence of A Nerve Growth Factor from the Venom of *Vipera russelli russelli*.

JUN-ICHI KOYAMA, SEIJI INOUE, KIYOSHI IKEDA, KYOZO HAYASHI*

Nerve Growth Factor (NGF) was purified from the venom of *Viper russelli russelli* by Sephadex G-50 gel filtration, S-Sepharose column chromatography and Blue-Sepharose CL-6B column chromatography. The purified NGF was found to be a glycoprotein, whose apparent molecular weight was established to be about 17.5 kDa by SDS-PAGE. The amino acid sequence was determined by a combination of conventional methods. The *Vipera russelli russelli* NGF was composed of 117 amino acid residues with one residue, Asn-21, being *N*-linked glycosylated and the molecular mass of its protein portion was calculated to be 13,280 Da. This is the first report of the entire sequence of glycosylated NGF.