between gene Dly and virus sigma.

References: McCrady, W.B. and R.L. Sulerud 1964, Genetics 50:509-526; Williamson, D.L. 1961, Genetics 46:1053-1060.

Gold, J.R. and M.M. Green. University of California, Davis, California. mu - a mutator gene in Drosophila melanogaster.

In two previous reports, an apparently new mutator gene, mu, in D. melanogaster was identified and genetically characterized (Green, 1970; Green and Lefevre, 1972). In these reports, it was shown that mu significantly increases the reversions of the sex-linked mutants y^2 and f^{3N} to their respective wildtype alleles, and the frequency of sex-linked lethal mutations in homozygous mu females.

In addition to the frequent reversions of y^2 and f^{3N}, several other visible mutations have been recovered from experiments using single P_1 homozygous mu females. Some of these "forward" mutations are listed in Table 1, and are presented to demonstrate the influence on spontaneous mutability of the mutator gene. Most of the newly recovered mutations were progeny tested to determine the origin, i.e. somatic or germinal. Multiple events or clusters

Table 1

Forward visible mutations recovered from experiments using homozygous mu females.

No	Phenotype of the mutation	Number of occurences	Somatic or germinal**
1	achaete	2	?
2	bithorax-like	1	S
3	Beadex	1	S
4	Blistery wing	1	S
5	bulgeing eye (extreme)	1	G
6	cut wing	2*	G
7	Delta wing	4*	G
8	Dicheate-like	1	S
9	Hairless	5*	?
10	hairy eye (extreme)	10	S
11	held-out wing	1	G
12	Lobe or reduced eye	many	S
13	lozenge spectacle	1	sterile
14	Minute	12*	S,G
15	Notch	16*	G
16	roughened eye	6*	G
17	scute	2	S
18	zeste eye color	1	sterile
19	Ultrabithorax-like	2	S
20	several bristle irregularities	many	-
21	several eye shape mutations	many	-
22	several synanders (mitotic loss)	many	-

* Recovered as clustered events

** Somatic - S (not recovered in F_1 progeny tests)
Germinal - G (recovered in F_1 progeny tests)

from single P_1 females were found in several instances and are noted in the Table. Three conclusions can be drawn from the results: 1) mu induced mutability is not gene or allele specific; 2) mu induced mutations occur in both somatic and germinal cells; 3) at least some of the mu induced mutations occur premeiotically as evidenced by the clustered mutations. All three observations were made previously and are extended by the observations reported here.

References: Green, M.M. 1970, Mutation Res. 10:353-363; Green, M.M. and G. Lefevre, Jr. 1972, Mutation Res. 16:59-64.