

Burdette, W.J. and J.E. Carver. The University of Texas, M.D. Anderson Hospital and Tumor Institute, Houston, Texas. Tumors in *Drosophila* following treatment with oncogenic viruses.

The RNA Rous-sarcoma virus (Bryan high-titer strain: BH-RSV) was found to be associated with an increased incidence of melanotic tumors, mutations, and chromosomal aberrations in *D. melanogaster* (Burdette, W.J., 1969, Tumors, hormones, and viruses in *Drosophila*, Nat. Cancer Inst. Monogr. 31: 303-321;

Burdette, W.J. and Yoon, J.S. 1967, Mutations, chromosomal aberrations, and tumors in insects treated with oncogenic virus, Science 155: 340-341). The results of these and similar studies in which the DNA virus: SV 40 (Simian virus: strain 40) and Rous associated virus (RAV-1) have been administered to two different melanogaster stocks (sc⁸.Y.B^S/y² wⁱ ct⁶ f: "Multipurpose" and Oregon-R) in 1:1 and 1:50 dilutions are shown in the table below. Tumor frequencies significantly higher than controls were observed in all series except in the Oregon-R stock treated with SV 40 virus. Further, the tumorigenic effects of BH-RSV and SV 40 were found

Tumor incidence following treatment of pre-imaginal stages with oncogenic virus

<u>Stock</u>	<u>Virus administered</u>	<u>Percent with tumors</u>	<u>Total number observed</u>	<u>P</u>
MP	Control	2.3	2230	-
	BH-RSV, 1:1	5.2	852	<0.005
	SV-40, 1:1	8.5	1396	<0.005
	RAV-1, 1:1	4.2	1702	<0.005
	BH-RSV, 1:50	7.9	1846	<0.005
	SV-40, 1:50	7.8	742	<0.005
	RAV-1, 1:50	8.1	1530	<0.005
ORE-R	Control	0.3	1320	-
	BH-RSV, 1:1*	2.6	760	<0.005
	SV-40, 1:1*	0.9	1337	.05-.10
	BH-RSV, 1:50*	3.2	801	<0.005
	SV-40, 1:50*	1.0	314	.25-.5

*Yates' correction applied.

to be greater on the multipurpose than on the Oregon-R stock. The latter result suggests genetic differences in susceptibility to oncogenic viral agents among different strains of *Drosophila*. Comparison of 1:1 and 1:50 dilution treatments show higher frequencies of tumors at the 50-fold dilution for BH-RSV (P<0.01) and RAV-1 (P<0.001) in the M-P stock, and for BH-RSV in the Oregon-R stock (P<0.001). No significant difference between treatment concentrations was observed for SV 40 in either stock analyzed (MP: P>0.5) ORE-R: P>0.8, Yates' correction applied). Studies designed to elucidate the mechanisms of viral action in *Drosophila* are being continued.

Baimai, V. Mahidol University, Bangkok, Thailand. *D. montium* from Mt. Maquiling, Luzon, Philippines.

Karyotype variation in *D. montium* has recently been discussed (Baimai, 1969).

In February, 1969, an extensive sample of living *Drosophilas* was obtained from Mt. Maquiling, Luzon, Philippines (Mather 1970).

A culture of *D. montium* was established from the collection which turned out to have a metaphase plate Type III similar to those from Tawau and Sandakan, Sabah. This strain proved to be cross-fertile with strains from Madang, (New Guinea) Kota Kinabalu (Sabah), and Tawau (Sabah).

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References: Baimai, V. 1969. Karyotype variation in *D. montium*. DIS 44: 115. Mather, W.B. 1970. The Genus *Drosophila* at Mt. Maquiling, Luzon, Philippines. DIS 45: 111.