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FENS Forum 2010 - Amsterdam

- Posters: to be on display from 8:00 to 13:15 in the morning and from 13:30 to 18:45 in the afternoon. Poster sessions run from 09:30 to 13:15 in the morning and from 13:30 to 17:30 in the afternoon. A one hour time block is dedicated to discussion with the authors (authors should be in attendance at their posters as from the time indicated.)
 - For other sessions, time indicates the beginning and end of the sessions.
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First author Hafkemeijer, Anne (poster)

Poster board C105 - Tue 06/07/2010, 14:30 - Hall 1

Session 166 - Mental disorders 5

Abstract n° 166.16

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Title Sedating effects of cannabinoids measured with EEG, EMG and an infrared detector in the Wistar rat

Text Cannabis sativa is one of the oldest herb plants in the history of medicine. Nowadays, cannabinoids are used throughout the world in various therapeutic applications from pain to epilepsy. In the central nervous system, the endocannabinoid system exerts important functions by the activation of CB1 receptors, such as retrograde inhibition of neurotransmitter release, control of neuronal excitability and regulation of various forms of synaptic plasticity. Moreover, cannabinoids seem to play a main role in the regulation of sleep.

In the present study the sleep inducing effect of cannabinoid agonists, synthetic and phytocannabinoids included, is explored. It is investigated whether the sedating effect found in the synthetic agonist also applies for the phytocannabinoids and whether it applies to specific components of the phytocannabinoid spectrum. The sedating effects of cannabinoids were investigated in freely-moving Wistar rats. Movements of the animals were recorded with an analogic passive infrared detector (PIR). EEG and EMG electrodes were implanted in male rats at age of 8-month and after recovery cannabinoids were injected subcutaneously. The synthetic cannabinoid agonist R(+) WIN55, 212 caused a dose-dependent decrease in motor activity, which is an indication for sedation, with an apparent ED₅₀ of 9.9 mg/kg (95%CI: 6.3-16 mg/kg). Analysis of the EEG, EMG and PIR signals of the phytocannabinoids are presently being processed and analyzed and will be presented at the forum.

Theme C - Disorders of the nervous system
Mental disorders - Other