

ABSTRACT**INFLUENCE OF DEWANDARU LEAVES (*EUGENIA UNIFLORA L.*) TO REDUCE MALONDIALDEHYDE (MDA) LEVEL IN *Rattus norvegicus* MALE WISTAR STRAIN WITH EXPOSURE TO CIGARETTE SMOKE**

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Background: *Malondialdehyde* (MDA) results in lipid peroxidation metabolites by free radicals. Lipid peroxidation can lead to breakdown of fatty acid chains into toxic compounds and can cause damage to cell membrane. MDA is one of the most commonly used indicators as one of the indications of oxidative stress due to free radicals. Free radicals can be caused by cigarette smoke. The presence of oxidants in the body requires antioxidants to prevent the spread of free radicals in the body. Dewandaru leaves (*Eugenia uniflora L*) contain anti-inflammatory, antioxidant and anti-diabetic compounds.

Objective: The purpose of this study was to determine the mechanism of Dewandaru leaves (*Eugenia uniflora L*) in preventing elevated levels of *Malondialdehyde* (MDA) by exposure to cigarette smoke.

Materials and Methods: Twenty-seven white Rats (*Rattus norvegicus*) of the male *Wistar* strain were divided into 3 groups. KN group is the negative control group, KP group is the positive control group induced by the exposure of cigarette smoke and K1 group is treatment group induced by exposure to cigarette smoke and given decoction of Dewandaru leaves 3g / KgBW for 2 weeks. Dewandaru leaves (*Eugenia uniflora L*) with a dose of 3g / KgBW is given 1 time daily for 2 weeks. In the last treatment the whole rats was decapitated and then taken the blood serum for examination of MDA levels.

Result: Dewandaru leaves (*Eugenia uniflora L*) were able to inhibit elevated MDA levels ($p < 0.05$)

Conclusion: Dewandaru leaves (*Eugenia uniflora L*) can prevent the increase of MDA levels with exposure to cigarette smoke.

Keywords: Dewandaru leaves (*Eugenia uniflora L*), *Malondialdehyde* (MDA), cigarette smoke, antioxidant.