

Paper No. 5

Title: Possible Ameliorative Effects of *Moringa olifera* in Inhibiting Toxicity of Adriamycin in Male Rats

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ABSTRACT

The present investigation aimed to study the protective effects of aqueous extract of *Moringa olifera* (MOR) leaf powder against the side effects of Adriamycin ADR (an anthracycline antibiotic, used in tumor therapy) on the hematological and biochemical functions of male albino rats. Animal's studies and drug treatment: 48 male albino rats weighing 180 ± 10.0 gm were taken and divided into six groups each one consists of 8 male rats. The 1st group was fed ad-libitum with saline without any treatment so called control. The 2nd group received MOR leaf powder aqueous extract orally with a daily dose 144 mg/Kg body weight for 30 days. The 3rd one is ADR group where the animals were injected intraperitoneal (IP) from the first day in six equal injections of ADR (each containing 3 mg/kg b.wt.) over a period of two weeks (total cumulative dosage of 18 mg/kg body weight). The 4th is ADR then MOR post-treated group where animals administered the same six injections of ADR dose of thereafter they were given the aqueous MOR leaf powder extract orally from day 20. The 5th is ADR/MOR treated group where animals received six equal injections of ADR over a period of 19 days and given concomitant orally a daily dose of MOR leaf powder aqueous extract of 144 mg/kg of body weight for 30 days. The 6th group was (MOR pretreated then ADR group) where animals given orally once daily dose of MOR aqueous extract of 144 mg/Kgb. wt for 30 days and at the 11th day received the six equal injections of ADR over a period of 19 days. The results revealed loss in body weight, an increase in mortality rate, disturbances in hematological parameters, liver and kidney functions of rats treated with adriamycin. In contrast, the Moringa improves the studied parameters to levels more or less similar to that of control group. This study revealed that Moringa may ameliorate the effect of ADR especially in the group that pretreated with Moringa before Adriamycin treatment.

Keywords: Adriamycin, Moringa, Blood parameters, liver and kidney functions, histopathology, rats.