Short communication

Effects of GABA\_B receptor ligands in rodent tests of anxiety-like behavior

Anna Partyka\(^3\), Aleksandra Kłodzińska\(^1\), Bernadeta Szewczyk\(^1\), Joanna M. Wierońska\(^1\), Ewa Chojnacka-Wójcik\(^1\), Tadeusz Librowski\(^3\), Barbara Filipek\(^3\), Gabriel Nowak\(^1,2\), Andrzej Pilc\(^1,4\)

\(^1\)Institute of Pharmacology, Polish Academy of Sciences, Smętna 12, PL 31-343 Kraków, Poland
\(^2\)Department of Cytobiology and Histochernistry, \(^3\)Department of Pharmacodynamics, Collegium Medicum, Jagiellonian University, Medyczna 9, PL 30-688 Kraków, Poland
\(^4\)Department of Drug Management, Collegium Medicum, Jagiellonian University, Grzegórzecka 20, PL 31-531 Kraków, Poland

Correspondence: Andrzej Pilc, e-mail: tfpilc@cyf-kr.edu.pl

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