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Short communication

Effects of $GABA_B$ receptor ligands in rodent tests of anxiety-like behavior

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Abstract:
GABAergic hypothesis of anxiety was introduced many years ago, however, a limited number of supporting data were accumulated so far and the role of $GABA_B$ receptors in behavioral processes related to the anxiety disorders has not been resolved.
In the present study, we examined anxiolytic activity of CGP 36742, a potent and selective $GABA_B$ receptor antagonist, in rodent tests/models. We have demonstrated that CGP 36742 (30 mg/kg) is active in several animal tests detecting anxiolytic activity (the elevated plus-maze, conflict drinking test and four-plate test). Moreover, we examined the effects of another antagonist – CGP 51176 and agonist – CGP 44532 of $GABA_B$ receptor in the four-plate test in mice. CGP 51176 (5 or 8 mg/kg) was inactive, while CGP 44532 (0.125 mg/kg) exhibited anxiogenic-like effect. These preclinical data further implicate $GABA_B$ receptor function in anxiety, and support the GABAergic hypothesis of this disorder.

Key words:
CGP 36742, CGP 51176, CGP 44532, $GABA_B$ receptor, anxiety