other initial media.

One hundred eye-antennal discs isolated from Oregon-R larvae yielded about 4 x 10^5 single cells, whereas one hundred wing discs from the same strain produced about 4.5 x 10^5 cells. One hundred eye-antennal discs from Bar larvae yielded about 3 x 10^5 cells by the same procedure.

When single cell suspensions each containing 10^5 cells in 0.3 ml medium were introduced into tightly covered micro-beakers, rotated on a gyratory shaker for 24 hours at 100 rpm at 28°C, tissue-like cell aggregates were reconstituted in the center of the micro-beakers. Cell aggregates obtained from eye-antennal disc cells of the Oregon-R strain had an average diameter of 0.6 mm, whereas eye-antennal disc cells from the Bar strain formed smaller and looser aggregates of an average diameter of 0.4 mm. In the staining preparations of the aggregates ommatidium-forming cells formed some cell clusters, which were separated and sorted out from those of antenna-forming cells.

Wing disc cells from the Oregon-R strain formed after 24 hours of rotation aggregates of 0.5 mm in diameter which showed a characteristic structure different from that of eye-antennal disc cells. The differences in histogenesis and organogenesis of different imaginal discs are now further studied.

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2. Kuroda, Y. and S. Tamura, 1956, Med. J. Osaka Univ., 7: 137.
3. Kuroda, Y., 1968, Proc. XII Internatl. Congr. Genet., Vol. II: 100.

Mohamed, Aly H. and Patricia A. Kemner. University of Missouri-Kansas City, Kansas City, Missouri. Cytogenetic effects of hydrogen fluoride on D. melanogaster.

Wild type (Oregon-R) D. melanogaster males were subjected to hydrogen fluoride gas and crossed to untreated Oregon-R virgin females and to tester virgin females of the genotype Pm dp b/Cy sp^2; Sb/D CxF. Salivary gland chromosomes smears of the F_1 larvae from the first cross indicated the presence of chromosomal aberrations such as duplications, deficiencies and inversions. The second cross has been used to determine the induction of subvital, semi-lethal and lethal mutations on the second chromosome.

Abrahamson, S., W. C. Kiriazis and E. M. Sabol. Dept. of Zoology, University of Wisconsin, Madison, Wisconsin. A Storage Effect of Ethyl Methane Sulfonate (EMS) on the Induction of Translocations in Drosophila Sperm.

Experiments were performed to determine the effect of EMS, a monofunctional alkylating chemical, on the induction of translocations, including mosaic translocations, in fresh mature sperm and stored mature sperm.

Oregon-R males aged for 5-6 days were fed a 0.0125 M solution of EMS for 24 hours (following procedures of Lewis and Bacher). These males were mated to bw/bw;e/e ♀♀ for 24 hours and then discarded. The females were allowed to lay eggs for 2 more days, and then transferred to non-yeasted media. After 10 more days the females were transferred back to yeasted media and allowed to lay for 3 days. Progeny obtained from the first three days of egg laying were products of fresh mature sperm; progeny recovered from the last brood were products of stored mature sperm. The F_1 males containing the treated chromosomes (wild-type males) were mated singly to bw/bw;e/e ♀♀. The F_2 cultures were screened for translocations. Six to ten wild-type males from each normal F_2 culture, those not exhibiting translocations, were further tested for mosaic translocations by single pair matings with bw/bw;e/e ♀♀.

One Y-2 translocation was recovered from 271 fertile cultures from fresh mature sperm. Although only 20 vials were fertile in the stored mature sperm test, three 2-3 translocations were recovered, giving a translocation frequency of 0.15. This is a remarkable increase over the translocation frequency of 0.004 obtained in the fresh mature sperm test.

No mosaic translocations were recovered after testing 6-10 males from each of 110 F_2 normal cultures from fresh sperm nor from the 17 aged sperm cultures. However, two other kinds of mosaics were observed in the stored sperm test. Among the progeny of the 6 males from F_2 normal culture #7 two of these vials showed that bw/bw ♂♂&♀♀, bw/bw;e/e ♂♂&♀♀, and +/+ ♀♀ all