



## Evaluation of hematological and biochemical parameters of the heat-stress rats treated with *Abutilon indicum* aqueous extract

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### Abstract

*The first shrubs of Abutilon indicum* plant is approved to have therapeutic actions as a broad medicine for various diseases. This study intends to evaluate the anti-stress, hematopoietic and biochemical effects of orally administrated

*Abutilon indicum* aqueous extract (*Malvaceae*) on male albino rats that exposed to environmental stress. The *Abutilon indicum* plant was collected from Bsia area/ Al Muthanna governorate and identified in the Botany Department / Al-Muthanna University. The *Abutilon indicum* prepared as an aqueous extract. A thirty Wister albino rats used in this study and divided into 3 groups after one-week of acclimatization, each group with 10 animals. These group were: negative control group (GI) administered with normal saline, the positive control (GII) exposed to heat and humidity stress and treatment group (GIII) exposed to heat and humidity stress and treated by 100mg/kg B.W *Abutilon indicum* extract for 28 days. Blood samples collected from the heart of each animal after euthanasia. The results of this study revealed high significant hematological features in the treated group (GIII) with decreased of ALT, AST and urea parameters. Moreover, RBCs, WBCs and lymphocytes percentages were also increased in (G III) in compare to (GII) that showed a marked increase in the enzymes AST, ALT and urea due to environmental stress. In conclusion, this study approved the immune stimulant effects of *Abutilon indicum* extract promoted by its flavonoids content. The authors recommend doing another study on *A indicum* to recognize its active ingredient that improves the immunity of the animals supported with histological studies using different doses of plant extract.

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