Table 3

The effect of uracil on the size of the Bar eye ♂♂ at 25°C.

% Uracil	Bar ♂♂ Facet Number
0.75	244 ± 18.1
1.50	310 ± 15.0
1.75	450 ± 13.8
2.00	575 ± 17.9
Control	88 ± 3.9

Table 4

The effects of other uracil homologues on the Bar eye ♂♂ at 25°C.

	Bar ♂♂ Facet Number
5-methyl uracil (Thymine)(0.25%)	155 ± 10.1
5-nitrouracil (2.25%)	no effect
5-aminouracil (0.10%)	highly toxic
6-methyl uracil (0.50%)	no effect
6-aminouracil (1.00%)	no effect

Table 5

The effects of 5-bromouracil on wings of fB stock at 25°C.

% 5-bromouracil	Total Number of Adults Emerged	Number With Abnormal Wings	% Abnormal Wings
0.10	235	16	6.8
0.25	141	87	61.7
0.50	16	16	100
0.75	63	62	100
1.00	19	19	↓
1.25	35	35	↓
1.50	16	16	↓
1.75	28	28	↓
2.00	13	13	↓
2.25	15	15	↓
Control	350	0	0

Rasmuson, B. University of Uppsala, Sweden. Modulation of the puff in the tip of the X-chromosome in D. m.

In a duplication of white-locus, containing the mutant ch in the distal duplicate and sp-w in the proximal one (Rasmuson: Hereditas 53), a series of salivary chromosome analyses was performed in order to determine the length of the duplication. The original ch- and sp-w stocks were analysed together with the duplication, which had occurred independently in two females, heterozygous for these marker genes. It was found that the duplication had arisen as a cross-over after unequal pairing in such a way that a segment from 3 A to 4 C was duplicated. This means that the bands 3 A 1234, including the zeste band 3 A3, which is known to pair regularly - but very seldom - with the 3 C1 band within or very close to the white-locus, also have an affinity to pair with some structure between 4 C and 4 D. The band 4 D does not seem to be duplicated. Further, the size and the shape of the puff near the tip of the X-chromosome, including the sections 2 A and 2 B, is modulated from the normal appearance found in the two original strains. In males, the puff in the duplicated chromosome is elongated in proximal direction to an ellipsoidal shape and appears to include the 3 A12 bands within its border. In a recombinant where the duplication had been eliminated, the normal shape of the puff reappeared. Thus, the duplication seems to contain some factor which induces the puffing in a region outside of the duplication what under normal conditions does not show any puffing activity. Studies are under way to investigate whether this factor is a special gene or a heterochromatic region and whether it is possible to obtain the same phenomenon with other chromosome rearrangements.