



Short communication

Effects of methadone and morphine on c-Fos expression in the rat brain: Similarities and differences

Ewa Taracha¹, Małgorzata Lehner¹, Aleksandra Wiśłowska-Stanek²,
Małgorzata Zienowicz², Piotr Maciejak^{1,2}, Andrzej Bidziński¹,
Anna Skórzewska¹, Danuta Turzyńska¹, Adam Płaźnik^{1,2}

¹Department of Neurochemistry, Institute of Psychiatry and Neurology, Sobieskiego 9, PL 02-957 Warszawa, Poland

²Department of Experimental and Clinical Pharmacology, Medical University, Krakowskie Przedmieście 26/28, PL 00-927 Warszawa, Poland

Correspondence: Ewa Taracha, e-mail: taracha@ipin.edu.pl

Abstract:

This is the first study designed to compare the pattern of stimulation of c-Fos in selected brain structures after an acute administration of morphine and methadone. Methadone and morphine induced activation of c-Fos protein in the terminal forebrain projecting areas of the brain dopaminergic system, i.e. the striatum and nucleus accumbens. Taking into account generally accepted differences in the potency of pharmacological effects of the two drugs, it is surprising that this effect was most evident after the dose of 5 mg/kg of either drug.

Key words:

methadone, morphine, acute treatment, c-Fos, rats
