

Transposable elements are a major source of genetic change, including the creation of novel genes, the alteration of gene expression in development, and the genesis of major genomic rearrangements. They are ubiquitous among contemporary organisms and probably as old as life itself. The long coexistence of transposable elements in the genome would be expected to be accompanied by host-element coevolution. Indeed, the important role of host factors in the regulation of transposable elements has been illuminated by recent studies of several systems in *Drosophila*. These include host factors that regulate the P element, a host mutation that renders the genome permissive for gypsy mobilization and infection, and newly induced mutations that affect the expression of transposon insertion mutations. The finding of a type of hybrid dysgenesis in *D. virilis*, in which multiple unrelated transposable elements are mobilized simultaneously, may also be relevant to host-factor regulation of transposition.