

Abstract

Substance IEM 1460 is an antagonist of AMPA receptors in the brain. It is a derivative of adamantine, which has already been tested in several studies as a potential age-related anticonvulsant. In the research part of the thesis there is a summary of the knowledge about receptors, focusing on AMPA receptors, IEM 1460, epilepsy and ontogenetic development of laboratory rat. The research section evaluates the effect of IEM 1460 on motor skills of a rat in a few postnatal days of its life. To evaluate spontaneous animal motor skills, Open-Field tracking was used, and several specific tests were used to evaluate provoked motor skills. A total of 30 animals were included in the research. Substances (IEM 1460 at 3 mg / kg, IEM 1460 at 10 mg / kg or 2 ml / kg saline) were infused intraperitoneally on five consecutive days (ages P7-P11) and the animals were repeatedly tested at age 12, 15, 18, 21, 25, 31 and 60 days. In this study, IEM 1460 has not been shown to have significant effect on the gross rat motor skills and therefore the substance remains as a serious candidate for age-specific antiepileptic drugs.