

Results. It could be concluded that the occurrence in higher frequencies of some of proved mutants in the treated groups (2.1 per mosquito) in comparison with the controls (0.4 per mosquito); the distortion in the normal sex ratio; the reversion in the normal hatching sequence; the higher frequency of dominant lethal mutations; the lethals and semilethals obtained in the F_1 generation of the treated parental progenies; also the mosaic phenotypes with gross morphological aberrations induced in head appendages, proved to be the most important criteria for the mutagenicity of thalidomide in *Culex*¹⁶.

Zusammenfassung. Nach Behandlung von Männchen von *Culex pipiens molestus* mit Thalidomid konnten im Vergleich zur Kontrolle höhere Raten an phänotypischen Anomalien, Letalmutationen, Semiletalmutationen und

einige geprüfte Mutationen in der F_1 -, F_2 - und F_3 -Nachkommenschaft nachgewiesen werden.

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An Attempt to Induce Crossing-Over in Males of *Drosophila melanogaster* with Ovarian Extract

Crossing-over occurs with a very low frequency in *Drosophila* males but occurs freely in females. This observation encouraged REDDY, REDDY and RAO¹ investigate if there is any substance in the female germinal tissue, i.e. ovaries, which might induce crossing-over in males. They prepared an extract by homogenizing several *Drosophila* ovaries and tested this for the induction of crossing-over in the males. These experiments were performed both with fresh and boiled extract. The fresh extract proved to induce a significant number of cross-overs.

An attempt to confirm these interesting observations was made by SINGER et al.² Here, the fresh extract induced only 8 cross-overs in 68,974 flies, while the controls yielded 7 cross-overs in 19,170. These authors thus failed to confirm earlier results where 103 cross-overs were recovered in 29,147 flies. Therefore, it was thought worthwhile to repeat these experiments to support one or other of the observations.

A 3rd chromosome double recessive stock, *se cu*, and a wild stock Oregon-R, were used. Females heterozygous

for these 2 strains were mated to similar males and were dissected in saline. Nearly 400–500 ovaries were dissected and were homogenized with sand. Saline was added to make the volume of the homogenate to 1 ml. The homogenate was centrifuged twice at 4000 rpm for 5 min. The supernatant was injected into the heterozygous males with an AGLA brand micrometer syringe using a fine glass capillary. Fresh extract was injected into males in 2 sets at a rate of 0.2 μ l and 0.4 μ l per male. The extract was then boiled and similar injections were performed. The injected males were individually mated to 5–7 *se cu* virgins for 2 days per brood. 7 such broods were cultured. Scoring was not made for the first 2 broods. The results are given in the Table.

No cross-overs were observed in these experiments except in the one with boiled extract where only 2 recombinants appeared in 6252 flies. The conclusion is that the *Drosophila* ovarian extract does not induce crossing-over in the males.

Zusammenfassung. Von zwei früheren, sich widersprechenden Befunden wird einer gestützt: Ovarial-extrakte von *Drosophila* lösen in Männchen keine «crossing-over» aus.

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Induction of crossing-over in *Drosophila melanogaster* males treated with ovarian extract

Treatment	Dose per male	No. of males test-crossed	Total progeny	Total cross-overs
Saline	0.2 μ l	26	16,280	0
Fresh extract	0.2 μ l	16	8,482	0
Fresh extract	0.4 μ l	19	8,168	0
Boiled extract	0.2 μ l	20	7,726	0
Boiled extract	0.4 μ l	17	6,252	2

¹ O. S. REDDY, G. M. REDDY and M. S. RAO, *Nature* 208, 203 (1965).

² K. M. SINGER, A. CHOVNICK, D. T. SUZUKI, D. BAILLIE and D. HOAR, *Nature* 214, 503 (1967).

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