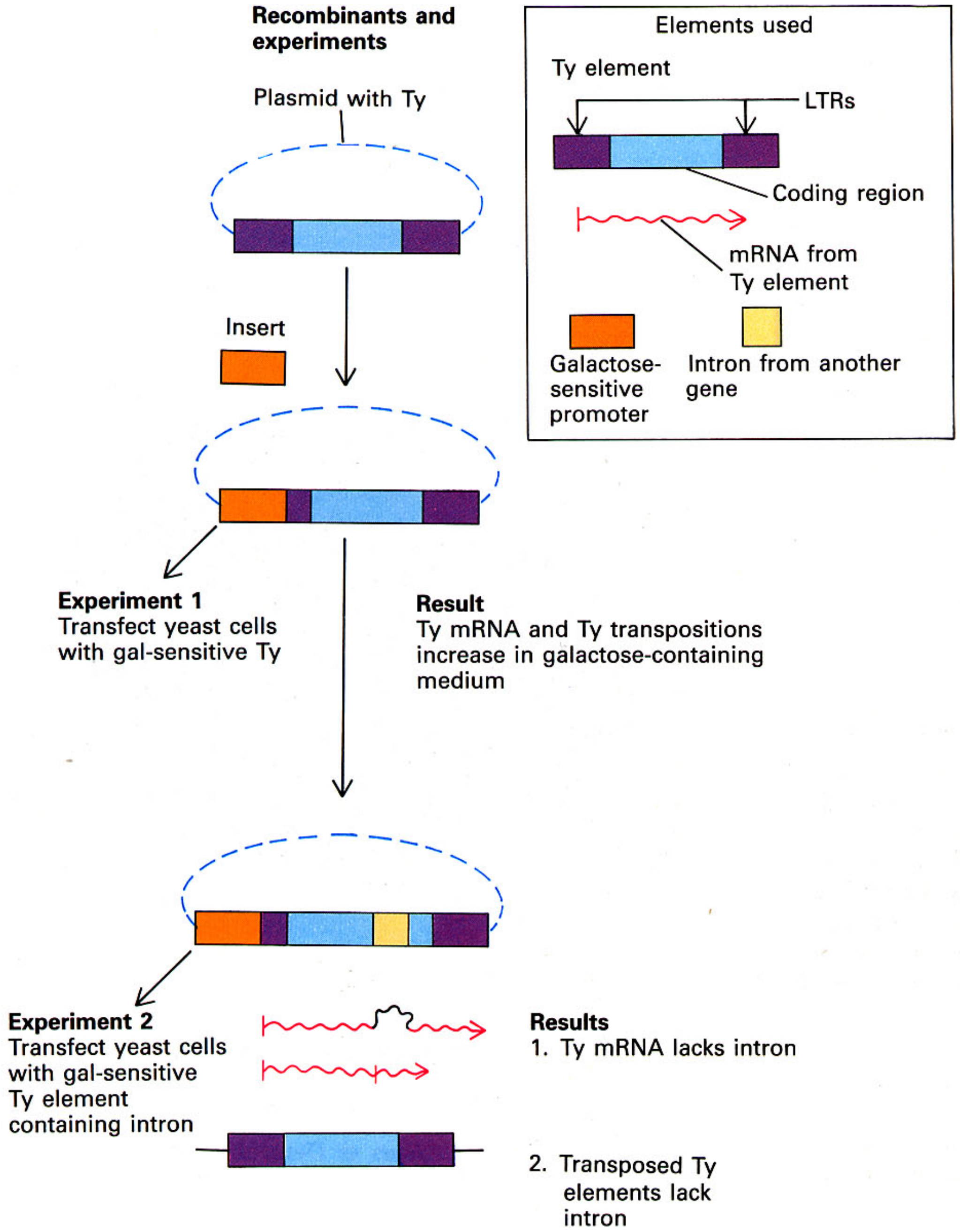
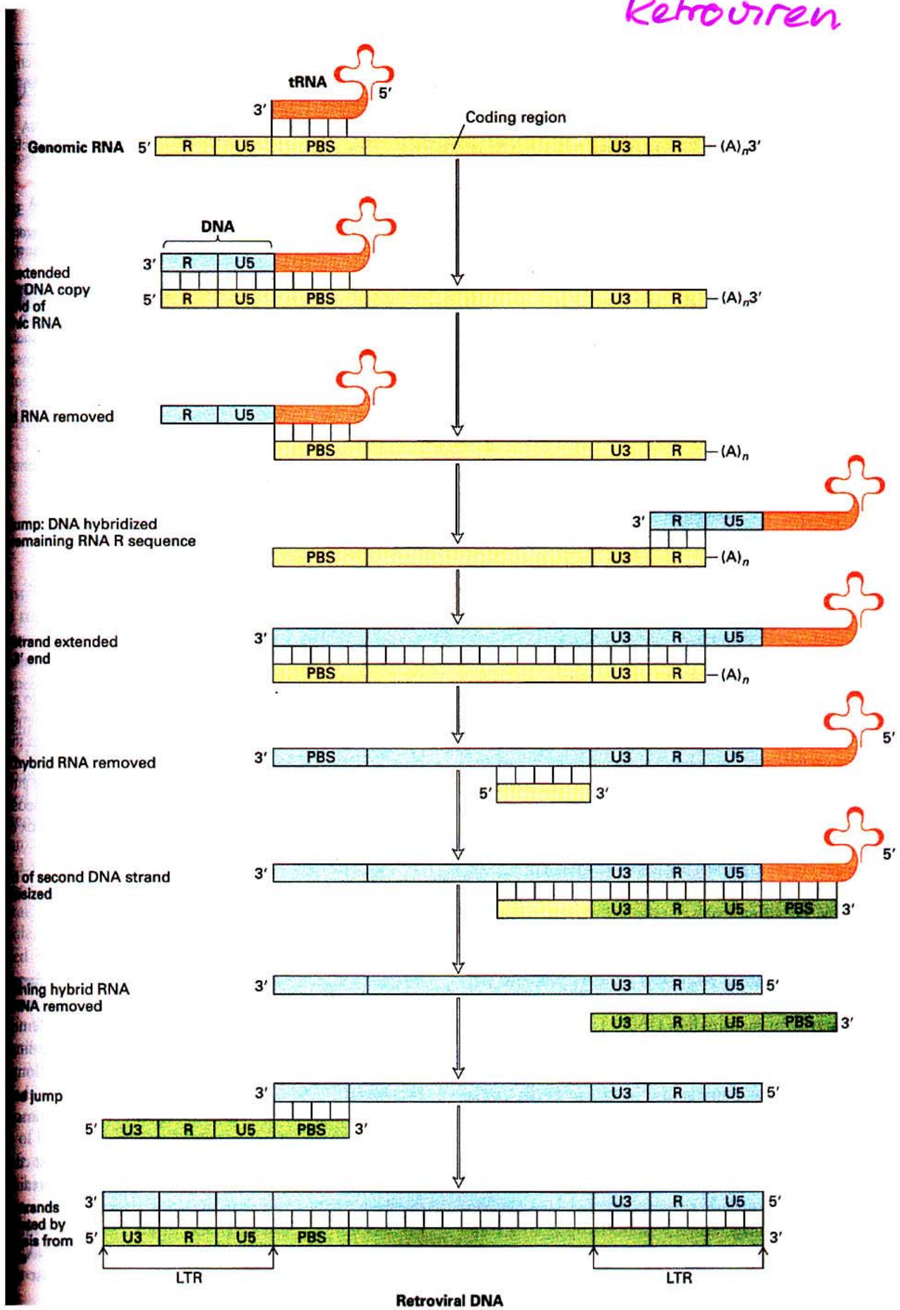
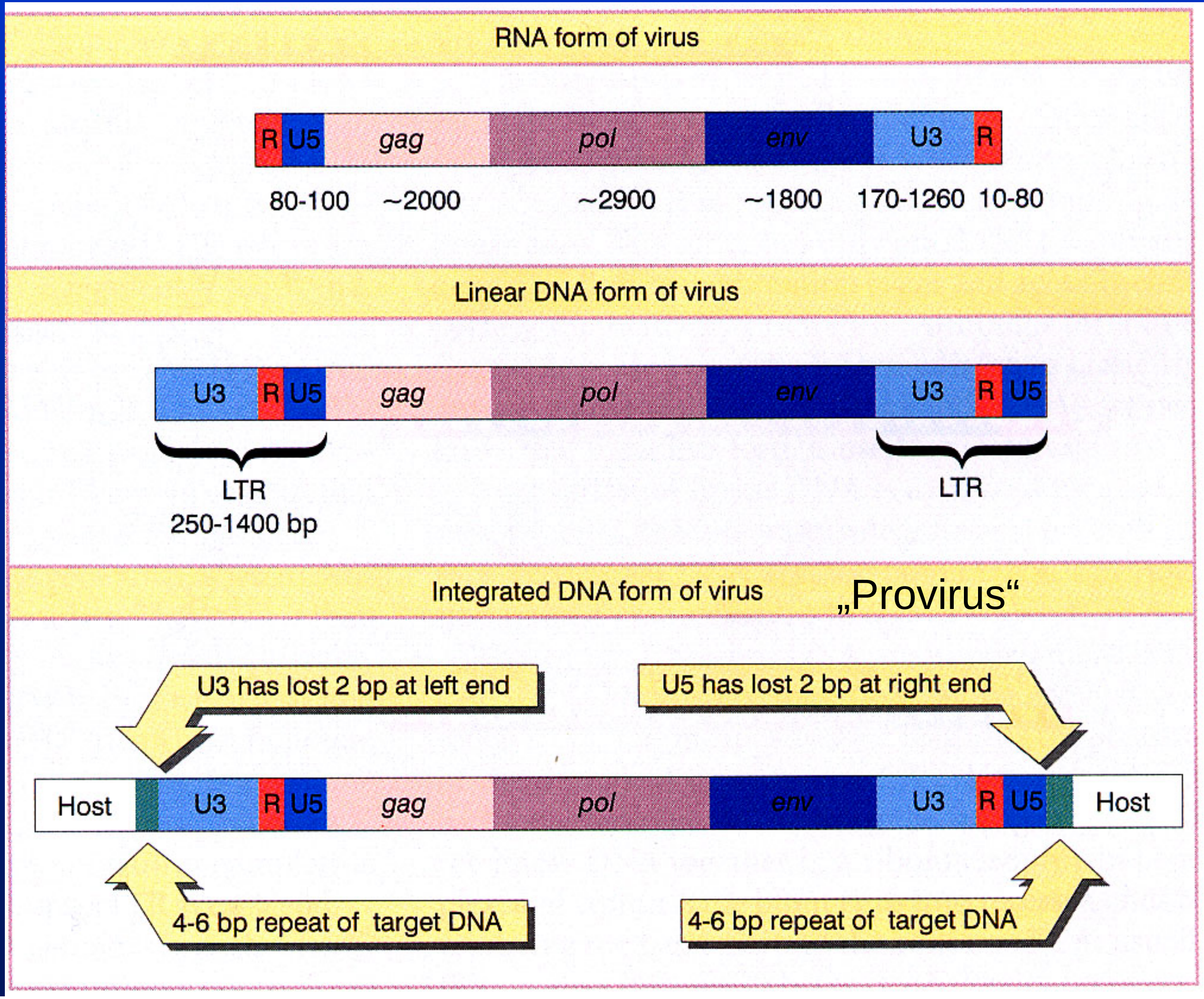
Beweis für Retro-transposition



Replikation und LTR-Entstehung bei Retroviren

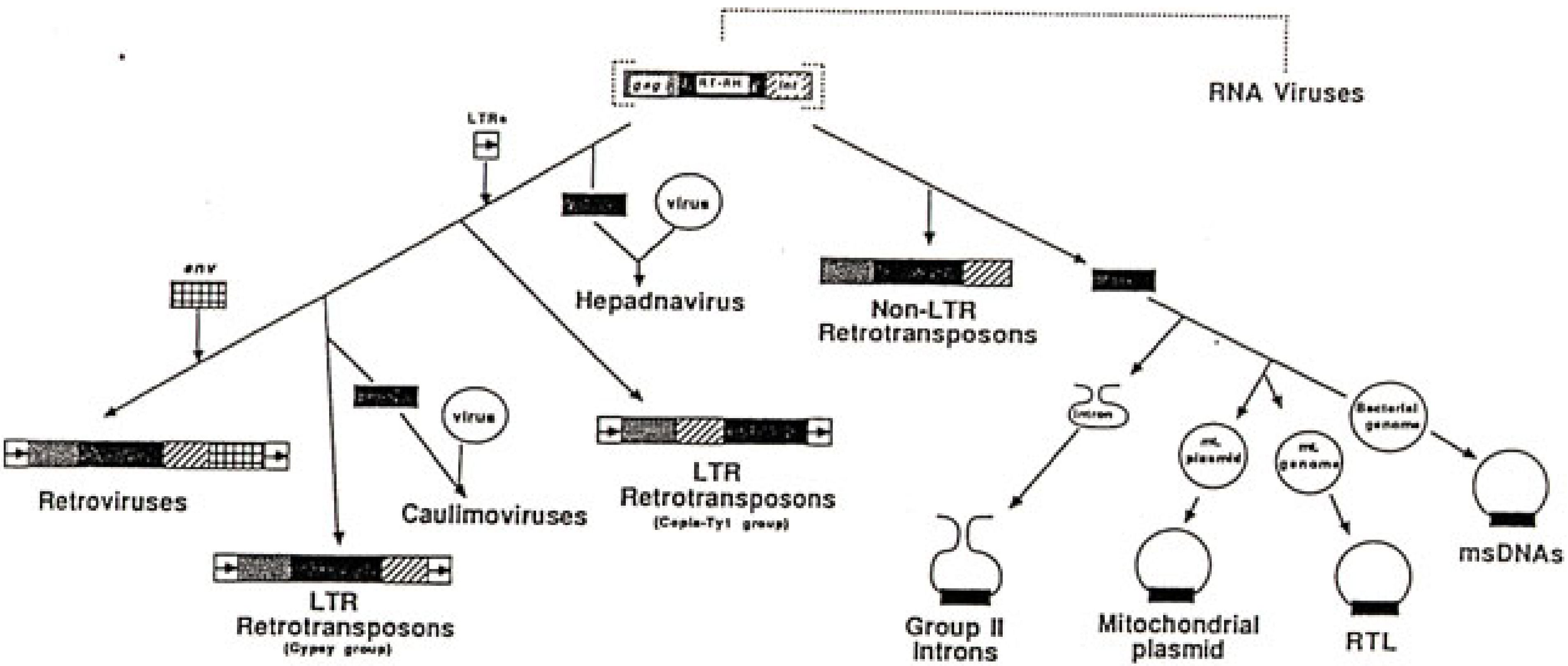


Retroviren unterscheiden sich in der DNA- und RNA-Form

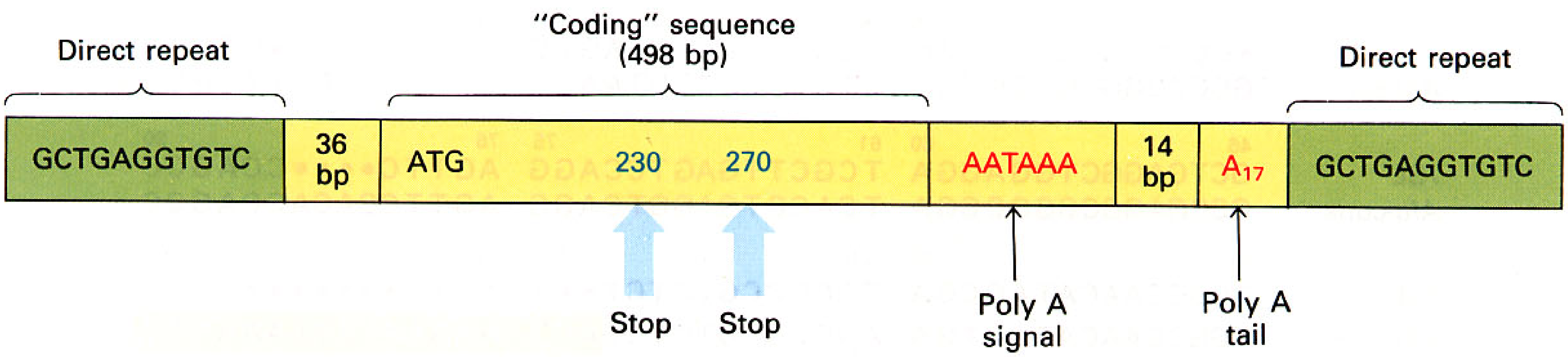


Evolution von Retroelementen: sind alle Retroelemente phylogenetisch verwandt?

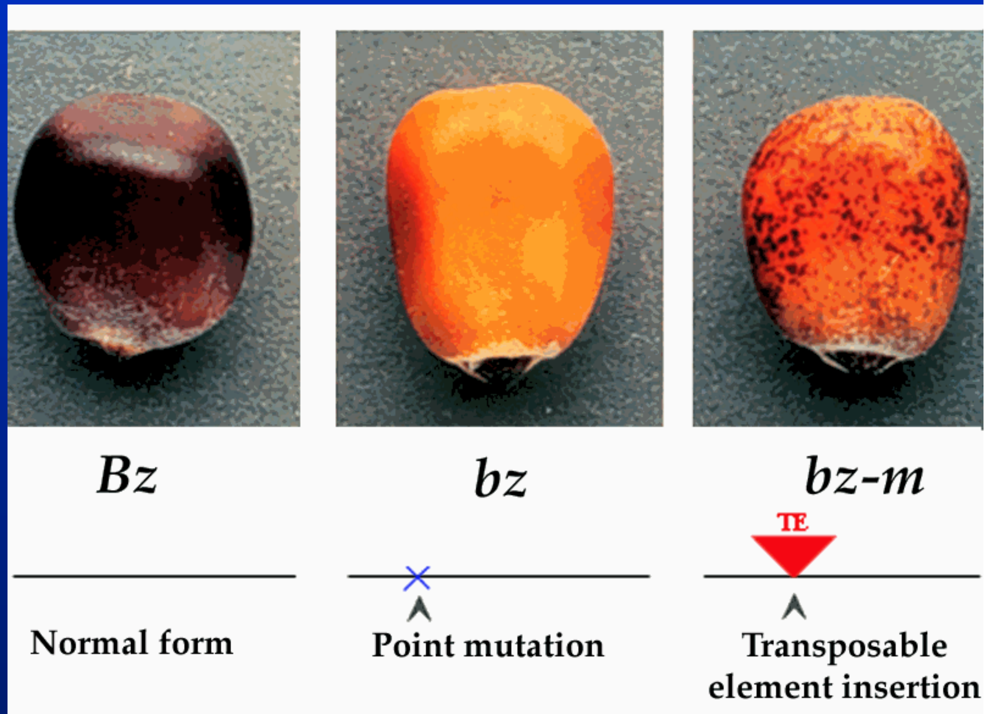
Y.Xiong and T.H.Eickbush



Prozessierte Pseudogene

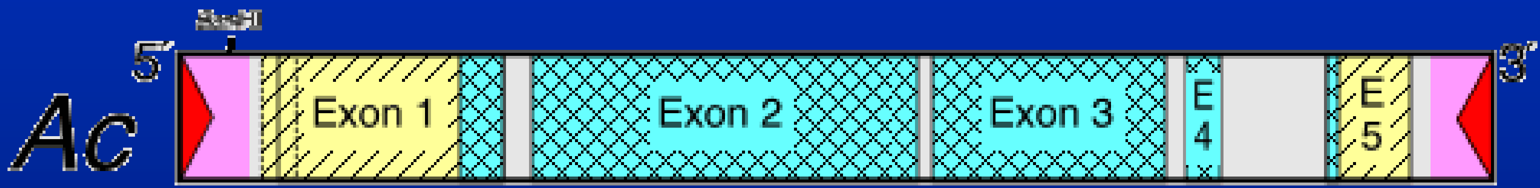


DNA-Transposons



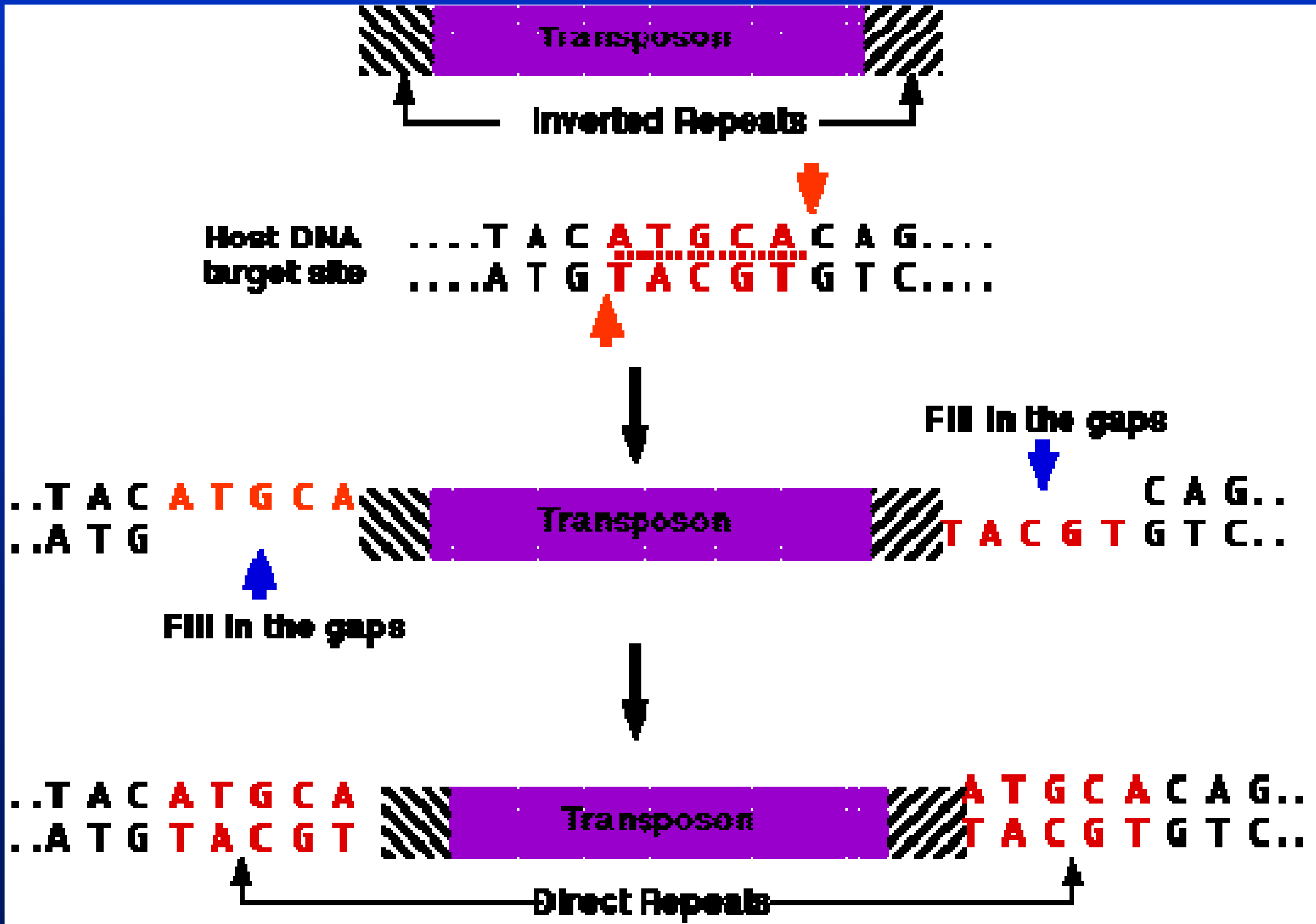
DNA-Transposons:
Körnerfarbe bei Mais

Activator Element „Ac“ bei Mais

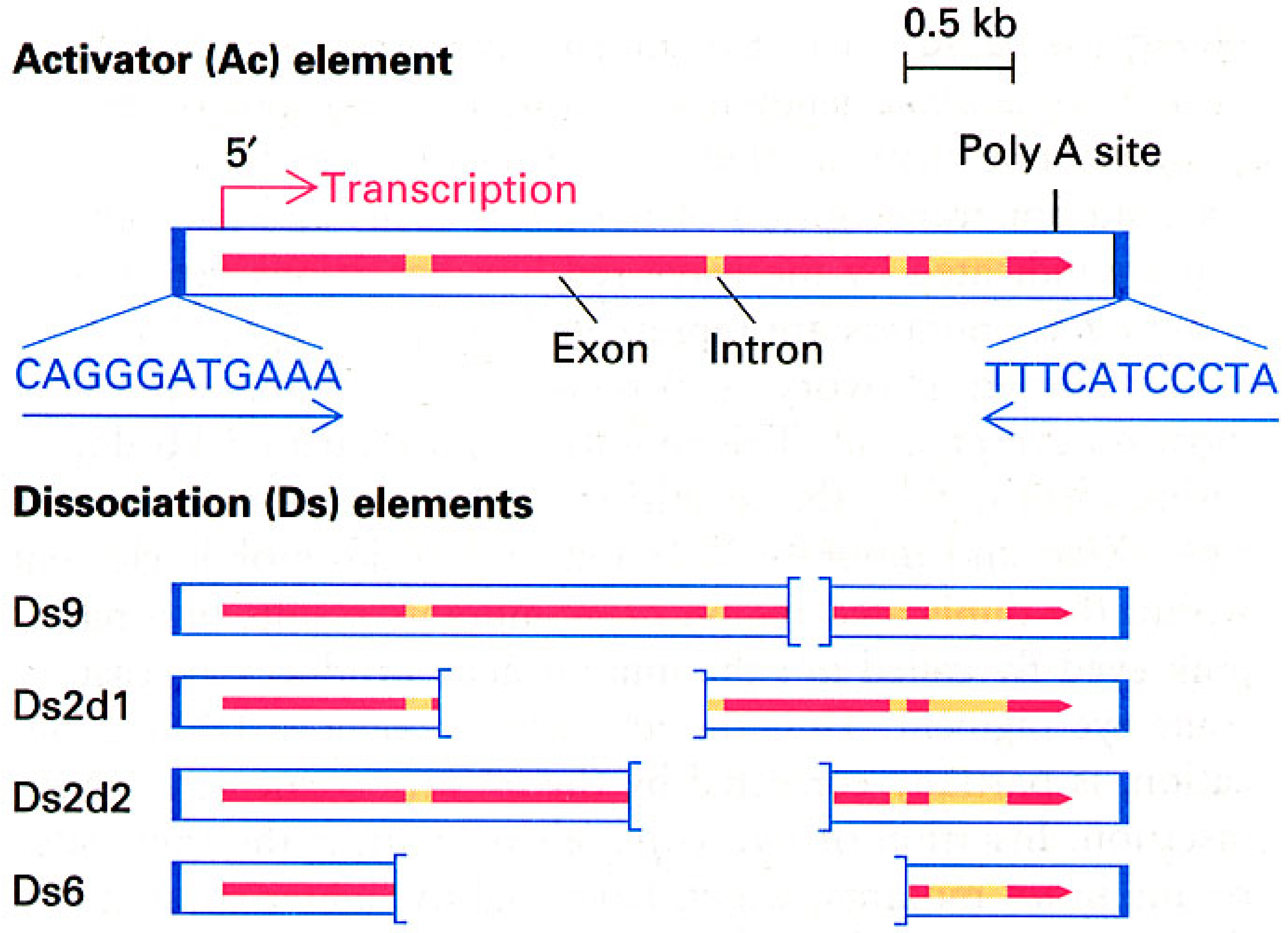


Das „Ac“-Element ist durch kurze „direct repeats“ flankiert

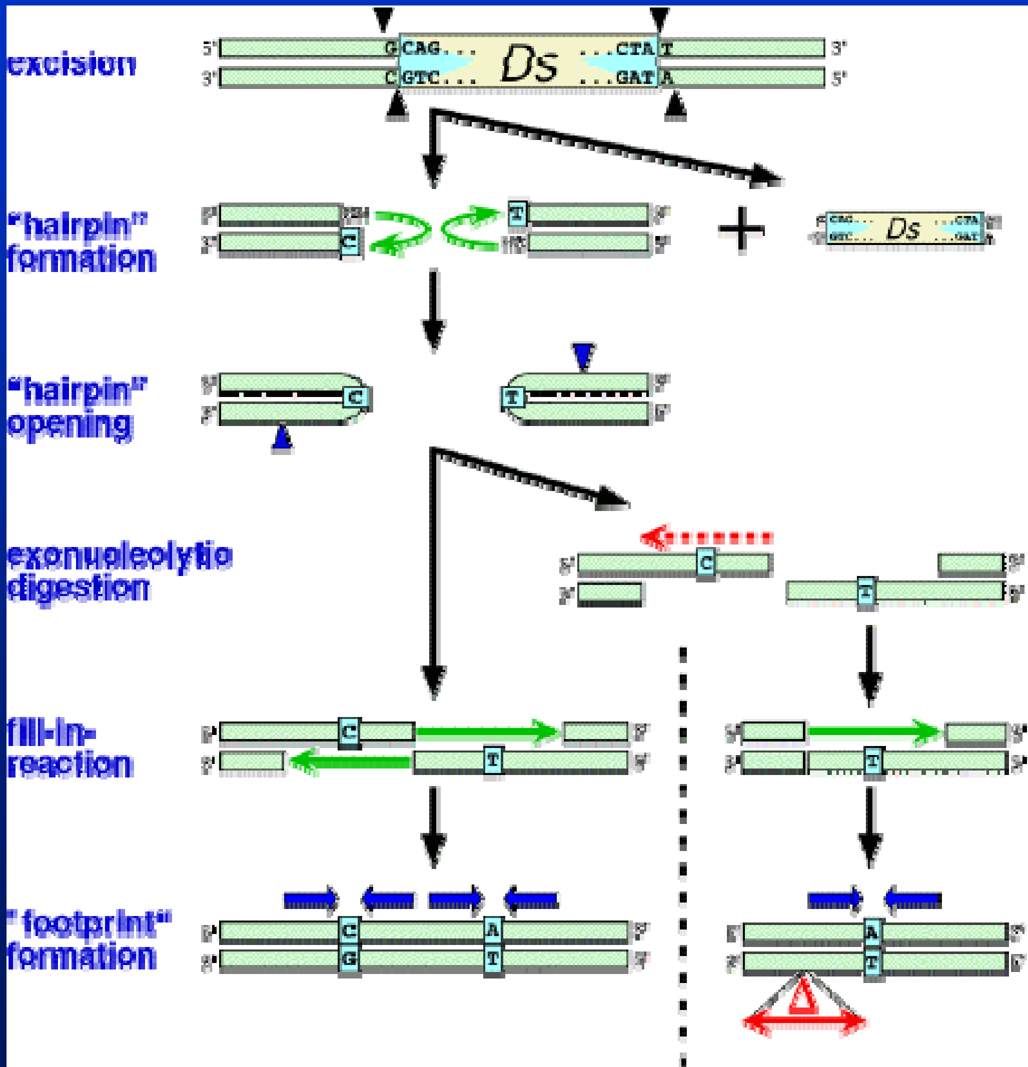
DNA-Transposons erzeugen „target site duplications“



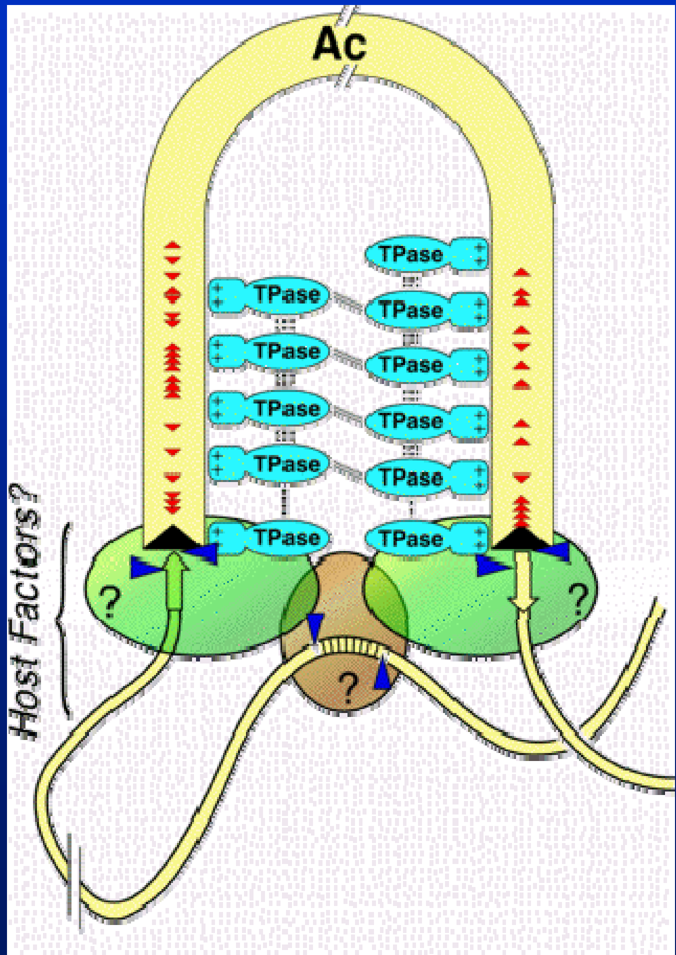
Das AC-Element besitzt eine aktive Transpsosase, Ds Elemente sind „nicht-autonom“



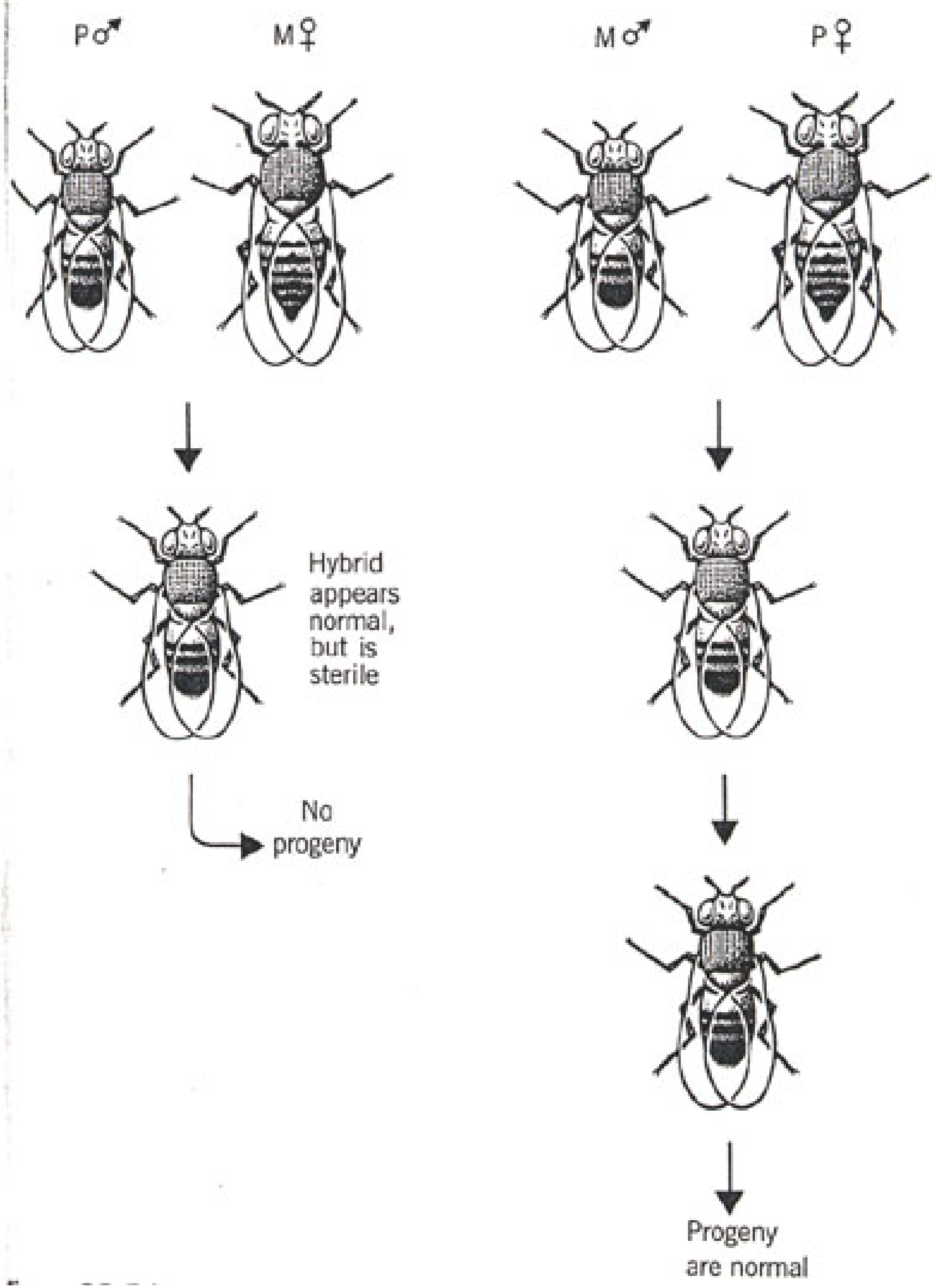
Bei der Exzision entstehen „footprints“



Bei der Transposition spielen die „inverted repeats“ ein große Rolle

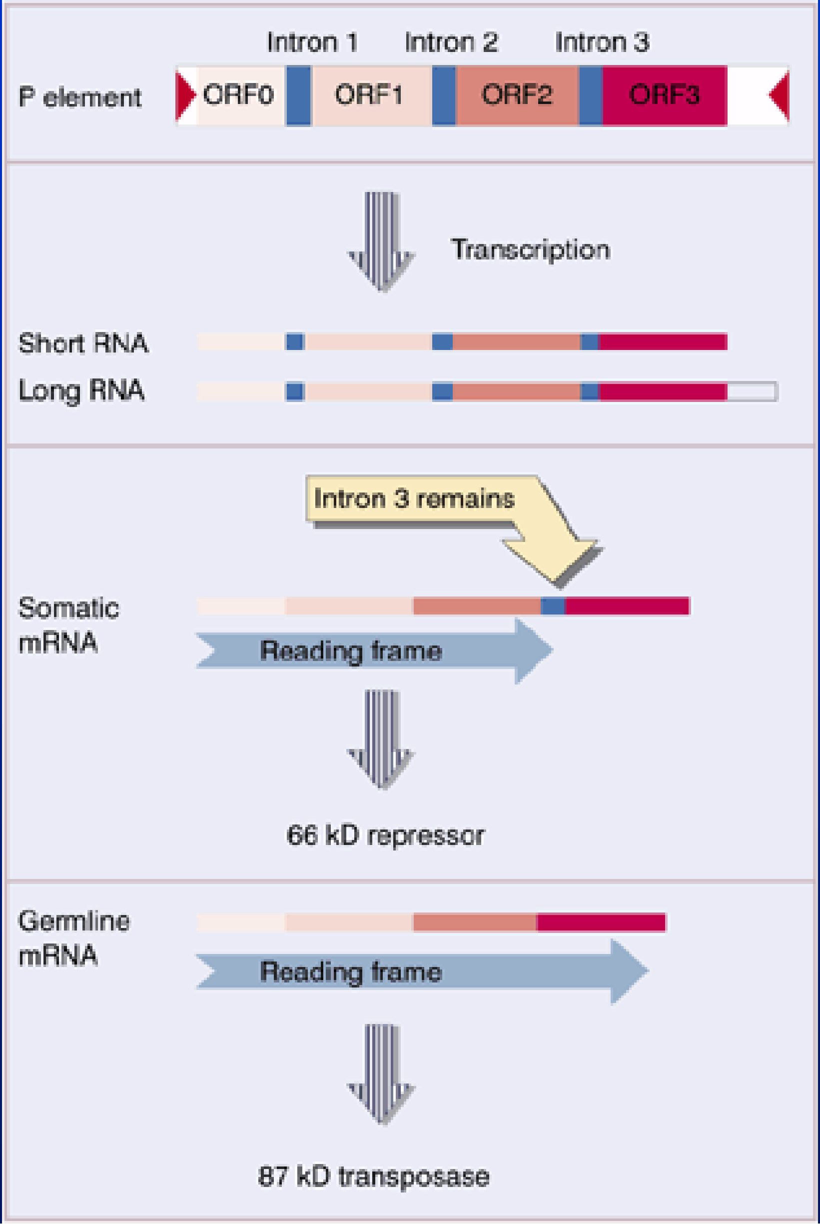


Die P-Elemente von Drosophila erzeugen „hybrid dysgenesis“



Die P-Elemente von Drosophila:

Figure 15.26 The P element has four exons. The first three are spliced together in somatic expression; all four are spliced together in germline expression.



Die P-Elemente von Drosophila:

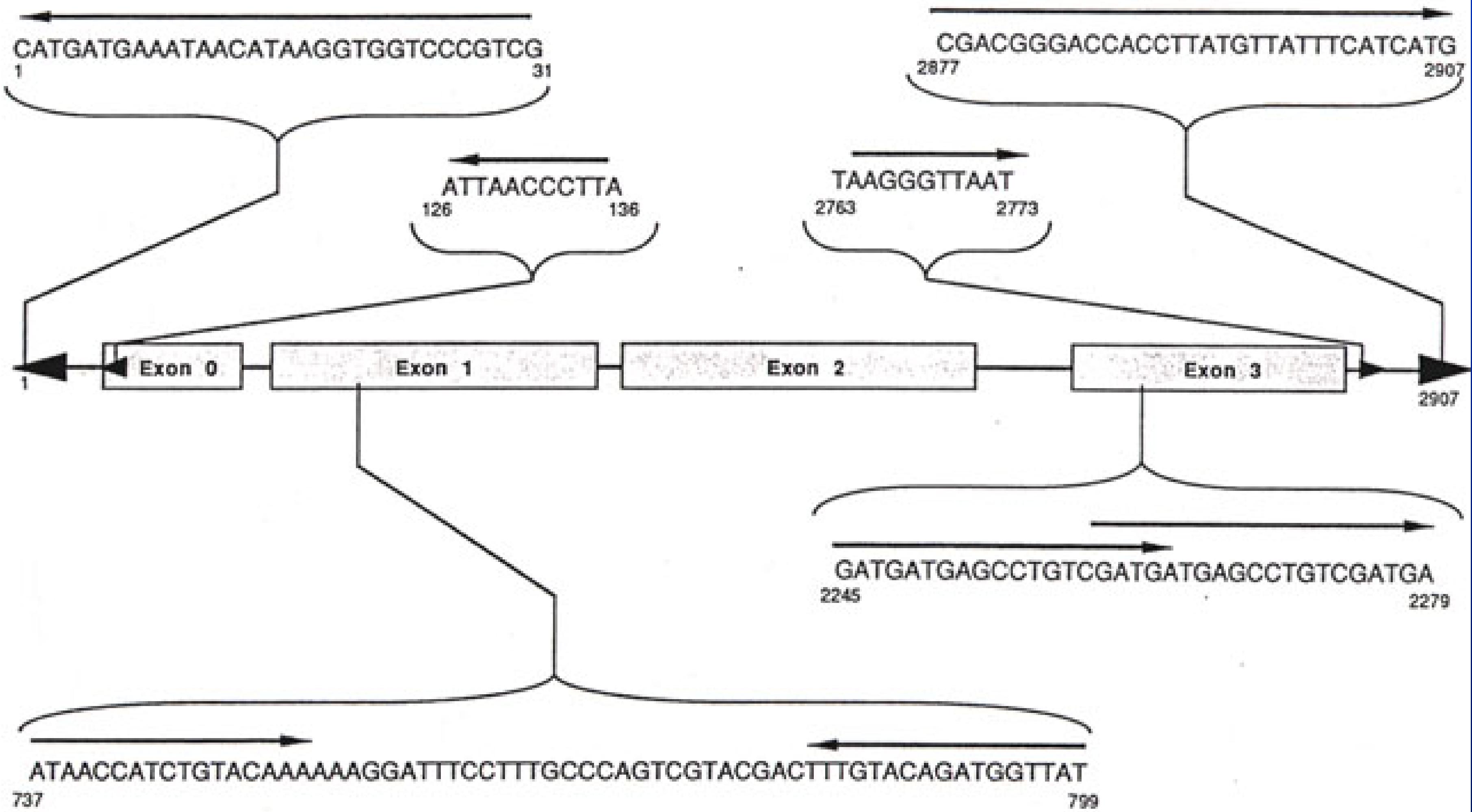
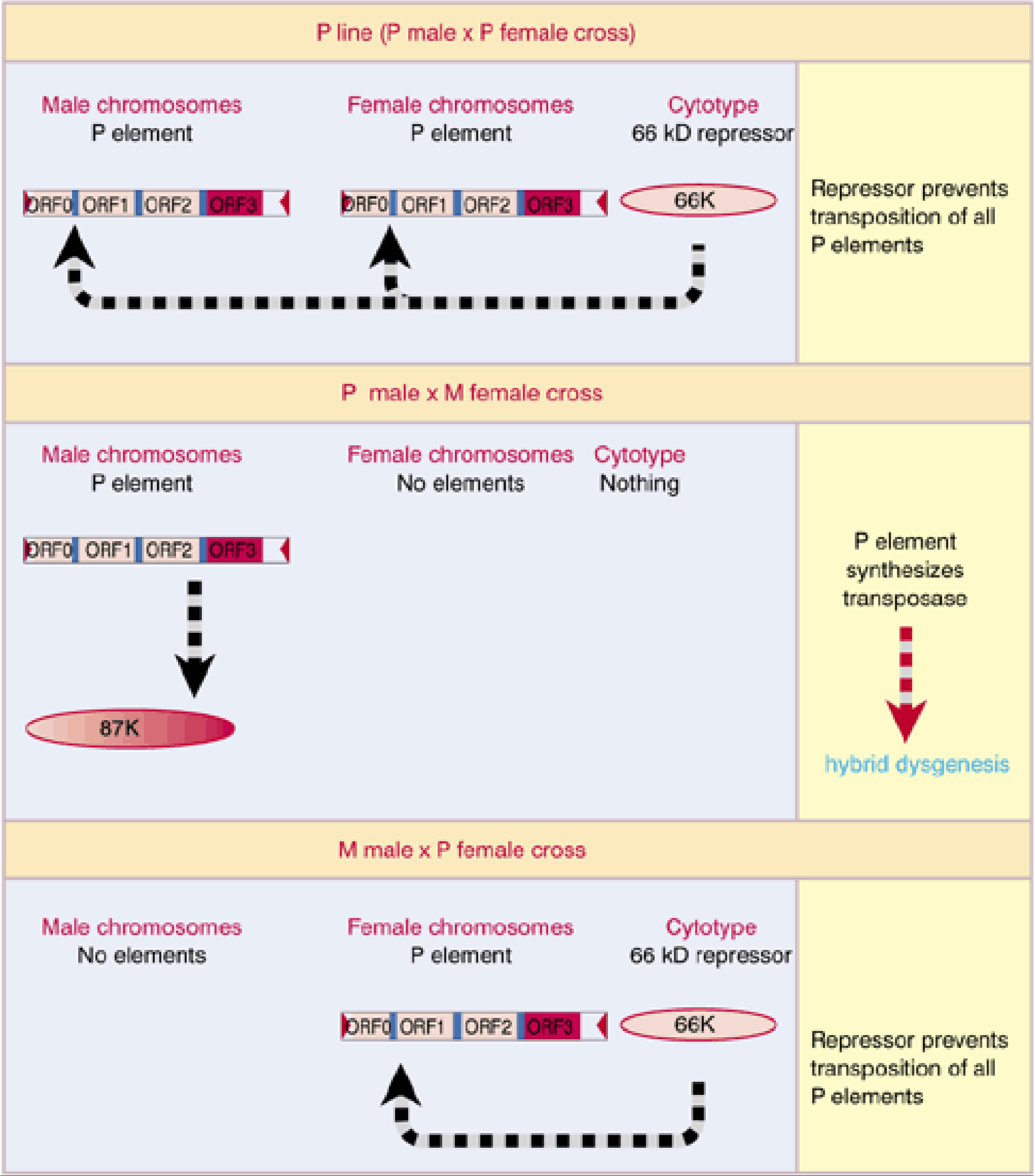


Figure 3. The complete P element and its repeat structures. The sequence was obtained by O'Hare and Rubin (155).

Figure 15.27 Hybrid dysgenesis is determined by the interactions between P elements in the genome and 66 kD repressor in the cytotype.

Die
„hybrid dysgenesis“
Ist die Folge von einem
Wechselspiel von
aktiver Transposase
In Keimzellen von P-freien
Tieren und dem Repressor
In P-haltigen Tieren

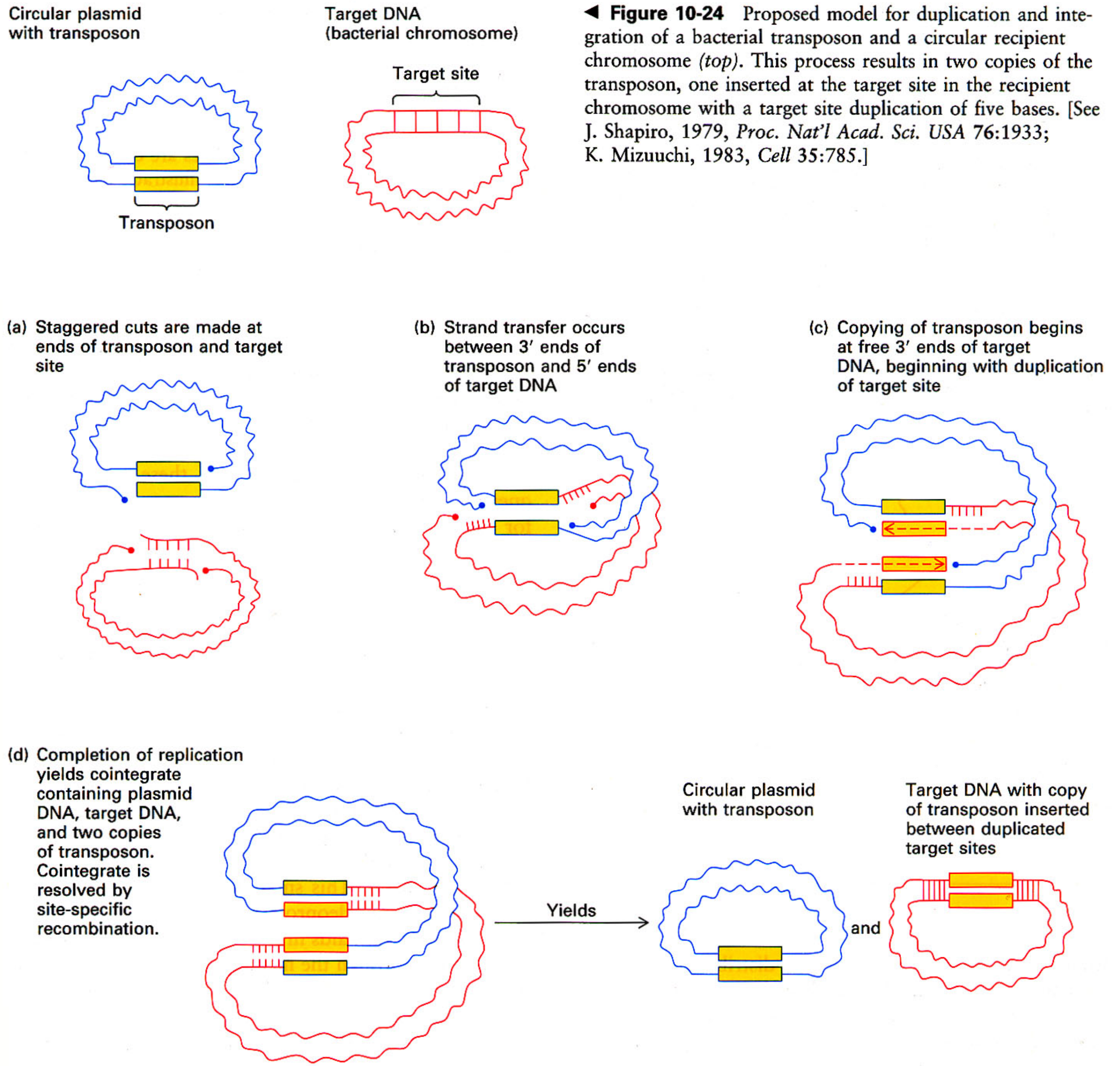


DNA-Transposons beim Menschen

Table 11 Number of copies and fraction of genome for classes of interspersed repeat

	Number of copies (× 1,000)	Total number of bases in the draft genome	Fraction of the draft genome sequence (%)	Number of families (subfamilies)
DNA elements	294	77.6	2.84	
hAT group				
MER1-Charlie	182	38.1	1.39	25 (50)
Zaphod	13	4.3	0.16	4 (10)
Tc-1 group				
MER2-Tigger	57	28.0	1.02	12 (28)
Tc2	4	0.9	0.03	1 (5)
Mariner	14	2.6	0.10	4 (5)
PiggyBac-like	2	0.5	0.02	10 (20)
Unclassified	22	3.2	0.12	7 (7)

Mechanismus der replikativen Transpososition



◀ **Figure 10-24** Proposed model for duplication and integration of a bacterial transposon and a circular recipient chromosome *(top)*. This process results in two copies of the transposon, one inserted at the target site in the recipient chromosome with a target site duplication of five bases. [See J. Shapiro, 1979, *Proc. Nat'l Acad. Sci. USA* 76:1933; K. Mizuuchi, 1983, *Cell* 35:785.]