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<sup>OA</sup>Open Access paper.



**Cover** Polyploid or polytene tissues are common throughout development in plants and animals. Both have increased DNA copy number, but they differ in their arrangement of replicated chromatids, with sisters being aligned in polytene chromosomes. Polytene chromosomes in *Drosophila* can have greater than 1000 copies of each chromosome, but copy number is not necessarily uniform throughout the genome, as illustrated by the constricted regions of reduced copy number. In this issue, under-replicated regions in *Drosophila* salivary glands are shown to be repressed for transcription and ORC binding. Active inhibition of replication fork progression across the regions also contributes to reduced copy number. (Cover illustration by Tom DiCesare, <http://www.scipx.com>. [For details, see Sher et al., pp. 64–75.]