

No. of males	Male age (days)	F ₁ scored	dp mutants	Frequency (%)
36	2	7156	40	0.56 ± .03
23	27	5050	54	1.07 ± .04

the increased susceptibility to EMS mutagenesis by aged males is unknown, but may be due to depressed error-free repair functions which normally deteriorate with age.

Kaidanov, L.Z. and E. Hugoto. Dept. of Genetics & Selection, Leningrad State University, USSR. Studies on genetic possibilities of inbred stocks of *Drosophila*.

maintained by closed inbreeding during about 300 generations. After 261 generations lateral branches were founded, which were selected for increasing a number of abdomen bristles. In contrast to HA the LA selection was very effective. There were also some differences between the stocks. The rate of LA and its lateral branches' semi- and sublethal mutations was higher (55-65% for 2 chromosome). When the selection of LA was stopped, the result was gradual clearing of the stock from mutation load. There was no equal distribution of harmful mutations among the LA genome; they have been concentrated in chromosome 2. The reasons for their accumulation were artificial selection and increased rate of spontaneous mutations (Gorbunova and Kaidanov 1975; Kaidanov 1979). The latter probably also was a result of previous selection. The mutable loci have been localized (Kaidanov 1979).

References: Gorbunova, V.N. and L.Z. Kaidanov 1975, *Genetika* (Russ) 11:9; Kaidanov, L.Z. 1979, *Z. ob. biol.* (Russ) 40:6.

This work was aimed at discovering genetic consequences of long-term selection on sexual activity. The concentration of mutations to viability has been studied for selected stocks of flies.

We used the following stocks: LA (low activity) and HA (high activity), produced from the former by reverse selection. Both of these have been

Kaplin, V. and L. Korochkin. Institute of Cytology & Genetics, Novosibirsk, USSR. Histochemistry of the tissue distribution of some enzymes during the development of *D. melanogaster*.

Using histochemical methods we investigated the tissue distribution of some enzymes at the different stages of development in *D. melanogaster*. Two stocks, Canton S and In(3LR)D/Sb with the complicate inversion on the 3rd chromosome, have

been investigated. Embryonic material was synchronized according to Delcour (1969). Two special methods of preparation of sections for the histochemical staining were elaborated by us.

First method: (1) Washing of eggs in some portions of distilled water. (2) Treatment by 2.5% glutaraldehyde prepared using Hanks solution with the addition of a substrate enzyme for a corresponding enzyme, at 4°C.

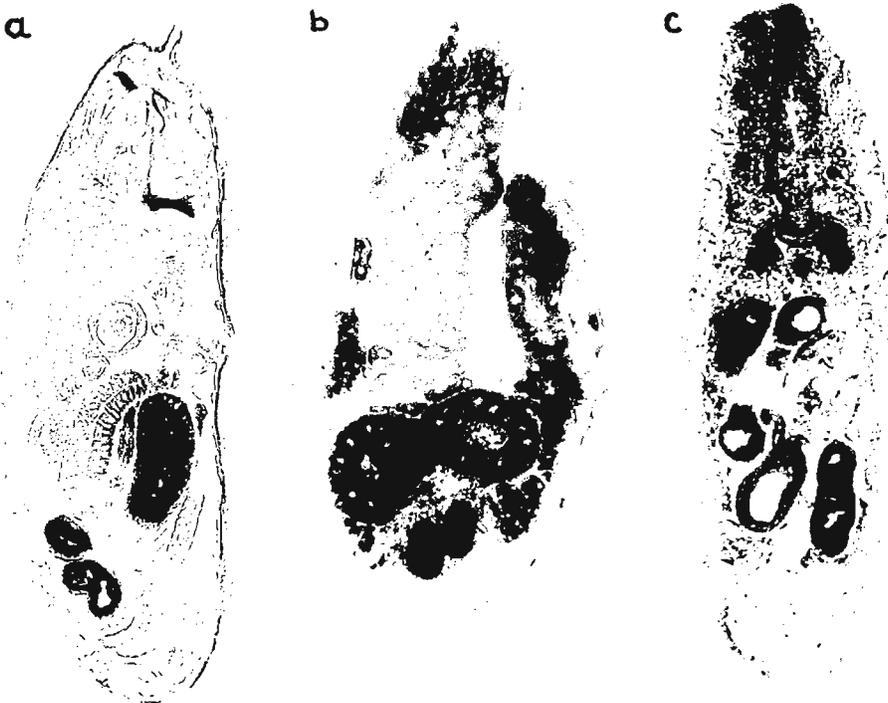


Fig. 1. Sections which were stained histochemically. (a) Alkaline phosphatase; embryo 22 h. (b) Esterase; embryo 22 h. (c) Malic acid; embryo 24 h.