

SHORT COMMUNICATION

EFFECT OF GLUCOCORTICOID DEXAMETHASONE ON CYCLIC AMP FORMATION STIMULATED BY PITUITARY ADENYLATE CYCLASE-ACTIVATING POLYPEPTIDE (PACAP) IN THE CEREBRAL CORTEX AND HYPOTHALAMUS OF CHICK

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Effect of glucocorticoid dexamethasone on cyclic AMP formation stimulated by pituitary adenylylase-activating polypeptide (PACAP) in the cerebral cortex and hypothalamus of chick. J.B. ZAWILSKA, J.Z. NOWAK. Pol. J. Pharmacol., 2001, 53, 39–45.

In this study we tested in chicks the effects of acute and chronic *in vivo* treatment with a glucocorticoid dexamethasone (4 mg/kg, *ip*) on PACAP-stimulated cyclic AMP formation in [³H]adenine-prelabeled slices of the hypothalamus and cerebral cortex. PACAP (1–100 nM) concentration-dependently stimulated cyclic AMP formation in both brain regions of chick. In acute experiments, dexamethasone (single dose)-injected chicks were killed after 2, 24 and 48 h; while in chronic experiment the glucocorticoid was given once daily for 12 days and the animals were killed 48 h after the last injection. The ability of PACAP to stimulate cyclic AMP formation in the hypothalamus and cerebral cortex was similar in vehicle-treated (control) and dexamethasone-treated animals, with the exception of the nucleotide response to 100 nM of the peptide in both brain regions, which was significantly larger in the group of chicks killed 48 h after the administration of the single steroid dose.

Key words: *dexamethasone, PACAP, cyclic AMP, brain, chick*

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