Jousset, F.X. Station de recherches cytopathologiques, Saint Christol-les-Alès, France. Presence of iota virus in French strains of Drosophila immigrans.

Iota, a Drosophila immigrans virus, induces a CO_2 sensitivity when injected into Drosophila melanogaster ♂ flies (Jousset, 1970). Despite this symptom, iota virus is entirely different from sigma virus. Iota virions are paraspherical, 30 nm in diameter (Jousset, 1972). Iota virus is morphologically similar to P virus of D. melanogaster (Plus and Duthoit, 1969) which affects the fecundity and the life span of the flies (David and Plus, 1971). P virus belongs to the Picorna viruses family (Téninges and Plus, 1972).

Eleven strains of D. immigrans from different regions of France were checked for the presence of iota virus. A sample of flies of each strain was ground in Ringer solution, the extract centrifuged, filtered through a 450 nm pores filter and injected into standard melanogaster free of known Drosophila viruses (sigma, P and iota). In all cases, the CO_2 sensivity appeared in the injected males at the first or the second passage on melanogaster. The other characteristics of iota infection on melanogaster flies, sterility of the ♀ and early death of ♂ and ♀, appeared at the following passages. One of the immigrans strains, captured in Alès, Gard, was further investigated for the presence of iota virus in each of 25 individual ♀ and each group of 3♂♂. The 30 extracts were injected into groups of melanogaster ♂♂ submitted later on to CO_2 gas. The CO_2 sensivity occurred in each group of injected ♂♂. Thus, iota virus is likely to be present in every fly of the Alès strain of immigrans. Furthermore, iota seems to exist in all the French strains of D. immigrans, as endemic virus.

References: Jousset, F.X. 1970 C.R. Acad. Sci. Paris 271:1141-1444; _____ 1972 C.R. Acad. Sci. Paris, D, 274:749-751; Plus, N. and J.L. Duthoit 1969 C.R. Acad. Sci. Paris 268: 2313-2315; David, J. and N. Plus 1971 Ann. Inst. Pasteur 120:107-119; Teninges, D. and N. Plus 1972 J. Gen. Virology, in press.

Bennett, J. and A.M. Hathaway Northern Illinois University, DeKalb, Illinois. Behavioral correlates of the w, w^+ gene substitution, observations in day 2.

A pair of isogenic, inbred, Oregon-R lines, differing only at the white locus (DIS 45:140-141) were examined for differences in behavioral patterns. Flies were separated on the day of eclosion and examined on the second day between 2 and 6 pm. All observations were made between 2 December 1971 and 6 January 1972. Individual flies were observed for 10 minute periods in 16 mm Blister™ slides (DIS 47: 75). Observations were recorded on a checklist of 13 behavioral patterns. Only one incidence of a given pattern was recorded in each 10 minute period. 100 flies of each sex and for each line were observed. The table records the observations for those patterns showing significant differences, and the Chi-square probabilities. An earlier

Line and Sex		Rub Proboscis	Rub Antenna	Rub Thorax	Comb Abdomen	Comb Wings	Activity (sum of all)
w^+	♀	16	45	20	24	50	405
w^+	♂	14	50	19	18	47	389
w	♀	12	40	16	7	47	359
w	♂	3	44	9	13	39	338
w vs. w^+	P = <	0.001	0.01	0.03	0.003	0.006	0.01
Greatest Discrepancy		♂	♂	♂	♀	♂	

study (DIS 47:75) recorded similar differences in Antenna, Wings, and Total Activity, with flies of a greater age spread "2 to 4 days". Three other patterns (Proboscis, Thorax & Abdomen) that show significant differences between lines in this study did not show such great differences in the earlier study. Similarly three patterns (Rub Forelegs, Rub Head & Pull Anus) that were significant in the earlier studies did not show such great differences in this group. Some of the differences between the studies may be dependent upon the age of the fly, time of day of observation (morning hours in the earlier study), and season (summer months in the earlier study). Additional observations are being devoted to these factors.