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ESTABLISHMENT OF BEHAVIORAL MODEL IN THE STUDY OF NICOTINE EFFECT ON SPATIAL MEMORY

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Abstract

Although its negative effects on health have been known, addiction to nicotine contained in tobacco products in Malaysia is still on the rise. The search to counter this problem is ongoing, including the potential use of compounds found in natural products. Behavioral based research is a possible approach to study nicotine effects on cognitive function. Hence, the search for a behavioral model to be used in locally conducted researches related to the alleviation of nicotine negative effects is imperative. In the behavioral model we are establishing, the chronic effect of nicotine on performance task was assessed every five days using eight-arms radial maze. Fifteen male Sprague-Dawley rats divided randomly into nicotine-treated and saline-control groups were intraperitoneally injected for 56 consecutive days with 5mg/kg body weight nicotine and saline, respectively. This preliminary study succeeded in establishing the experimental procedures and behavioral model which could be used for further related studies.

Keywords: Spatial memory, Behavioral study, Nicotine