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mutation "almond eye" and its inter-  
action with certain dominant mutants  
in *Drosophila melanogaster*.

In the first generation derived from crossing a male from a natural wild population (Uman) with females of strain D In(3LR)/Sb approximately half of the flies with the marker Dichaete had almond eyes and all the Stubble flies had normal eyes. A line was obtained from Dichaete offspring with abnormal eyes. In crosses with the normal alternative mutation named "almond eye"

(symbol "ale") behaved as a usual monogenically inherited recessive. Thus ale becomes dominant in the presence of the gene Dichaete. Then we found that ale is located in the third chromosome. The position of the gene ale at the third chromosome was determined by using dominant markers Sb and Dl. The results enabled us to establish the position of locus ale in



The phenotype of ale/ale

The phenotype of Mc ale/Mc ale

the region of  $47.5 \pm$ . In the same region is located the gene Deformed. The dominant allele Dfd is lethal in the homozygote and in the heterozygote produces two main visible effects: reduced eye and tufted vibrissae. The phenotype of Dfd/ale heterozygotes show no deviants from normal size and shape of eyes and only about 20% of flies have the vibrissae near the eyes tufted. It remains unclear whether ale is closely linked with Dfd new gene producing in heterozygous condition the phenotypic suppression of Dfd or ale is a new recessive allele of Dfd locus which in Dfd/ale restores the normal phenotype. In a preliminary recombination test Dfd/ale females were crossed to D/Sb males. In the  $F_1$  436 flies D/ale and 133 D/Dfd occurred and no flies with marker D and normal eye (recombinant). In heterozygotes Dl/ale, Mc/ale, Dr/ale and L/+; D/ale the mutant phenotype is more pronounced with respect to eye size. Mc ale homozygotes are completely eyeless, the facets are replaced by occasional bristles, head size is considerably reduced. Crosses between Mc ale homozygotes are sterile, whereas crosses involving females or males of other strains are fertile. Mutation Mc is a dominant suppressor of the phenotypic effect of genes Dfd and ale exerted on eye shape but not its size. It is concluded that though the ontogenetic events determining normal eye shape and size are interrelated at certain early stages, subsequently they follow distinct courses of development since they are independently affected by genetic factors.

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Anything seen somewhat resembling these floating muscle fibres are flight muscle fibres of *Drosophila* which have been described to be fibrillar, striated and having giant round mitochondria associated with them as described by Watanabe and Williams (1953). Such giant mitochondria are not found associated with these floating muscles described in the present research note.

Reference: Watanabe, M.I. and C.M. Williams 1953, as quoted by Herbert H. Ross (1956) in "A text book of Entomology", John Wiley & Sons, Inc. (New York) pp 519.