

- Document Type** : Thesis
- Document Title** : Genetical studies for mutagenic and antimutagenic effects of plant extracts on medical drugs in *Drosophila melanogaster*  
دراسات وراثية للتأثير الطفرى والتأثير المضاد للطفور لأحد المستخلصات النباتية على بعض العقاقير الطبية في حشرة الذر وسوفيلاميلانوجاستر
- Document Language** : Arabic
- Abstract** : The present study was designed to investigate the mutagenic potentiality of the two sedatives drug (tegretol and sapofen) singly or combined with fenugreek extract in *Drosophila melanogaster* using two test systems , the sex linked recessive lethal (SLRL) and by estimating the activity of cholinesterase enzyme (ChE) in order to compare the sensitivity of the two test system . A wild type Strain Oregon-R (or-R) male flies of *D.melanogaster* were reared on a medium containing one concentration of each of the two drugs 5ml/100ml medium , singly and combined with fenugreek extract and screened for sex linked recessive lethal . Also the activity of ChE was estimated in some insects of the two generations of SLRL : F1 females , F2 bar eye females and F2 wild type males . The results were as follow  
A-Sex linked Recessive Lethal Test : The individual treatment for fenugreek, tegretol and sapofen singly did not appear any significant effect in the different stages. The combined treatment by tegretol and fenugreek gave significant genotoxic effect in the first stage (spermatozoa). The combined treatment by fenugreek and sapofen did not appear any significant effect in the four stages of the *D. melanogaster* (SLRL) B- Estimation of the cholinesterase activity : The individual treatment by fenugreek gave a significant increased in the F1 females and F2 bar eye females but it gave a significant decreased in the F2 wild type males. The individual treatment by tegretol gave a significant decreased in all stages . The individual treatment by sapofen gave a significant increased in all stages except the first stage in the F1 females and the second stage in the F2 wild type males at which the effect is non significant The combined treatment by fenugreek with tegretol gave a significant increased in the F1 females and a significant decreased in the F2 bar eye females and F2 wild type males . The combined treatment by fenugreek with sapofen gave a significant increased in the F1 females and the F2 bar eye females but it gave a significant decreased in and F2 wild type males .
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