Figure 1: A self-inactivating autonomous transposon vector for inducible transposition

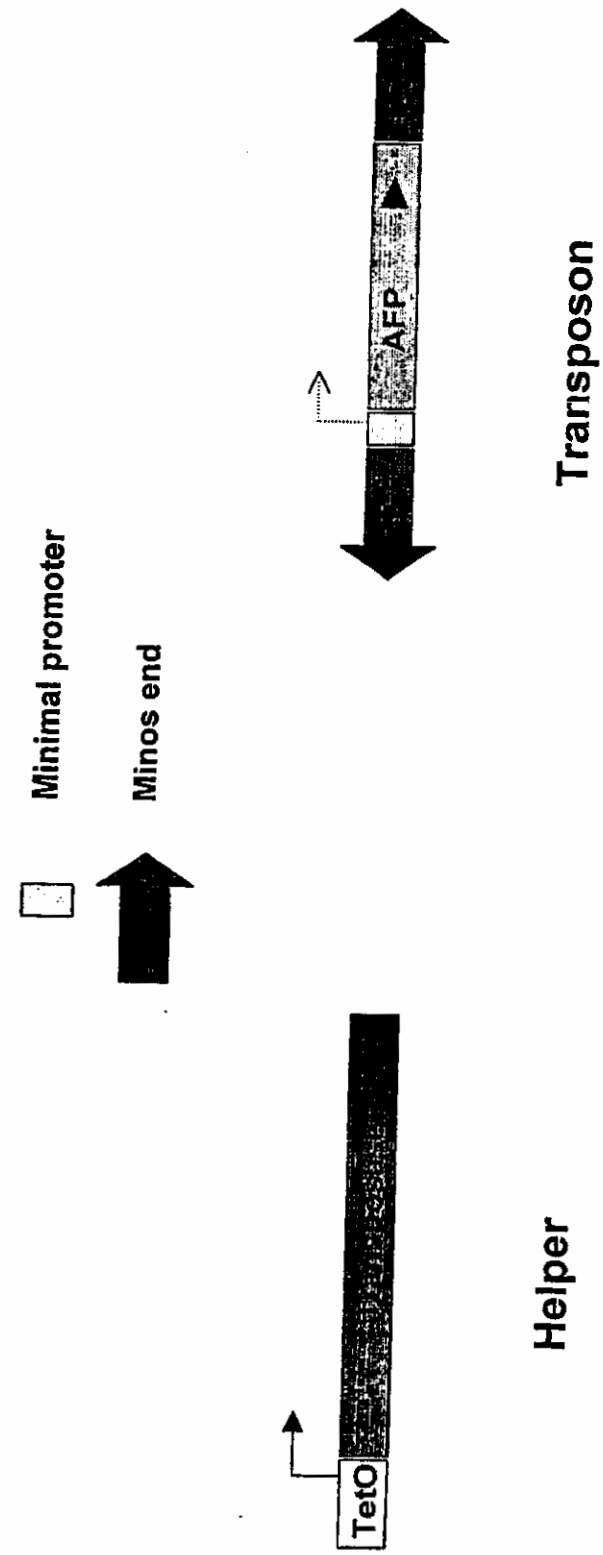


Figure 2. Inducible enhancer trap system

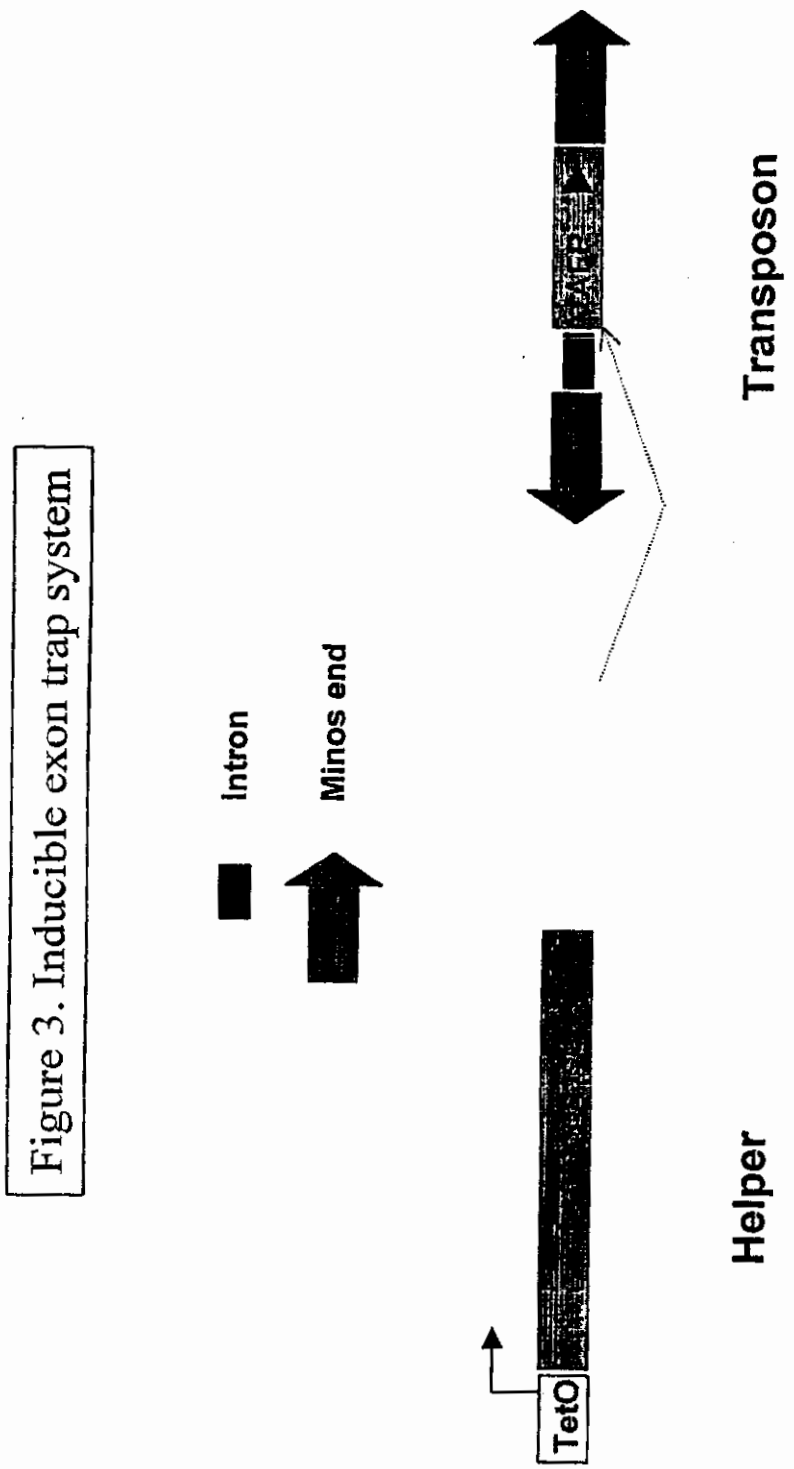


Figure 3. Inducible exon trap system

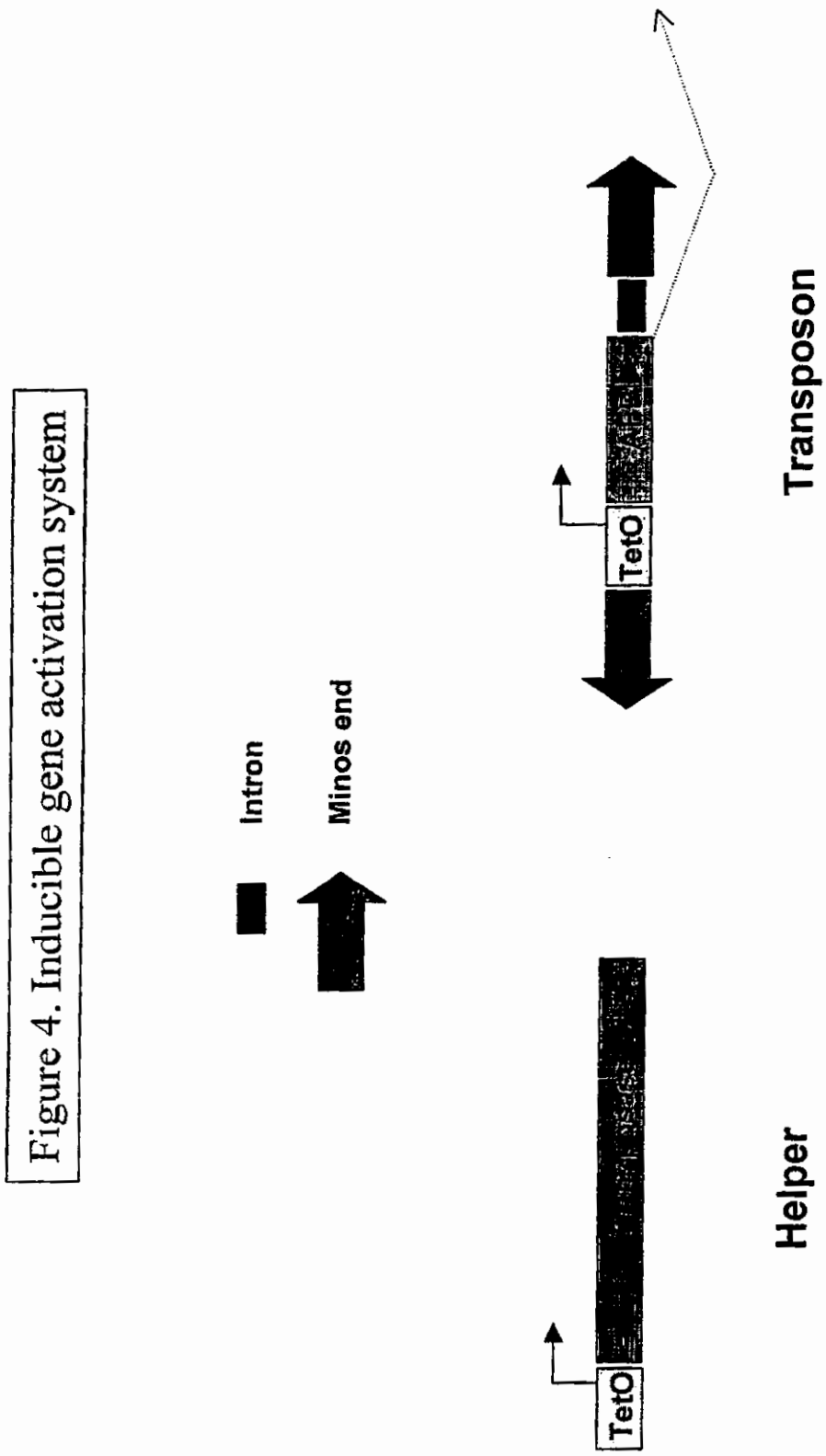
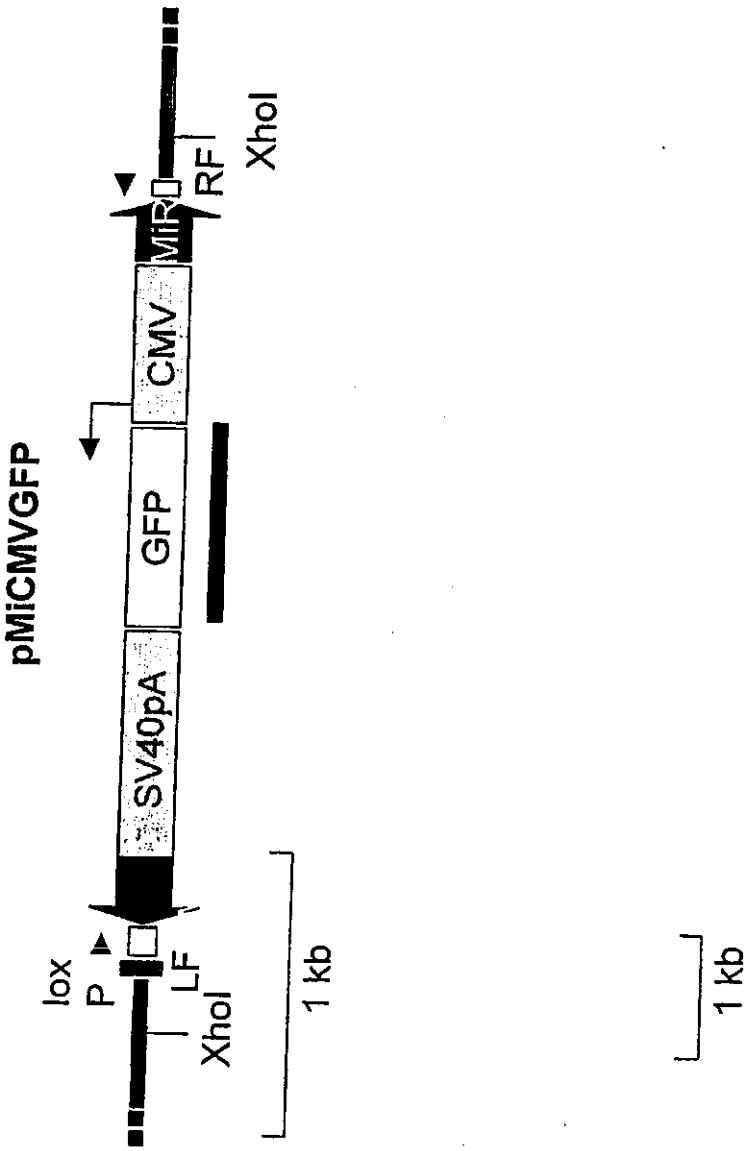
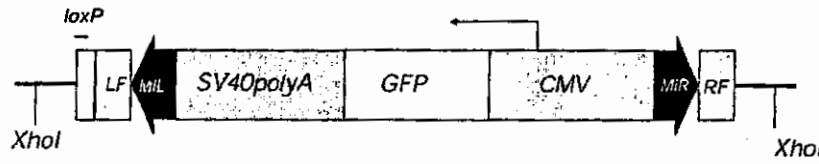


Figure 4. Inducible gene activation system

Figure 5



A


loxP
LF
MiL
SV40polyA
GFP
CMV
MiR
RF
XhoI
XhoI

B

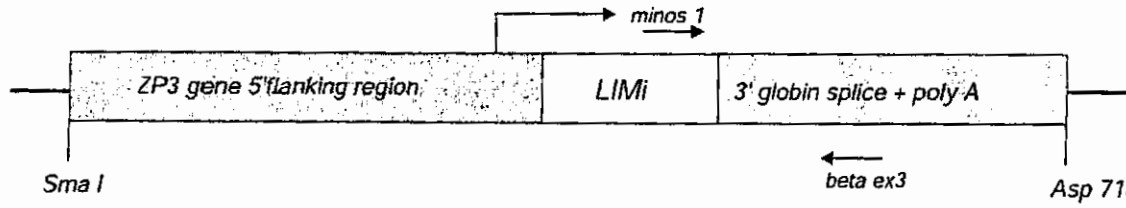

minos 1
ZP3 gene 5'flanking region
LIMi
3' globin splice + poly A
beta ex3
Sma I
Asp 718

FIGURE 6

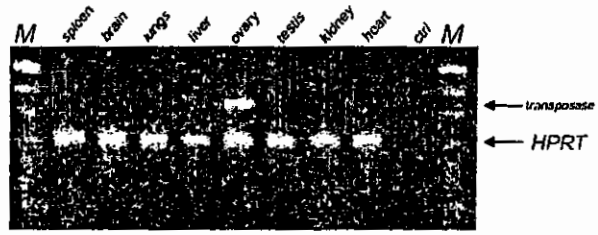

M
spleen
brain
lungs
liver
ovary
testis
kidney
heart
ctrl
M
transposase
HPRT

FIGURE 7

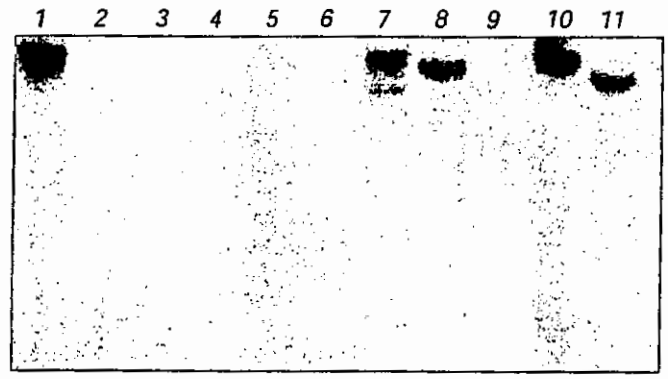
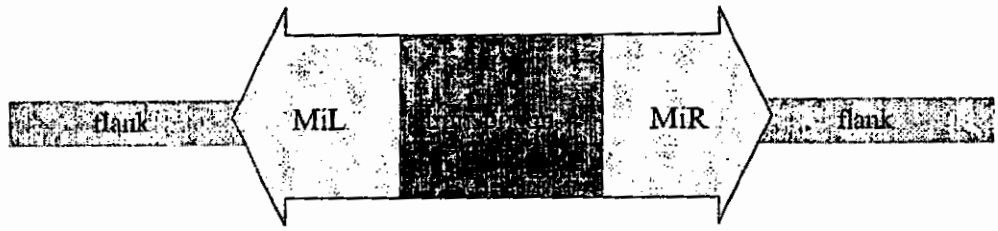


FIGURE 8



	GCACGTTAGCAGCTTCTacga		Original integration	tcgtAGAAAACGAAAAATATC
TE1	ATAGCTATAGTGGTAA	Ta cga	Chr 10 (GA_5J8B7W3239)	tcg tAGAGGTATGATTCCTAT
TE2	ATTTTTCTTACCTACA	Ta cga	Chr 7 (GA_5J8B7W8 9HK)	tcg tACATGTGCATATATGGC
TE3	ACACACAAAATAACAT	Ta cga	Chr 2 (GA_X5JB7W5LKQ)	tcg tATTCTATCTTCTTAATAT
TE4	TTAGACAGCTCAATGT	Ta cga	Chr 14 (GA_5J8B7W)	tcg tATCATTCATGATGCATT

FIGURE 9

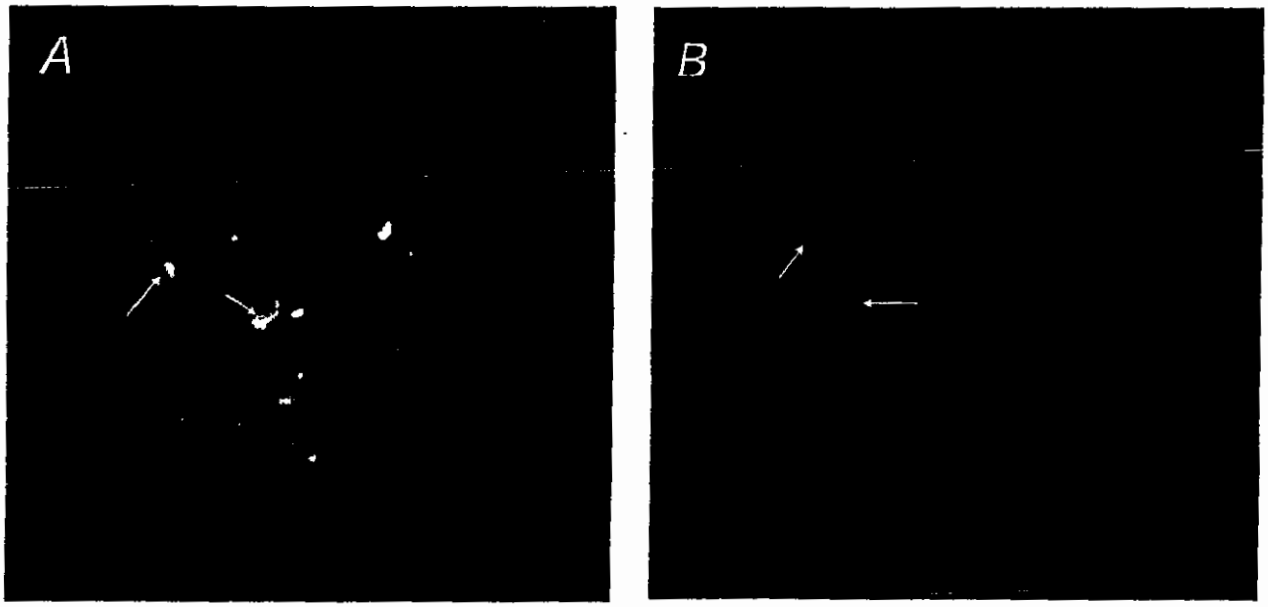
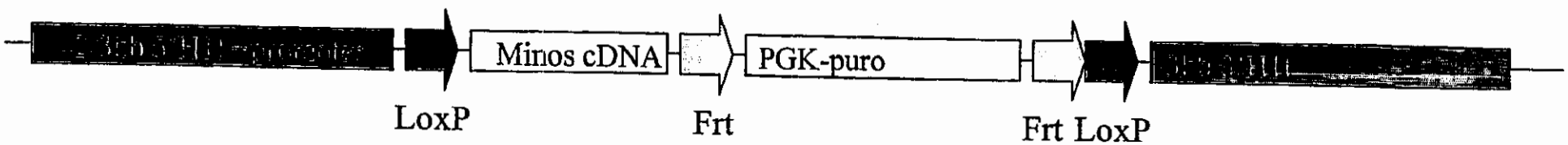


FIGURE 10

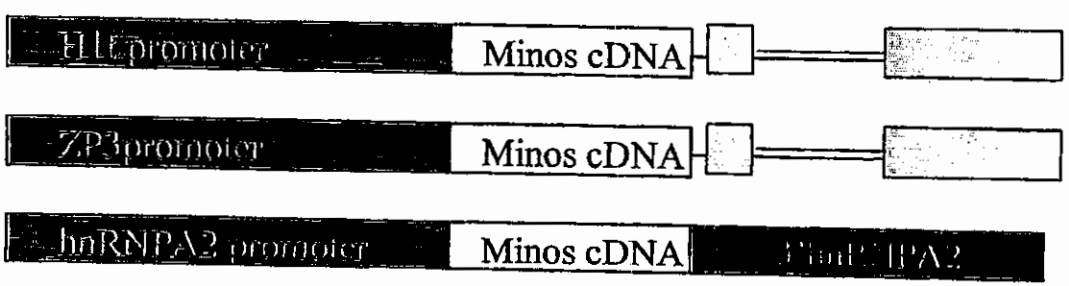
Figure 11

A



•Kozak sequence in constructs at the ATG
•*3' homology incudes TGA stem loop and Pu rich sequence

B



Testis specific expression

Egg specific expression

Ubiquitous expression

Figure 12

Trap construct for transgenic mice and /or cloning into retroviral plasmid



Dflank: small pieces of Drosophila DNA
RIR, LIR: Left and right inverted repeat sequence
TRE: Tet inducible CMV promoter
En2 SA: intron-splice acceptor
IRES/EGFP: internal ribosome binding site, flueorescent marker gene

In Vivo Transposition Technology with the male contributing the transposon, the female the transposase. Transposition takes place in the egg or early embryo.

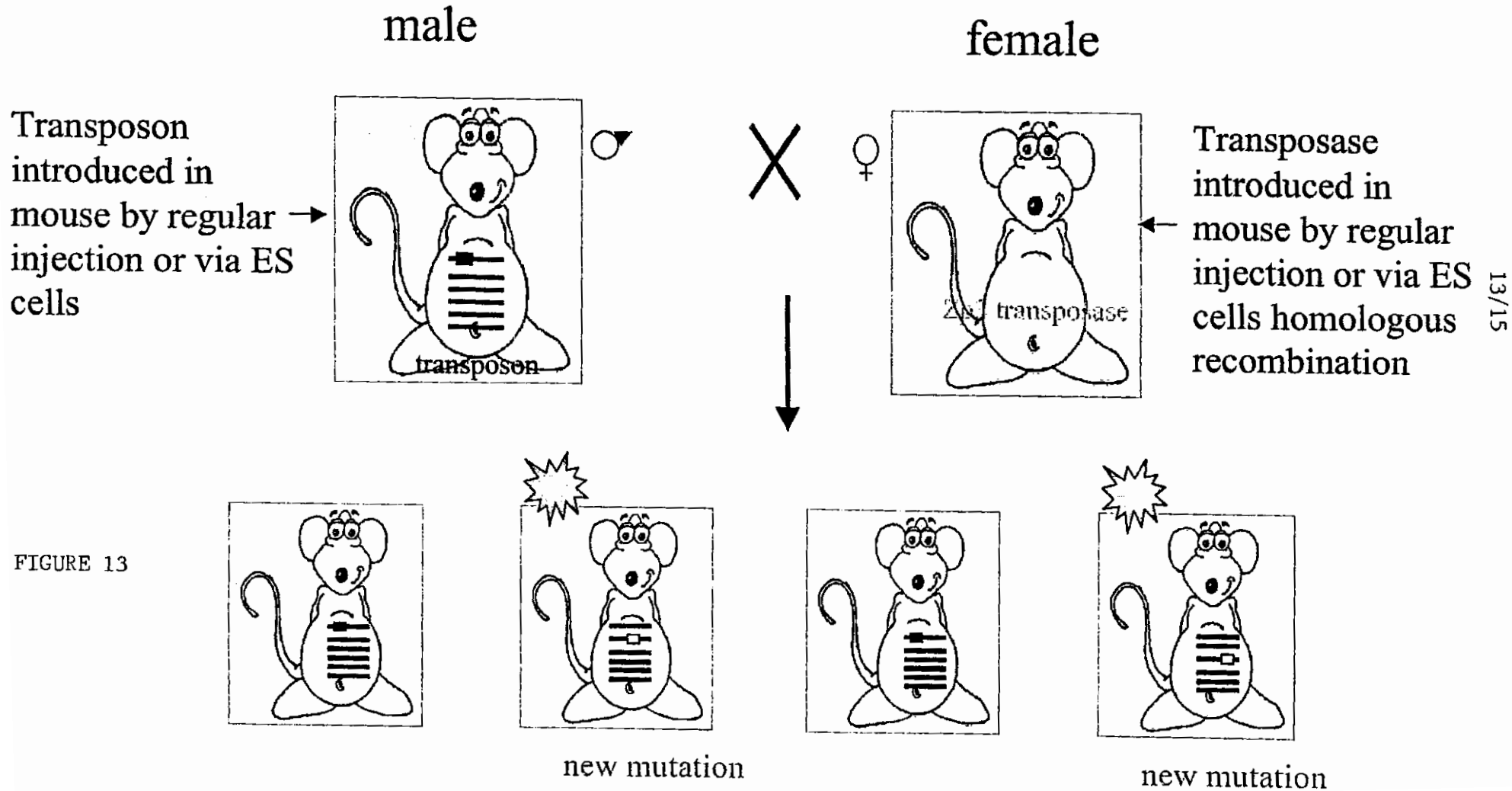


FIGURE 13

In Vivo Transposition Technology with the female contributing the transposon, the male the transposase. Transposition takes place in the sperm

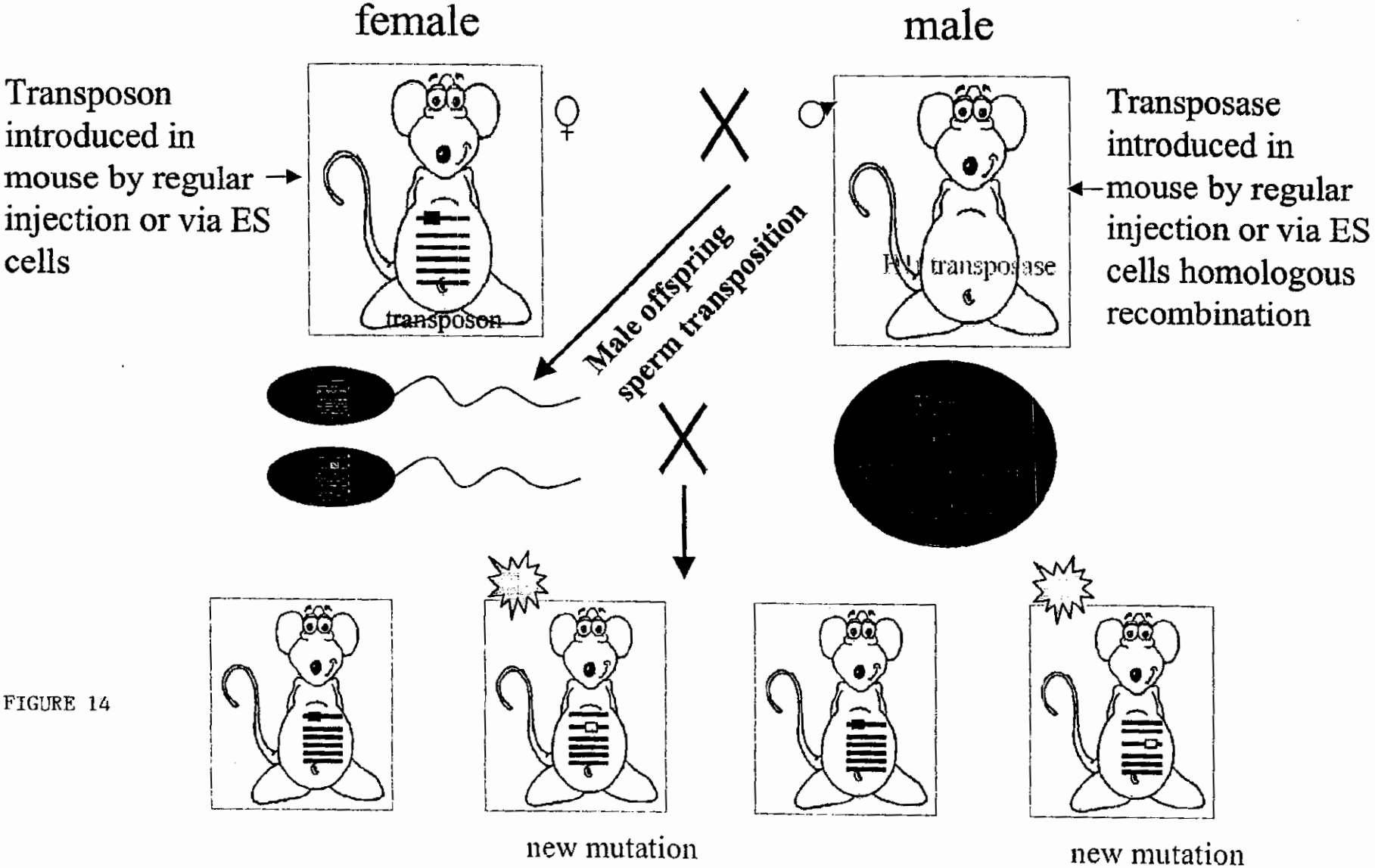


FIGURE 14

In Vivo Transposition using ubiquitous expression. Males and females are interchangeable with respect to the transposon or transposase

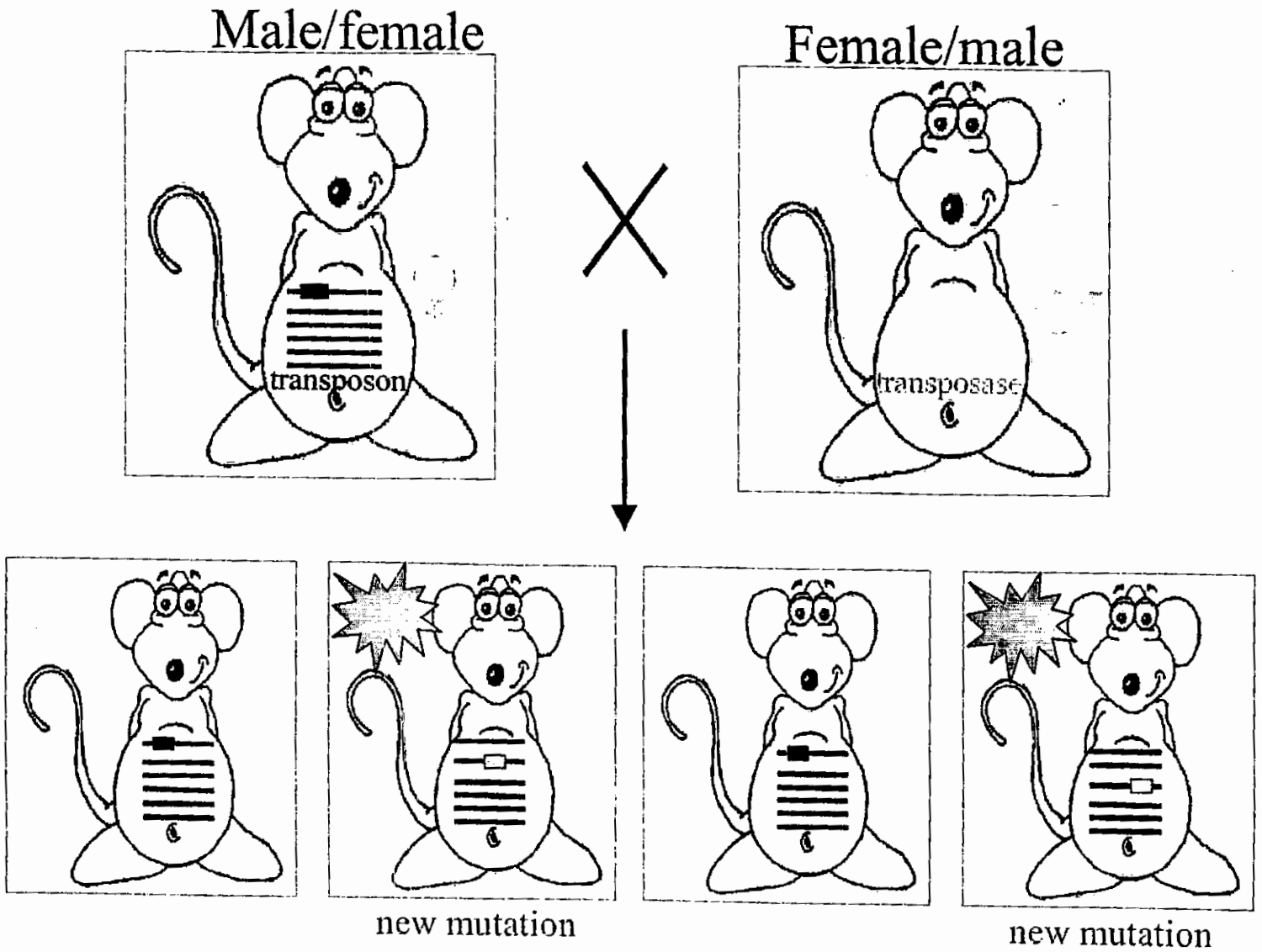


FIGURE 15