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A new virus-like particle found in *Drosophila melanogaster*.

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Reports of virus-like particles (VLPs) in *Drosophila* tissue, during the mid-1960s and early 1970s, were among the first evidence that viruses infect *Drosophila melanogaster* (Akai *et al.*, 1967; Filshie *et al.*, 1967; Philpott *et al.*, 1969; Gartner, 1971; Felluga *et al.*, 1971). Since then, only a few *Drosophila* viruses have been further characterized (Brun and Plus, 1980). *Drosophila* VLPs mostly appear oval to round in shape and form quasi-crystalline arrays, usually in the nucleus, but also in the cytoplasm. They range in average length from 400 to 727 angstroms and have been distinguished from one another according to size (Felluga *et al.*, 1971).

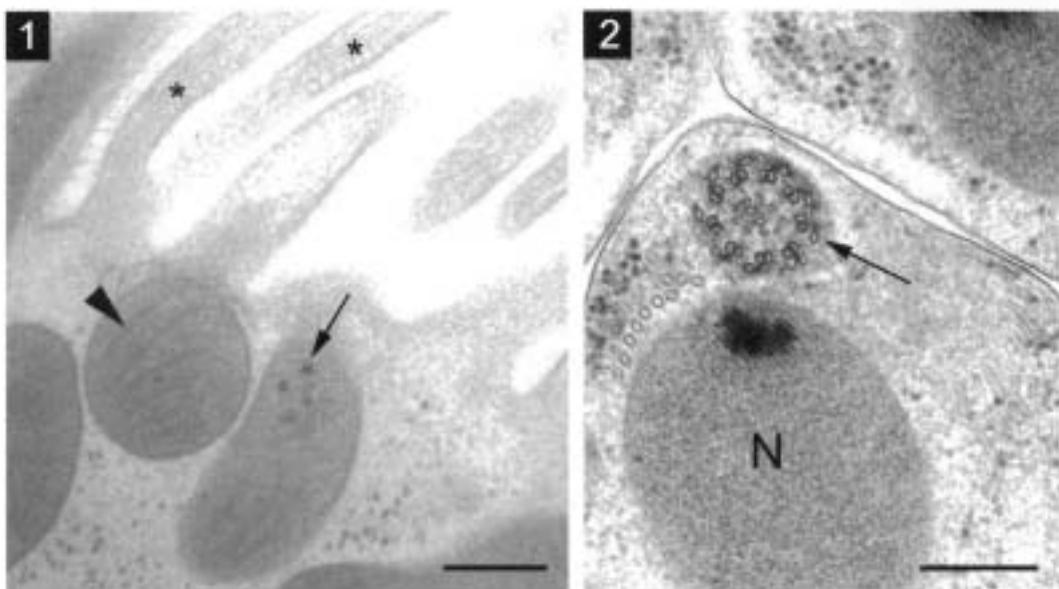


Figure 1. A quasi-crystalline inclusion (arrow) of virus-like particles in the nucleus of a gut epithelial cell. Bar equals 1.0  $\mu$ m.

Figure 2. Higher magnification of the inclusion in Figure 1. Thin fibers (arrow) are observed running along one side of the inclusion. The virus-like particles are hexagonally packed with spaces disrupting the periodicity. Bar equals 0.5  $\mu$ m.

We have discovered a smaller-sized class of VLPs in the nuclei of gut epithelial cells of adult flies from a yellow, rosy stock. Like other *Drosophila* VLPs, these VLPs were oval to round in shape, depending on the cutting plane, and loosely packed together in orderly arrays to form quasi-crystalline nuclear inclusions (Figures 1 and 2). Particles were usually hexagonally packed, sometimes squarely packed, with spaces disrupting the periodicity. Single particles were also present in the nuclei of some cells. No particles, either single or in arrays, were observed in the cytoplasm. The average dimensions of a single particle were 307 by 251 angstroms. These dimensions make this VLP the smallest VLP reported so far in *Drosophila melanogaster*.

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References: Akai, H., E. Gateff, L.E. Davis, and H.A. Schneiderman 1967, Science 157: 810-813; Brun, G., and N. Plus 1980, *The Genetics and Biology of Drosophila* (Ashburner, M., and E. Novitski, eds.) 2d, pages 625-702, Academic Press, New York; Felluga, B., V. Jonsson, and M.R. Liljeros 1971, J. Invert. Path. 17: 339-346; Filshie, B.K., T.D.C. Grace, D.F. Poulson, and J. Rehacek 1967, J. Invert. Path. 9: 271-273; Gartner, L.P., 1971, Experientia 27: 562-564; Philpott, D.E., J. Weibel, H. Atlan, and J. Miquel 1969, J. Invert. Path. 14: 31-38.