

[Neurodegeneration, 2, 173-181 (1993)]

[Lab. of Molecular Biology]

Sabeluzole Potentiates the Effect of Nerve Growth Factor on Survival and Differentiation in PC12 Cells and Sympathetic Neurons.KATSUHITO MURASE, HIROFUMI AWATSUJI, KYOZO HAYASHI*, RONY NUYDENS,
ROGER NUYENS, FRANS CORNELISSEN, HUGO GEERTS

Nerve growth factor (NGF) is essential for neuronal cell survival in specific regions of the mammalian brain and the peripheral nervous system. Sympathetic neurons and the rat pheochromocytoma cell line, PC12, both depend upon NGF for neuronal differentiation and survival under specific culture conditions. We show herein that sabeluzole (R58735), a substance that stimulates neurite outgrowth in hippocampal neurons, neuroblastoma cells and adult rat dorsal root ganglion cells, potentiates the NGF-mediated effects on morphological differentiation and survival. The fraction of positive PC12 cells increases maximally 40 %, where the neurite length is raised by 25 %. This effect is reached at a sabeluzole concentration of 10 nM and a NGF concentration of 10 ng/ml. The potentiating effect of sabeluzole is maximal at low NGF concentrations or in conditions of decreased sensitivity for NGF. The compound has no effect on NGF secretion by astrocytes in vitro. Sabeluzole tends to decrease the endogenous need for NGF with regard to neuronal differentiation and cell survivals.

[Shoyakugaku Zasshi, 47, 27-33 (1993)]

[Lab. of Herbal Garden]

Studies on the Constituents of Chinese Medicine 'Luobumaye' (I) On Flavonoid Glycosides of Genera *Apocynum* and *Poacynum* Leaves and Their Application to Method for Identification of Origin of Luobumaye Products.

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From leaves of *Apocynum venetum* L. used as the origin of the Chinese medicine Luobumaye (Folium Apocini Veneti), were isolated four flavonoid glycosides (hyperoside, isoquercitrin, trifolin and astragalin) and from leaves of *Poacynum hendersonii* (HOOKER f.) WOODSON, used recently in the name of Luobumaye, two flavonoid glycosides (isoquercitrin and guercetin 3-O-sophorosides). (-)-Bornesitol was isolated from both samples. Flavonoid glycosides in the leaves of several species of the genus *Apocynum* and the genus *Poacynum* were compared by HPLC.

[Shoyakugaku Zasshi, 47, 111-122 (1993)]

[Lab. of Herbal Garden]

Pharmacognostical Studies of Plantaginis Herba (10) On the Morphology of Leaves of Chinese *Plantago* spp..

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Studies were performed on the outer and inner morphologies of 15 Chinese *Plantago* plants, namely *P. asiatica*, *P. hostifolia*, *P. major*, *P. jehohlensis*, *P. erosa*, *P. depressa*, *P. depressa* var. *montana*, *P. camtschatica*, *P. maritima* var. *salsa*, *P. virginica*, *P. lanceolata*, *P. lessingii*, *P. media*, *P. aristata*, and *P. indica*. The following results were obtained. They could be distinguished from each other by outer morphological characteristics observed of the shapes and hairiness of leaves or lengths of petioles and by inner morphological differences in the types of vascular bundles and arrangements of palisade tissues and spongy tissues. For convenience of identification of these crude drugs, the key to 15 *Plantago* species was prepared.