



Figure 13. Quelling

For simplicity, only two of the seven chromosomes are diagrammed (*straight line segments in gray circles* representing nuclei). The native *albino* gene (*al*) is indicated by the dark orange rectangle on the top chromosome; the other (*dark orange* or *yellow*) rectangle represents ectopic *al* sequences introduced by transformation. Since transformed cells are often multinucleate, transformants are often heterokaryotic, as illustrated. Whether or not the transforming DNA includes the entire coding region, in some transformants it silences (“quells”) the native *al* gene in both transformed and non-transformed nuclei through an undefined *trans*-acting molecule (*red lines* emanating from the transforming DNA indicated by the *yellow rectangle*). This results in poorly pigmented or albino (AI) tissue in some transformants, as shown.