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**College of Science**  
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# **Histological study for the effect of *Capsicum frutescense* extract on some body organs and biochemical parameters in white mice**

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## **Abstract**

The hot chili pepper have prominent role in processing of many pathological conditions, the chili pepper is considered as an alternative treatment in arthritis and some inflammatory case, so it has an have effect on cancer, as mentioned in many scientific references. The current study focuses on examining the role of watery chili pepper extract on the some histological and biochemical alterations in a some organs and its role in obesity processing of white mice. The animals employed in the current study about 60 male white mice with an average age three months, the period of study in month March in year 2022 ,the lab animals were maintained in the sciences college's animal house at Al-Muthanna University. All environmental parameters in the animal house were under control.

The experimental animals are divided into four groups which including (A, B, C, and D), each group is composed of 15 white mice, A group is considered as a control group, B group is treated with low dose of watery chili pepper extract, C group is treated with middle dose of watery chili pepper extract, and D group is treated with high dose of watery chili pepper extract. The important histological findings that showed after thirty days of administration in all treated groups with three different concentrations of watery chili pepper extract, these findings include: the kidney has significant histological deference's in dimensions and histological descriptions of renal corpuscle and renal tubules, which have prominent histological changes after treated with high and middle doses (C and D groups) compared with (A groups), while the histological results in (B group) were similar in something to control group.

The liver has significant deference's in the histological results in (C and D groups) compared with control group , while non- significant in (B group) , As for the small

intestine, there were significant histological changes in all treated groups compared with the control group.

In summary, it can be concluded that treating the animal with chili pepper extract has significant effect on the diameter of adipose tissue nuclei .However, there is significant decrease among low, middle and high doses of chili pepper treated groups compared with control group, the average weight in C and D treated group has significant decrease compared with B and control groups . These result referred to the chili pepper facilitates weight loss.

The biochemical results of B,C and D groups that treated with (low, middle, high dose) of chili pepper extract showed significant decrease in the level of cholesterol compared with control group, while showed significant increase in the level of (TSH, T4, T3 and Irisin) compared with control group .