

cytological processing. Clearly cell death in the fat body does not require acid phosphatase-1.

Acid phosphatase has been demonstrated in the protein granules of the larval fat body in other insect species (beetles: DeLoof, 1972; moths: Locke and Collins, 1968; muscid flies: Stay, 1959) but the function of acid phosphatase in the protein granules is not yet clear. Since the protein granules of the larval fat body of *Drosophila* contain acid phosphatase, and since Gaudecker (1963) finds the granules to be autophagic, it is reasonable to think of these granules as being lysosomal. Attempts to identify other acid hydrolases in the granules are underway.

References: Barret, A.J. 1969 In: *Lysosomes in Biology and Pathology*, Vol. 2 (Ed. by Dingle and Fell) Chapt. 6, American Elsevier Co., N.Y.; Bell, J.B., R.J. MacIntyre and A.P. Olivieri 1972, *Biochem. Gen.* 6:205-216; Butterworth, F.M. 1972, *Devel. Biol.* 28:311-325; Butterworth, F.M. and D. Bodenstein 1967, *J. Exp. Zool.* 164:251-266; Butterworth, F.M. and R.C. King 1965, *Genetics* 52:1153-1174; Butterworth, F.M., D. Bodenstein and R.C. King 1965, *J. Exp. Zool.* 158:141-154; DeLoof, A. 1972, *J. Insect Physiol.* 18:1039-1047; Gaudecker, B.V. 1963, *Z.F. Zellforsch.* 61:56-95; Gomori, G. 1950, *Stain Tech.* 25:81; Locke, M. and J.V. Collins 1968, *J. Cell Biol.* 36:453-483; Pearse, A.G.E. 1961, *Histochemistry, Theoretical and Applied*, 2nd ed. Little, Brown & Co., Boston; Seligman, A.M. and L.H. Mannheimer 1949, *J. Nat. Cancer Inst.* 9:427-434; Stay, B. 1959, *J. Morph.* 105:457-494.

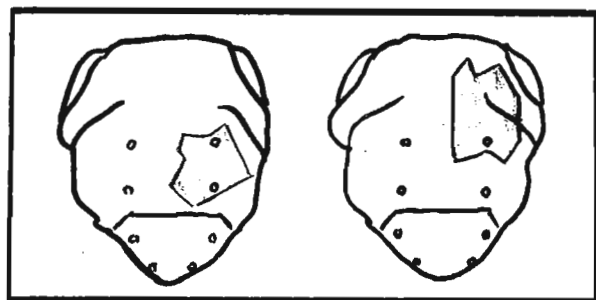
Behnia, A. and G. Koliantz. Teachers Training College, Tehran, Iran. The effect of uric acid on a wild-type strain of *D. melanogaster*.

In the summer of 1970, from a natural population of Azarbaijan province in Iran, a wild type strain, called Gayaneh, was isolated which showed a high viability, fecundity and also a longevity more than Java wild type (Mostashfi, P. and G. Koliantz, 1970, 1971). The strain

was divided into three lines each of which was exposed to different genetical experiments.

Two-day old males of the second line, were let feed for 24 hours on Whatman filter paper which had been saturated with uric acid in distilled water. Then each male was made to mate with two virgin females in fresh Mostashfi medium. After 24 hours the males were discarded and females remained to lay eggs for 48 hours. To obtain F_2 , a mass mating method was used (Spencer 1947a, Tsuno 1970). In this experiment the evidence was saccharose solution with the same concentration as uric acid.

The effect of uric acid in 1, 3, 5 and 10 percent concentrations are summarized in Table 1.



% Concent.	Gener.	l	sl	qn	malform.	mosai.
1	F ₁	1	2	7	-	-
	F ₂	-	1	6	3	-
3	F ₁	-	-	10	1	-
	F ₂	-	2	8	3	-
5	F ₁	2	-	8	8	-
	F ₂	-	1	7	3	9
10	F ₁	-	1	9	9	-
	F ₂	5	3	2	13	-

The number of malformations in the F_1 increased with uric acid concentrations and reached its highest point in the F_2 of 10% concentration.

In 5% concentration, two gynandromorphs and nine cases of mosaicism were observed, two of which are drawn diagrammatically. Highest lethality in F_1 and F_2 was observed in 5% and 10% concentrations, respectively.

The results obtained by double bound (with saccharose solution), showed relatively lower malformations and lethal effects.

References: Godbole, N.N., R.M. Kothari and V.G. Vaidya 1971, *DIS* 46:116; Hochman, B. 1971, *Genetics* 67; Mostashfi, P. and G. Koliantz 1971, 3rd Iran. Cong. of Genet.