INFLUENCE OF SIB 1893, A SELECTIVE mGluR5 RECEPTOR ANTAGONIST, ON THE ANTICONVULSANT ACTIVITY OF CONVENTIONAL ANTIEPILEPTIC DRUGS IN TWO MODELS OF EXPERIMENTAL EPILEPSY

Kinga K. Borowicz¹, Barbara Piskorska¹, Jarogniew Łuszczki¹,*, Stanisław J. Czuczwar¹,²,³

1Department of Pathophysiology, Medical University, Jazewskiego 8, PL 20-000 Lublin, Poland,
2Isotope Laboratory, Institute of Agricultural Medicine, Jazewskiego 2, PL 20-950 Lublin, Poland,
3Recipient of a Fellowship for Young Researchers from the Foundation for Polish Science


SIB 1893, a non-competitive antagonist of group I metabotropic glutamate receptor subtype 5, administered at doses ranging from 0.25 to 10 mg/kg, failed to influence pentetrazole-induced convulsions in mice. Moreover, SIB 1893 (10 and 20 mg/kg) did not affect the protective action of valproate, ethosuximide, phenobarbital and clonazepam in this test. Similarly, the mGluR5 antagonist did not modulate the antiseizure activity of carbamazepine, diphenylhydantoin and phenobarbital against maximal electroshock in mice. The combined treatment of SIB 1893 with conventional antiepileptic drugs did not lead to motor impairment. Long-term memory disturbances were observed only in the case of the combination of SIB 1893 with phenobarbital.

Key words: SIB 1893, metabotropic glutamatergic receptors, conventional antiepileptic drugs, pentetrazole, maximal electroshock, seizures

³ correspondence; e-mail: czuczvar@galen.imw.lublin.pl