

## EXAMINATION OF THE INFLUENCE OF 3,5-DHPG ON BEHAVIORAL ACTIVITY OF ANGIOTENSIN II

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The effects of the class I metabotropic glutamate receptor (mGluR) stimulation on the behavioral activity of angiotensin II (Ang II) was investigated in the present study. The experiments were performed on adult male Wistar rats. Stimulation of the group I of mGluR receptors was evoked by *icv* injection of (S)-3,5-dihydroxyphenylglycine (3,5-DHPG) at the dose of 0.01 and 1 nmol per rat. Fifteen minutes later, the animals were given *icv* solution containing 1 nmol of Ang II. Memory motivated affectively was evaluated in passive avoidance and active avoidance responses (CARs). Moreover, the speculative influence of the treatment on anxiety and motor activity was tested in elevated plus-maze and in open field, respectively.

We observed that both compounds did not have statistically significant influence on motor activity of rats in open field test. However, 3,5-DHPG at the dose of 0.01 nmol given alone and combined with Ang II tended to increase locomotor activity. 3,5-DHPG, given alone, significantly facilitated consolidation process in a passive avoidance situation (only at the dose of 0.01 nmol) but had no influence on acquisition and recall of information. Examination of the influence of 3,5-DHPG on the acquisition and extinction of CAR proved that it did not alter acquisition and extinction of these responses. In the elevated plus-maze, 3,5-DHPG had anxiogenic-like profile. Ang II, as repeatedly shown before, greatly increased passive avoidance latency, rate of acquisition of CARs and decreased their extinction. On the other hand, Ang II induced anxiolytic-like effect in elevated plus-maze. The pre-treatment of rats with 3,5-DHPG tended to attenuate behavioral effects of the Ang II administration.

**Key words:** *angiotensin II, 3,5-DHPG, learning, memory, metabotropic glutamate receptors, rat*

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