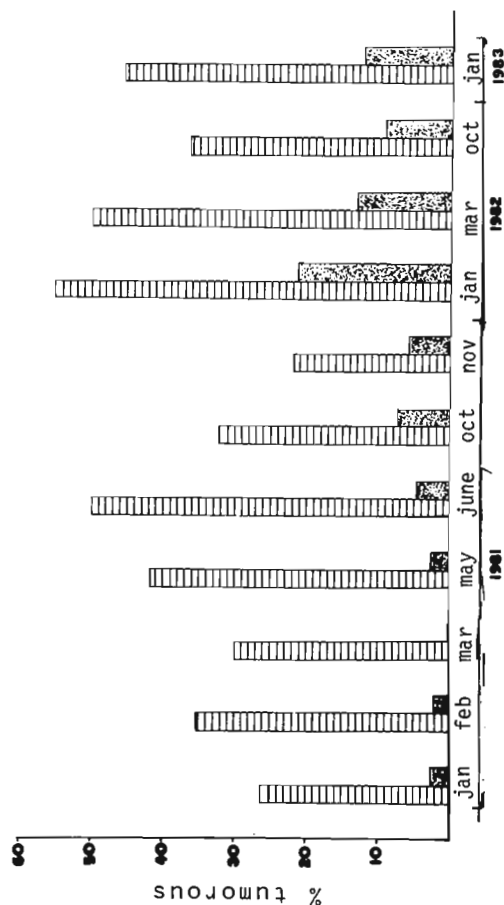


**Di Pasquale Paladino, A., P. Cavolina and A. Vella.**  
 Università di Palermo, Italy. Lack of response to selection for high and low penetrance in the tu-pb stock of *Drosophila melanogaster*.

genes, two selection experiments--one for high penetrance (Line H) and another for low penetrance (Line L)--in standard conditions of rearing were made. From the results obtained (Figure 2) no modification can be shown in divergent sense with the respect to the tumoral incidence in the two lines H and L.

Nevertheless considerable swingings of the percentage of tumorous individuals, equally affecting the two lines, are recordable during the 14 generations. The lack of response to the directional selection could be explained with a very high genetic homogeneity of the modifying genes or with their absence; one could also think that the genome structure is such that doesn't allow reassortment of modifier genes. In any case, percentage swingings should constitute a purely phenotypic variability, the manifestation of tumors in the individuals of the tu-pb stock being susceptible of changes because of factors extraneous to the genome.

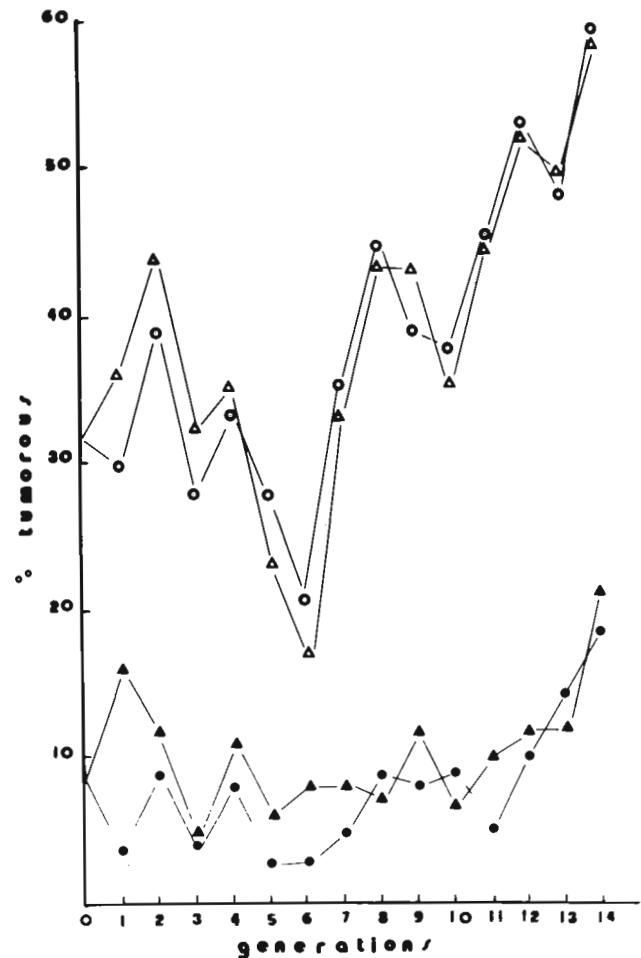
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**Figure 1.** Histogram showing tumor penetrance variations during two years; females (dashed bar), males (hatched bar).

Remarkable changes with regard to the penetrance of the melanotic tumor character have been shown to occur periodically in the tumorous stock of tu-pb of *Drosophila melanogaster*, Figure 1.

In the search of verifying if this variability was to attribute to the choice of different modifying



**Figure 2.** Percent response to selection for high  $\Delta$  and low  $\circ$  penetrance in females and for high  $\blacktriangle$  and low  $\bullet$  penetrance in males.