



Figure 1. Schematic Illustration of *white* Variegation in the X-Chromosome Inversion $In(1)w^{m4}$

The *white* locus, normally located in the distal euchromatin (*blue*), is now placed within 25 kb of a breakpoint within the pericentromeric heterochromatin (*pink*) of the X chromosome due to an X-ray-induced inversion. Spreading of heterochromatin packaging into the euchromatic domain results in silencing; loss of silencing in some cells during differentiation results in a variegating phenotype. Given a fly exhibiting PEV, one can select for second-site mutations that either suppress the phenotype (*Su(var)* mutations; resulting in a loss of silencing) or enhance the phenotype (*E(var)* mutations; causing an increase in silencing).