
TE's control in *Drosophila* germline : between global repression and controlled permissiveness

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Résumé

A large fraction of the genomes consists of mobile genetic elements, the transposable elements (TEs). These sequences have to be tightly silenced to avoid loss of genome integrity. However, TE mobilization can also have positive effects. Their mobilization in the germline may contribute to genome dynamics by generating novel expression profiles transmitted to the next generations. Therefore, TE expression has to be under the control of a cellular balance between a global repression and a sufficient permissiveness. During *Drosophila* oogenesis, TE repression involves the Piwi-interacting RNA (piRNA) pathway. To investigate the spatio-temporal pattern of TE silencing during oogenesis, we have developed a transgenic model in which regulation of the Idefix retrotransposon is used as a read-out. We have shown that during early oogenesis, in the dividing cysts of the germarium, Idefix repression escapes from the host control. Interestingly, Piwi expression is very low in these cells that we subsequently termed the "Piwiless pocket" or Pilp. To assess the permissiveness of TE mobilisation in the Pilp, we focus our analysis on the mechanisms underlying the absence of Piwi in this window. Our current analysis of the key RNAi factors present in the Pilp will be presented.

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