

enzyme in other animals the Triton X-100 was used to rupture the lysosomal membranes. The homogenate was centrifuged at high speed in a clinical centrifuge, the precipitate rehomogenized and centrifuged as before. After the final centrifugation the supernatants were combined, their volumes adjusted, and 0.5ml aliquots were pipetted into tubes containing 1.25ml buffer and 0.5ml substrate. The reaction was allowed to proceed for 2 hours at 25°C, and was stopped by plunging the tubes into an ice bath. The amount of o-nitrophenol liberated by the enzyme was measured colorimetrically at 420mμ immediately after adding 0.5ml 1M NaOH to each tube. Protein determinations were performed according to the method of Lowry (2). The results of the assay were expressed as μM o-nitrophenol per gamma protein.

The enzyme determinations were run on non-axenic live yeast fed adults (P_1) and on 2 successive axenic generations of adults (P_2 and P_3) raised on sterile medium containing 0.5% Brewer's yeast, 1.5% agar and either 0.8% sucrose or 0.8% lactose. All tests were made on flies 2 to 5 days of age. In Table I the beta-galactosidase activities of the axenic lactose

Table I. Beta-galactosidase Activity of Non-Axenic and Axenic *D. melanogaster* Adults.

Generation	Non-Axenic		Axenic				t
	No. of Tests	Mean uM o-N-phenyl/gamma protein	Lactose Fed		Sucrose Fed		
			No. of Tests	Mean uM o-N-phenyl/gamma protein	No. of Tests	Mean uM o-N-phenyl/gamma protein	
P ₁	3	0.336					
P ₂			4	0.14	4	0.12	0.490
P ₃			5	0.73	5	0.47	4.19*

* Significant at 5% level

and sucrose raised are compared to each other. These results are not compared to the P_1 generation since it is probable that bacteris may be biasing the result by contributing to the total enzyme activity.

Beta-galactosidase levels were highest in the P_3 adults after an initial, though non-significant decrease. It appears that the lactose fed flies have the greatest enzyme activity.

References: Sellinger, O. Z., Beaufay, H., Jacques, P., Deyen, A. and deDuve, C. 1960. *Biochem. J.* 74: 450-456. Lowry, O. H., Rosebrough, N. J., Farr, A. L. and Randall, R. J. 1951. *J. Biol. Chem.* 193: 265-275.

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Schalet, A., G. Lefevre and K. Singer. University of Connecticut, Storrs, Connecticut; San Fernando Valley State College, Northridge, California. Preliminary cytogenetic observations on the proximal euchromatic region of the X chromosome of *D. melanogaster*.

We have undertaken a cytogenetic investigation of deficiencies located in the proximal region of the X chromosome covered by the $y^+Y mal^+$ chromosome (Schalet and Finnerty, DIS 43: 128). Salivary analysis based upon at least 12 deficiencies of independent origin permits the following preliminary observations.

1) Cytological extent of the proximal X covered by $y^+Y mal^+$: From a left breakpoint

in 18F through sections 19 and 20.

2) Location of visible loci: ot, 19A3-6; sw and mel, 19B3-19C2; mal, 19C4-19D3; lf, 19E5-6; unc, 19F1-2; su(f), to the right of 20A2 (probably to the right of 20A). The "mal" locus of Lifschytz and Falk, (see note of Schalet and Finnerty in this issue), defined by the overlapping deletions All8/Q539, 19E7 or immediately next to it.

3) Lethal loci in section 20: Lethal A7 has been localized to 20A1-2. Complementation tests have demonstrated at least 7 lethal loci between lethal A7 and su(f). Consequently, these 7 lethals and su(f) are located within bands generally considered to be truly chromosomal. Since su(f) is to the left of the proximal breakpoint of the sc^4 inversion, these results are in conflict with Cooper's assignment of 19F for that breakpoint.