

# **The Genetic Effect of the Combined Action of Vincristine and Fennel Plant Extract on the Germ Cells of *Drosophilla melanogaster***

N.H. Al-Twaty, E.S. Ahmed and S.A. Al-Kurdi

*Department of Biology, Faculty of Science,  
King Abdulaziz University, Jeddah, Saudi Arabia*

*Abstract.* This study was designed to investigate the mutagenic potentiality of the anticancer drug vincristine and fennel plant extract on *Drosophilla melanogaster* using two test systems, the sex linked recessive lethal (SLRL) and estimating the activity of cholinesterase enzyme (ChE) in F1 and F2 bar eye females and F2 wild types males. A wild type Strain Oregon-R (or-R) male flies of *D. melanogaster* were treated on a medium containing a concentration of one of individually of the two agents, followed by combined treatment in an alternative way of fennel extract followed by vincristin, then vincristin followed by fennel extract and finally the two agents together. The results showed no significant increase in the percentage of the S.L.R.L in all stages of spermatogenesis in all treatments. Meanwhile, vincristine and fennel plant extract showed a genotoxic effects in the three categories of the two generations of S.L.R.L, F1 females heterozygous F2 bar eye females and F2 wild type males on the genetic background of ChE in all treatments.