

ABSTRACT**THE EFFECT OF QUERCETIN ON THE RISK OF NICOTINE
ADDICTION IN MICE**

Silvy Restuning Lailis

Drug addiction is a chronic condition and relapsing disorder in the brain that often recurs, marked by a strong desire to consume drugs. Substances that can cause addiction are nicotine and cigarettes. Nicotine and cigarettes will induce the formation of ROS in various brain regions, especially in the NAcc area which plays a role in drug addiction. In an effort to reduce the number of ROS in the brain so that it does not experience the reward effect, it is necessary to provide an antioxidant, namely quercetin through the mechanism of free radical scavenging and modulating endogenous antioxidants. This study was conducted to analyze the effect of quercetin on the level of nicotine addiction using the Conditioned Place Preference (CPP) method in experimental mice. There were five groups of male Balb / C mice used in this study. The addictive substances used are nicotine at a dose of 0.5 mg/Kg and CSE which is equivalent to 0.5 mg/Kg of nicotine, and quercetin at a dose of 50 mg/Kg as a drug to reduce the risk of addiction. Reward effect, which is an indicator of addiction, is observed through CPP using a biased design, by performing pre-conditioning, conditioning, post-conditioning, extinction, and reinstatement tests. Data were analyzed using one-way ANOVA followed by Tukey's post-hoc test to determine significant data values. Based on the results of this study, giving quercetin during conditioning and reinstatement can inhibit the reward effect and is predicted to reduce the production of ROS in NAcc rat neurons has been shown to contribute to drug addiction.

Keywords : addiction, nicotine, CSE, quercetin, conditioned place preference.