

DC

AUTHOR:

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TYPE AND CLASS OF STUDY:

WAVE AND/OR FREQUENCY:

0174 ACETYLCHOLINE AND CHOLINE LEVELS IN THE RAT CORPUS STRIATUM AFTER MICROWAVE IRRADIATION. (E.) Butcher, S. G. (U. California Sch. Med., Los Angeles) and L. L. Butcher. *Proc West Pharmacol Soc* 17:37-39, 1974.

A comparison was made between levels of acetylcholine (ACh) and choline (Ch) in Sprague-Dawley rat striata after decapitation and after rapid enzyme inactivation by a microwave fixation system. In the 3-min interval between decapitation and brain dissection, ACh levels decreased by 54.4 nmoles/g and Ch levels increased by 100 nmoles/g. These rapidly occurring changes were prevented by microwave irradiation at 6000 J (5kW for 1.2 sec). Parallel histochemical experiments showed virtually complete loss of acetylcholinesterase and NADH-diaphorase activities in the caudate-putamen nucleus after irradiation. (5 references)