

## **Abstract**

Nonspecific NMDA receptor antagonists induce hyperlocomotion in rats. The aim of this work is to determine whether the NMDA receptor antagonist specific for NR2 subunit exhibit similar negative effect as nonspecific antagonists. This subunit is predominant in the brain in the early postnatal period. The introduction summarizes the data on NMDA receptors and the development of rat. The experimental part deals with the action of a specific NMDA receptor antagonist Ro 25-6981 on motor performance of developing rats. Substance was repeatedly administered to rats at postnatal days 7 to 11. Spontaneous locomotion and motor performance of the animals were repeatedly tested up to adulthood by battery of tests appropriate for individual ages. Our research demonstrated that this substance does not have significant effect on motor system of laboratory rat and that it might be further tested as a possible age-bound antiepileptic drug.