



## Involvement of adenosine receptors in dizocilpine-induced motor activity in mice

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### Abstract:

The effect of adenosine receptor ligands on dizocilpine-induced locomotion was studied in mice. Dizocilpine-induced hyperactivity (0.1 mg/kg *ip*) in mice was antagonized by all adenosine receptor agonists: CPA – A<sub>1</sub> receptor agonist, CGS 21680 – A<sub>2</sub> receptor agonist, and NECA – A<sub>1</sub>/A<sub>2</sub> agonist, but the effect of NECA was the most apparent. Locomotion induced by the threshold dose of dizocilpine (0.05 mg/kg *ip*) was enhanced by DMPX (A<sub>2A</sub> adenosine receptor antagonist) and by theophylline (A<sub>1</sub> and A<sub>2</sub> receptor antagonist), but not by A<sub>1</sub> receptor antagonist – CPT. These data suggest that adenosinergic system is involved in the mechanism of dizocilpine-induced hyperactivity, and it seems that A<sub>2A</sub> adenosine receptor plays a more important role.

### Key words:

adenosine, dizocilpine, locomotor activity, mice

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