

**EFFECT OF RED DRAGON FRUIT (*Hylocereus polyrhizus*) EXTRACT AGAINST PRODUCTION OF METABOLITE PRODUCT MDA AND HISTOPATHOLOGICAL CHANGES OF CAROTIS COMMUNIS ARTERY IN MICE (*Mus musculus*) GIVEN HIGH FAT DIET**

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**ABSTRACT**

This study was undertaken to investigate the atheroprotective and antioxidant effect of red dragon fruit (*Hylocereus polyrhizus*) extract on metabolite product of MDA which acting as indicator of the occurrence of lipid peroxidation and histopathological features of carotis communis artery in mice given high-fat diet. Single doses of 15 g high fat diet/mouse/day for 56 days were administered orally. A total of forty 2-month-old male mice were used in this study. The mice were divided into five groups: negatif control group which was not given high fat diet and treatment (K0), positive control group which was given high fat diet (K1), and the groups receiving red dragon fruit extract dosed 5mg/mouse/day (P1), 10mg/mouse/day(P2), and 20mg/mouse/day(P3). High fat diet was given for 56 days and administration of extract lasted for 28 days. At the end of research, all mice were sacrificed and their carotis communis arteries were collected for metabolite product MDA's analysis using immunohistochemistry staining and histopathological features analysis using hematoxylin-eosin staining. Measurements of metabolic product MDA and histopathological features of the carotis communis artery were determined to be at day 56 of treatment. The results of this study showed that red dragon fruit extract decreased score of metabolite product MDA and prevented progression of damage in the carotis communis artery.

**Key words:** red dragon fruit (*Hylocereus polyrhizus*), atherosclerosis, MDA, histopathological features of carotis communis artery