



Figure 1. A schematic illustration of *white* variegation in the X chromosome inversion $In(1)w^{m4}$. (A) Rearrangement attributable to an X-ray-induced inversion places the *white* locus, normally located in the distal euchromatin (white bar) of the X chromosome (see top line), ~25 kb from a breakpoint in the pericentric heterochromatin (black bar; bottom rearranged line). Spreading of heterochromatin packaging into the euchromatic domain results in silencing (causing a white eye in this case); loss of silencing in some cells during differentiation results in a variegating phenotype (bottom line, right). (B) Given a variegating phenotype, screens for second site mutations can recover suppressors (*Su(var)s*) and enhancers (*E(var)s*) as described in the text. (C) Some *Su(var)* loci (e.g., *Su(var)3-9*, shown here) show an antipodal dosage-dependent effect, and are consequently thought to be structural proteins of heterochromatin. The presence of only one copy of the modifier gene results in less heterochromatin formation, and more expression from the reporter gene (suppression of PEV, top fly eye); conversely, the presence of three copies of such a modifier gene will drive more extensive heterochromatin formation, resulting in an enhancement of reporter gene silencing (enhancement of PEV, bottom fly eye).