Insertion and Transposition Elements in Prokaryotes

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Insertion and transposition elements are discrete segments of DNA that possess the ability to translocate to new positions on the same or a different chromosome. Both are found on bacterial plasmids, and transposition elements frequently carry antibiotic-resistance genes. The nature of the translocation event, the utility of the elements in bacterial genetics, and their contribution to bacterial evolution, was discussed and reference was made to the following papers: Cohen (1976); Starlinger & Saedler (1977); Bukhari et al. (1977); Kleckner (1977); Bukhari et al. (1977); Kleckner et al. (1977).

Bukhari, A. I., Shapiro, J. A. & Adhya, S. (1977) DNA Insertion Elements, Plasmids and Episomes, Cold Spring Harbor Laboratory, Cold Spring Harbor

Interrupter Sequences that are Widely Distributed in the Drosophila Genome

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(1) Interruptions of the 28S rRNA gene

The genes for ribosomal DNA are found as tandemly repeated clusters in the nucleolus organizers of the X and Y chromosomes of Drosophila melanogaster. Several laboratories have shown that between one-half and two-thirds of these repeating units contain a sequence inserted into the 28S gene (Glover & Hogness, 1977; White & Hogness, 1977; Wellauer & Dawid, 1977; Pellegrini et al., 1977). The most frequently occurring unit that contains a sequence insertion is exemplified by a 17000-base-pair DNA fragment generated by the EcoRI restriction endonuclease. Fig. 1 shows a physical map of such a 17000-base-pair fragment, fragment Dm103, which has been cloned within a bacterial plasmid (Glover et al., 1975). The fragments of fragment