EFFECTS OF COMBINED ADMINISTRATION OF 5-HT	extsubscript{1A} AND/OR 5-HT	extsubscript{1B} RECEPTOR ANTAGONISTS AND PAROXETINE OR FLUOXETINE IN THE FORCED SWIMMING TEST IN RATS

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Effects of combined administration of 5-HT	extsubscript{1A} and/or 5-HT	extsubscript{1B} receptor antagonists and paroxetine or fluoxetine in the forced swimming test in rats. E. TATARCYŃSKA, A. KŁODZIŃSKA, E. CHOJNACKA-WÓJCIK. Pol. J. Pharmacol., 2002, 54, 615–623.

Clinical data suggest that coadministration of pindolol, a 5-HT	extsubscript{1A}/5-HT	extsubscript{1B}/β-adrenoceptor antagonist, and selective serotonin reuptake inhibitors (SSRIs) may shorten the time of onset of a clinical action and may increase beneficial effects of the therapy of drug-resistant depression. Effects of combined administration of SSRIs and 5-HT receptor ligands are currently evaluated in animal models for the detection of an antidepressant-like activity; however, the obtained results turned out to be inconsistent. The aim of the present study was to investigate effects of a 5-HT	extsubscript{1A} antagonist (WAY 100635), 5-HT	extsubscript{1B} antagonists (SB 216641 and GR 127935) or pindolol, given in combination with paroxetine or fluoxetine (SSRIs), in the forced swimming test in rats (Porsolt test). When given alone, paroxetine (10 and 20 mg/kg), fluoxetine (10 and 20 mg/kg), WAY 100635 (0.1 and 1 mg/kg), SB 216641 (2 mg/kg), GR 127935 (10 and 20 mg/kg) and pindolol (4 and 8 mg/kg) did not shorten the immobility time of rats in that test. Interestingly, SB 216641 administered alone at a dose of 4 mg/kg produced a significant reduction of the immobility time in that test. A combination of paroxetine (20 mg/kg) and WAY 100635 or pindolol failed to reveal a significant interaction; on the other hand, when paroxetine was given jointly with SB 216641 (2 mg/kg) or GR 127935 (10 and 20 mg/kg), that combination showed a significant antimmobility action in the forced swimming test in rats. The active behaviors in that test did not reflect increased general activity because combined administration of both the 5-HT	extsubscript{1B} antagonists and paroxetine failed to alter the locomotor activity of rats, measured in the open field test. Coadministration of fluoxetine and all the antagonists used did not affect the behavior of rats in the forced swimming test. The obtained results seem to indicate that blockade of 5-HT	extsubscript{1B} receptors, but not 5-HT	extsubscript{1A} ones, can facilitate the antidepressant-like effect of paroxetine in the forced swimming test in rats. No interaction was observed between fluoxetine and 5-HT	extsubscript{1A}/5-HT	extsubscript{1B} receptor antagonists.

Key words: 5-HT	extsubscript{1A}/5-HT	extsubscript{1B} antagonists, paroxetine, fluoxetine, forced swimming test, rats

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