

A search for endogenous modulators of the GABA receptor in different regions of the rat CNS

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The possible existence of endogenous substances other than γ -aminobutyric acid (GABA), that can also bind to rat brain GABA receptors, has been investigated in synaptic membranes derived from whole rat brain, or from cerebral cortex; as well as in isolated synaptic vesicles obtained from cerebral cortex, striatum, hypothalamus, cerebellum and spinal cord and in the superfusion fluid of electrically stimulated brain cortex slices, where a GABA-like substance is released by a calcium-dependent process. The detector used to study the presence of such presumed non-GABA endogenous ligands, were frozen and thawed rat brain synaptic membranes, that had been treated with 0.05% Triton X-100 and thoroughly washed. With this highly sensitive preparation, at least 5 pmol of GABA/ml could be detected. The extracts of the different preparations where these hypothetical ligands were looked for, were analyzed by means of gel filtration on Sephadex G-10, paper chromatography and high voltage electropho