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## Acetylcholine synthesis is modulated by acetylcholine content of cytosolic fraction but not by that of releasable fraction\*

## Takeshi Suzuki, Yuko Kashima, Kazuko Fujimoto and Koichiro Kawashima

鈴木岳之, 鹿島裕子, 藤本和子, 川島紘一郎

Synthesis and release of acetylcltoline (ACh) in the rat hippocampal slices were examined to clarify the mechanism of modulation of ACh synthesis. Treatment with 2-(4-phenylpiperidino) cyclohexanol (AH 5183, 50  $\mu$ M), an inhibitor of ACh transport from cytosol to synaptic vesicles, inhibited the increase in ACh content of the membrane-bound fraction which is readily releasable, but did not affect the cytosolic ACh content. Under these conditions. The total ACh content reached a plateau value. These results indicate that ACh synthesis is modulated by cytosolic ACh content but not by the vesicular fraction.

<sup>\*</sup> 本報告は Neuroscience Letters, 144 (1992) 127-129 に発表.