POSTERS RELATED TO S15

Tue-S15-10
LACK OF EFFECT OF IN VIVO ADMINISTRATION OF HALOPERIDOL ON RAT BRAIN GLUTAMATE DEHYDROGENASE.

E. Ryder, E. Luengo-Borges, G. Campos


Studies in vitro have revealed that haloperidol is a very potent inhibitor of glutamate dehydrogenase (GDH); brain and liver enzyme being differentially affected depending upon the nucleotide used to measure enzyme activity. Studies were conducted to explore in vivo effect on rats of pharmacological doses of the drug, during acute and chronic treatments. Acute treatment consisted in a single ip injection of haloperidol (1 mg/kg) and killing after 1 and 2 h; in the chronic studies the animals received a daily ip injection of 0.5 mg/kg for 4 days and were sacrificed on the 5th day. The enzyme was tested in the crude mitochondrial fraction isolated from two brain regions (cortex and striatum) and from liver. Although the in vitro effect was confirmed, mainly with NADH as cofactor, we could not find any inhibition on GDH in brain or liver mitochondria after any in vivo treatment.

Tue-S15-11
SELECTIVE INHIBITION OF PSEUDOCHOLINESERASE BY DIBENZODIOXAZOCIN.

J. Gaál, O.K. Bán éságy, K. Kása


Tues-S 15-13

Tue-S15-12
VIP REGULATION OF CAMP ACCUMULATION IN HUMAN BLOOD MONONUCLEAR CELLS. EVIDENCE FOR VIP BINDING SITES.

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This study shows evidence that VIP possesses specific receptors and stimulates cAMP accumulation in human peripheral blood mononuclear cells. The binding of 125I-VIP was reversible, saturable and temperature-dependent. Two classes of receptors were defined at 15°C: a high affinity site (Kd=0.24nM, 8fmol/106 cells) and a low affinity site (Kd=80nM, 1.5fmol/106 cells). Half-maximal stimulation of cAMP accumulation was observed at 0.1 nM and maximal stimulation (4 times above basal) at 1 nM VIP. Secretin inhibited 125I-VIP binding and stimulated cAMP accumulation with a lower potency than VIP. Glucagon, somatostatin and insulin did not show any effect. Blood mononuclear cells are easily accesible and should permit the study of VIP action and the behaviour of VIP binding sites in physiological and pathological conditions known to present modified plasma VIP levels.

Tue-S15-13
SELECTIVE INHIBITION OF PSEUDOCHOLINESERASE BY DIBENZODIOXAZOCIN.

J. Gaál, O.K. Bán éságy, K. Kása


Tues-S 15-13

Tue-S15-14
UPTAKE OF SMALL MOLECULES INTO ISOLATED CHOLINERGIC SYNAPTIC VESICLES

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A variety of radiolabelled compounds, including purine and pyridine derivatives, choline analogues, biogenic amines and transmitter amino acids, were examined as candidates for transport into purified Torpedo synaptic vesicles at 26°C; uptake was assessed by post-incubation separation of occluded label by column gel filtration. Concentration-activated, indicated by a vesicle to medium ratio of >1, was exhibited by all the nucleotides, choline analogues and amines used. Amino acids penetrated poorly, sugars achieved only equilibration, and of organic amines, acetate but not citrate, was excluded. Thus Torpedo vesicles are relatively impermeable to compounds which cannot utilise the ATP or ACh carriers, both of which have wide specificity. Amine penetration is strongly dependent of pH, and an amine carrier of low affinity cannot be discounted.