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Autotaxin (ATX) is an exo-nucleotide pyrophosphatase and phosphodiesterase (NPP) which stimulates tumor cell motility at low nanomolar concentration. Cellular ATX mRNA expression was most abundant in breast tumor cells in several tumor cells, and breast cancer cells with high invasive and/or metastatic capacity such as MDA-MB-435S and MDA-157 showed relatively higher ATX expression. The pretreatment of cells with pertussis toxin abolished the cell migration response to ATX as a chemoattractant. Taken together, these data strongly suggest that cellular expression of ATX is correlated with an invasive phenotype of breast tumor cells.

[PB3-1] [ 04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3] ]

### **Effects of acute cocaine administration on the basal ganglial nervous systems : Immunohistochemical studies**

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Cocaine is a potent psychomotor stimulant which has become a popular drug of abuse. The purpose of the study was to examine time-course effects of acute cocaine exposure on dopaminergic, GABAergic and enkephalinergic nervous systems in the basal ganglia using immunohistochemical techniques. Sprague-Dawley rats were sacrificed 0.5, 2, 4 and 24 hr after administration of cocaine (1 mg/kg, i.v.). Immunohistochemical staining was performed using antibodies against tyrosine hydroxylase (TH), dopamine transporter (DAT), glutamic acid decarboxylase (GAD), parvalbumin (PV), and Met- and Leu-enkephalin (Enk). TH-immunoreactivity (IR) was gradually decreased, but DAT-IR was increased, in both the striatum (ST) and the nucleus accumbens (NA) until 4 hr after cocaine administration and then returned to the basal level at 24 hr compared with the saline-treated control. Similar patterns of changes in TH- and DAT-IR were also observed in the substantia nigra (SN). Met-Enk-IR was increased at 2-hr time point and then returned to the control level in the ST without any clear changes in the SN. Leu-Enk-IR was increased until 2-hr time point and then returned to the control level in the globus pallidus whereas no changes were observed in the ST and SN. GAD-IR appeared to be increased until 4 hr and then return to the control level in the SN. PV-IR was not altered in the ST and cerebral cortex compared with the control. The results suggest that immunohistochemical techniques can be used as a useful tool to study neurochemical effects of cocaine on the basal ganglial nervous systems.

[PB3-2] [ 04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3] ]

### **Scutellaria baicalensis protects CA1 hippocampal neurons after global cerebral ischemia in rats**

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Scutellaria baicalensis is one of the most widely used oriental herbal medicines against bacterial infections of the respiratory and the gastrointestinal tract. Current study was carried out to evaluate neuroprotective effects of Scutellaria baicalensis after transient global ischemia using 4-vessel occlusion model in rats. Methanol extracts of Scutellaria baicalensis administered intraperitoneally