ملخص البحث رقم (5)

Title: ***THE EFFECTS OF GINGER (ZINGIBER OFFICINALE) ON HISTOLOGY AND IMMUNOHISTOCHEMISTRY OF LIVER AND KIDNEY AND CERTAIN HAEMATOLOGICAL PARAMETERS IN ALLOXAN- INDUCED DIABETIC RATS***

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ABSTRACT:

In the present study, the hypoglycaemic potentials of ginger (*Zingiber officinale*) were studied in rats (four groups: control, ginger , diabetics and diabetics treated with ginger) . Ginger extract was daily orally administered

(400 mg/kg,) for 4 weeks to alloxan- induced diabetic rats (150 mg/kg) . Fasting blood serum was analysed for blood glucose, insulin, creatinine, blood urea nitrogen, aspartate aminotransferase, alanine aminotransferase, haemoglobin concentration, and erythrocytes, leucocytes, and platelets counts, and histological and immunohistochemical studies of the liver and

kidney tissues. The alloxan- injected rats exhibited hyperglycaemia accompanied with increases in creatinine, uric acid, blood urea nitrogen, AST and ALT. On the other hand, there were decrease in insulin, haemoglobin concentration, erythrocytes, leucocytes and platelets counts occurred. Ginger was significantly effective in lowering serum glucose, and returned the other previously mentioned blood assays levels in the ginger-treated diabetic rats to almost normal value. A significant reduction in pyknotic nuclei, vacuolation, inflammatory infiltration cells in liver sections in the alloxan- injected rats

treated with ginger . Also, reduction of the diffuse changes bring about loading of the Bowman's capsule space and adhesion of capillaries to the wall, hyalinized changes in kidney sect ions of the alloxan- injected rats treated with ginger . In addition, the ginger-treated diabetic sections were immunostained with Bax antibody which was more positive than diabetic group in both liver and kidney sections. The present study clearly indicates that the ginger can be effective in inhibiting hyperglycemia, and decreases the

damage in liver and kidneys by enhancing insul in level. Consequently, the ginger can be used as improvement material for treatment of Diabetes mellitus and its toxicity.

KEY WORDS:

Diabetes Mellitus, Ginger , Liver , Kidney, Immunohistochemistry, Histopathology