

## La mutation $A^y$ : une délétion



Conséquences :

1. **Agouti** est exprimé partout et en tout temps.
2. **Raly** n'est pas exprimé (→ létalité des homozygotes).

*Raly*

*agouti* ( $A^y$ )

Large deletion brings *Agouti* under *Raly* promoter, increases transcription of *Agouti*; inhibits eumelanin production

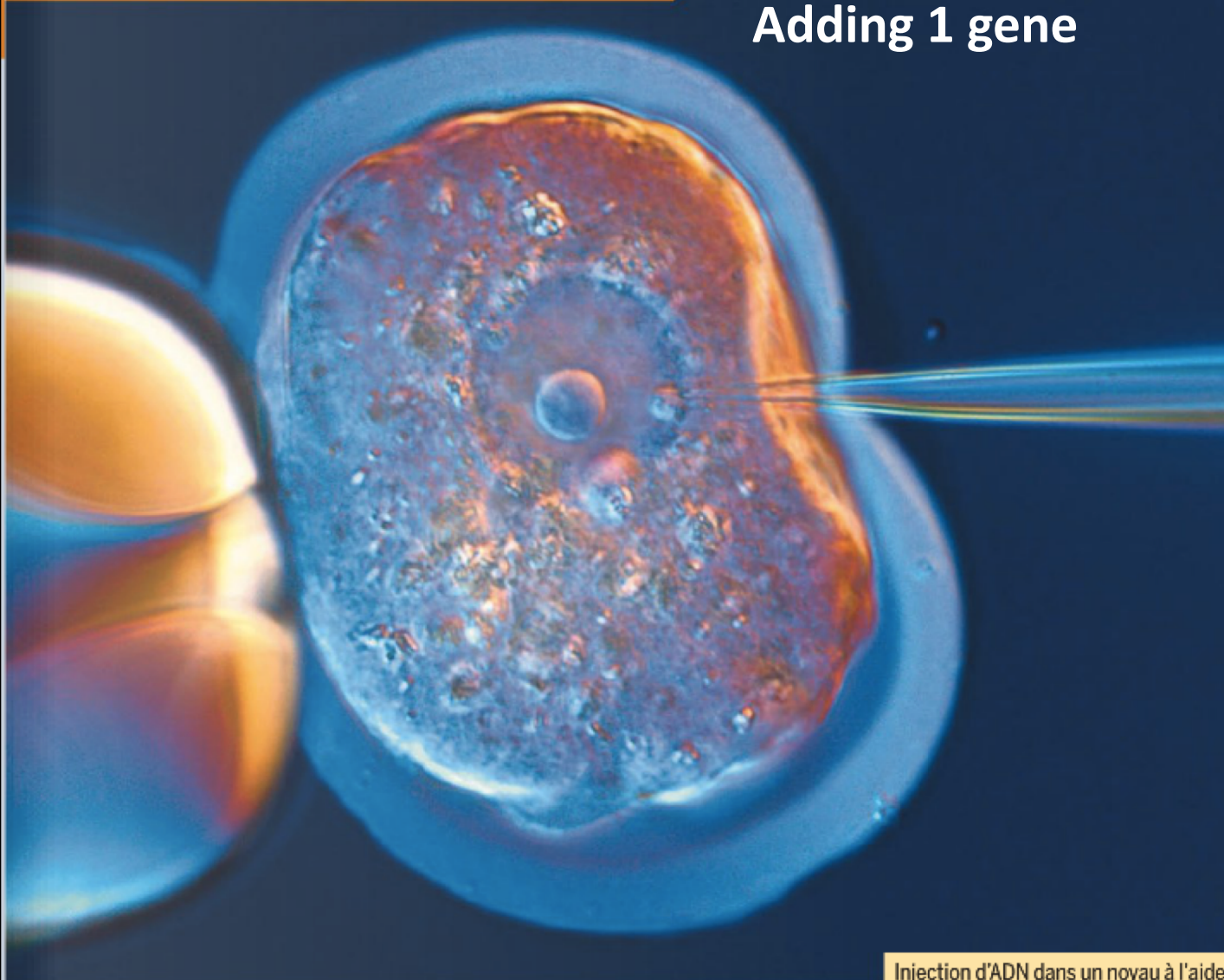
yellow fur ( $A^y/A$ )

agouti fur pattern ( $A/A$ )



## Adding 1 gene

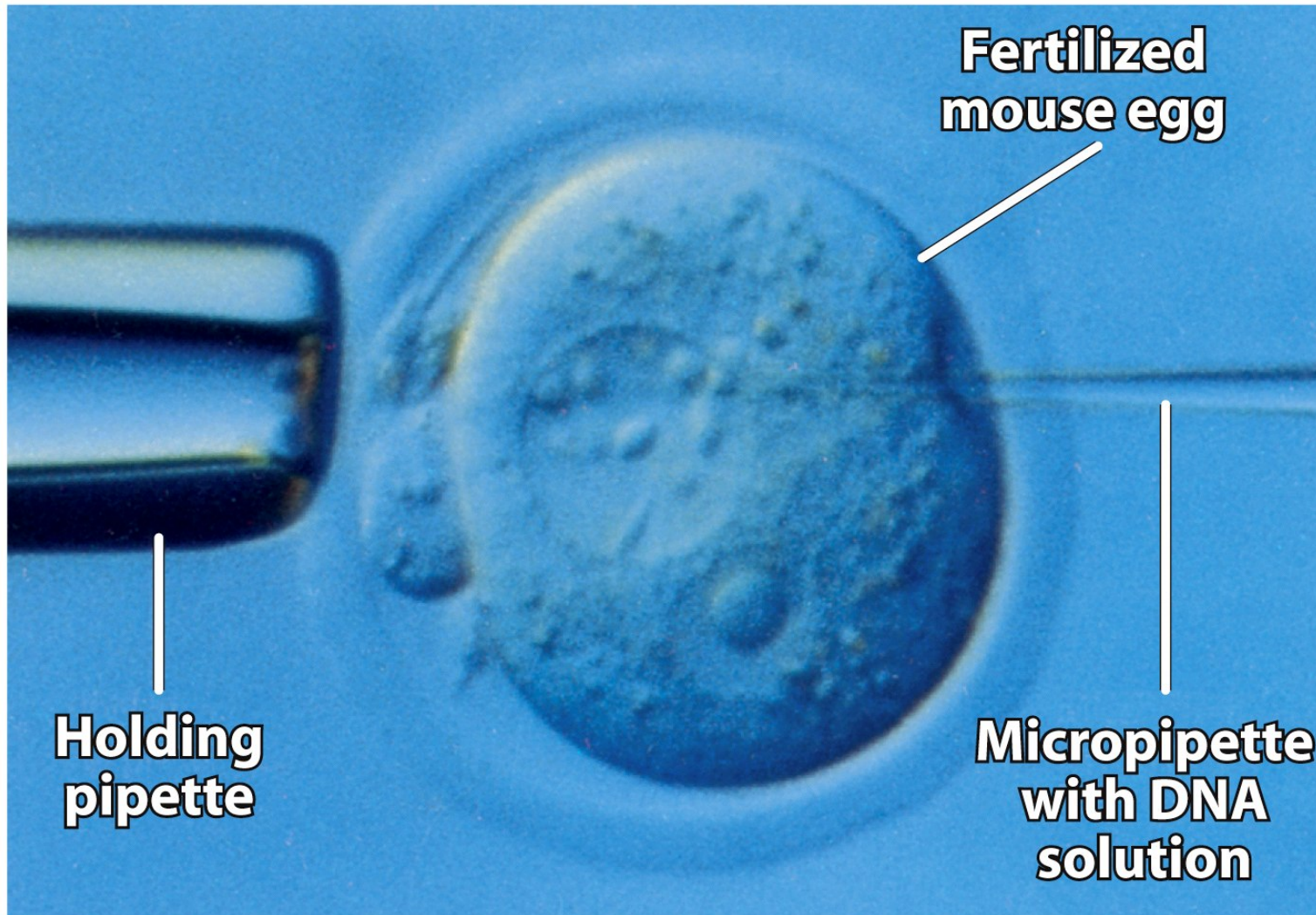
### chapitre 3



Bordas SVT 2<sup>de</sup>

Injection d'ADN dans un noyau à l'aide d'une micropipette.

Microinjection :



**Figure 5-31**  
*Biochemistry, Sixth Edition*  
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L'injection double le volume du pronoyau



Souris nouveaux-nées  
(nues)



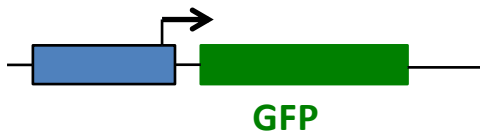
Souris adulte

Cardiac myocyte specific expression of a GFP transgene directed by a  $\beta$ -MyHC promoter in a transgenic mouse.

Le gène naturel:

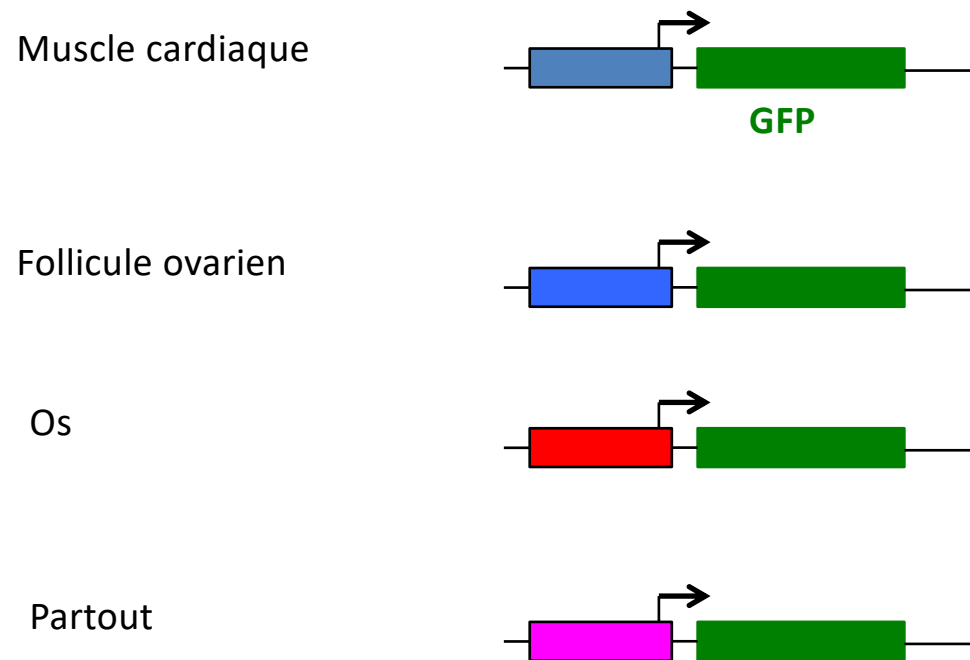


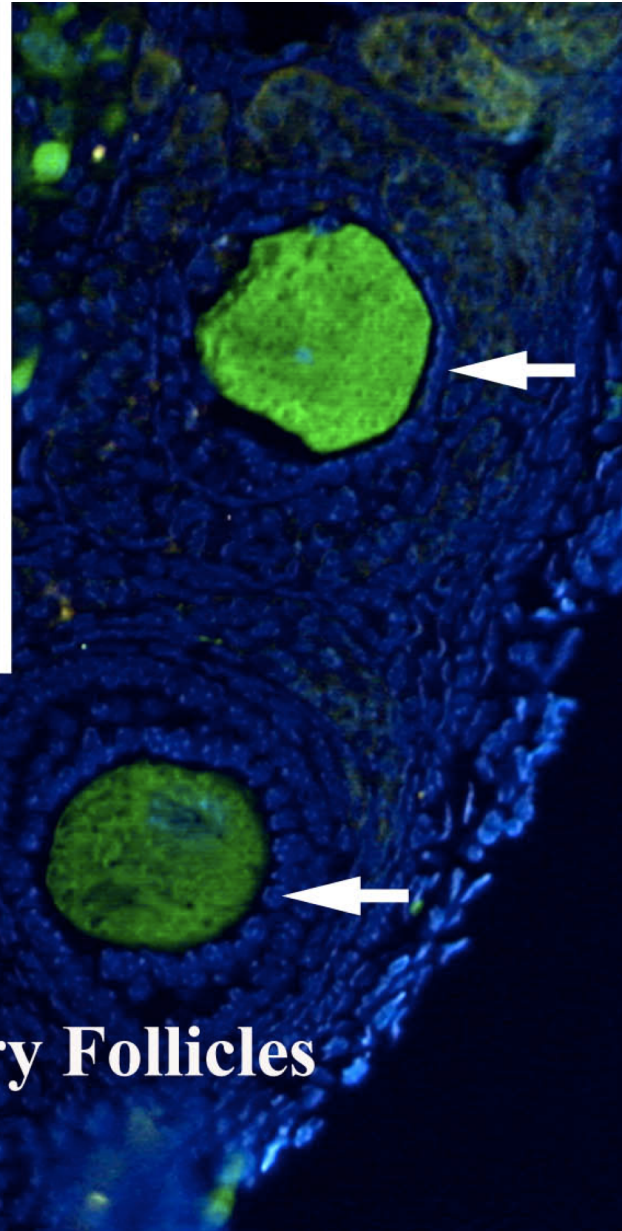
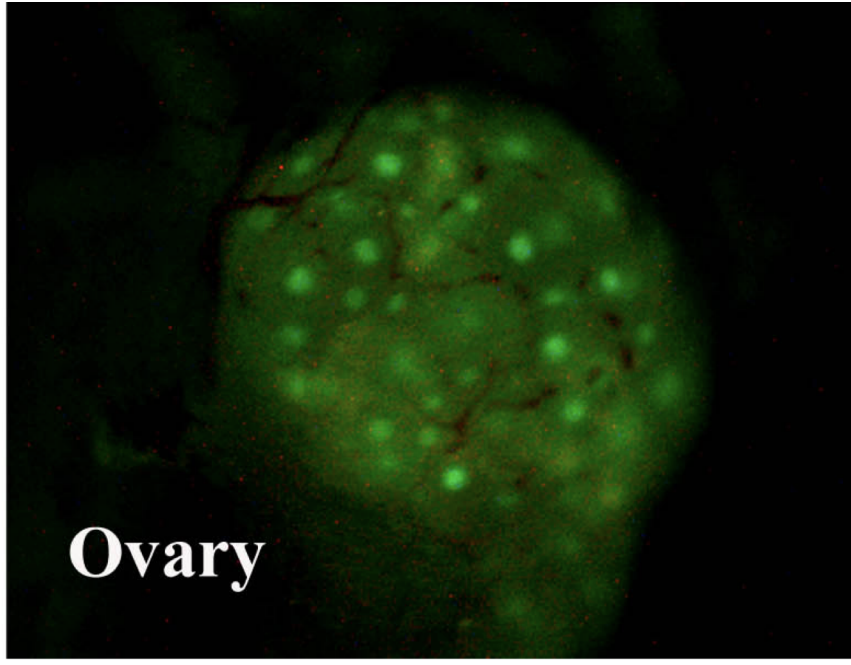
Le transgène:



# Une panoplie de promoteurs :

(promoteurs naturels)

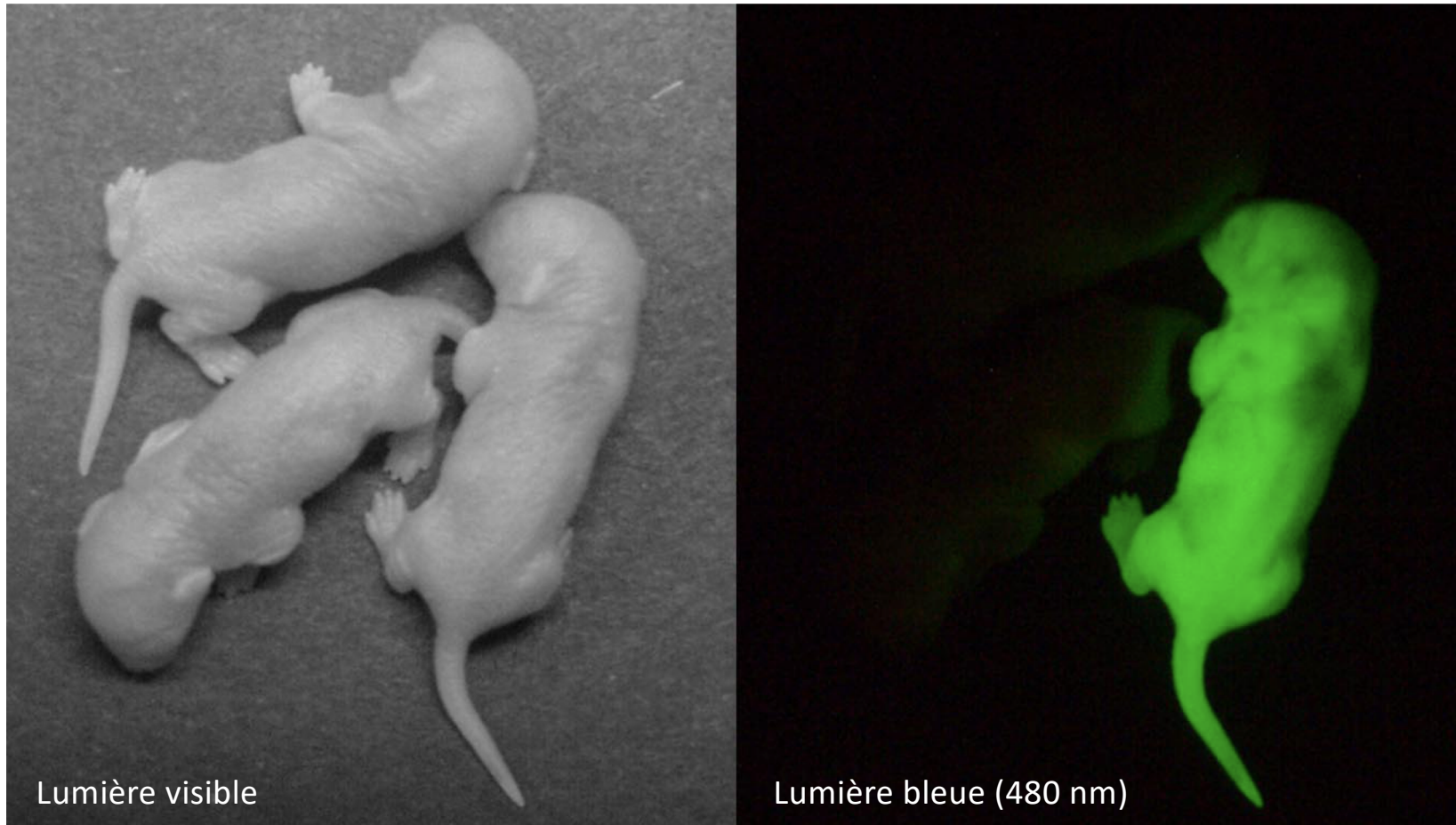




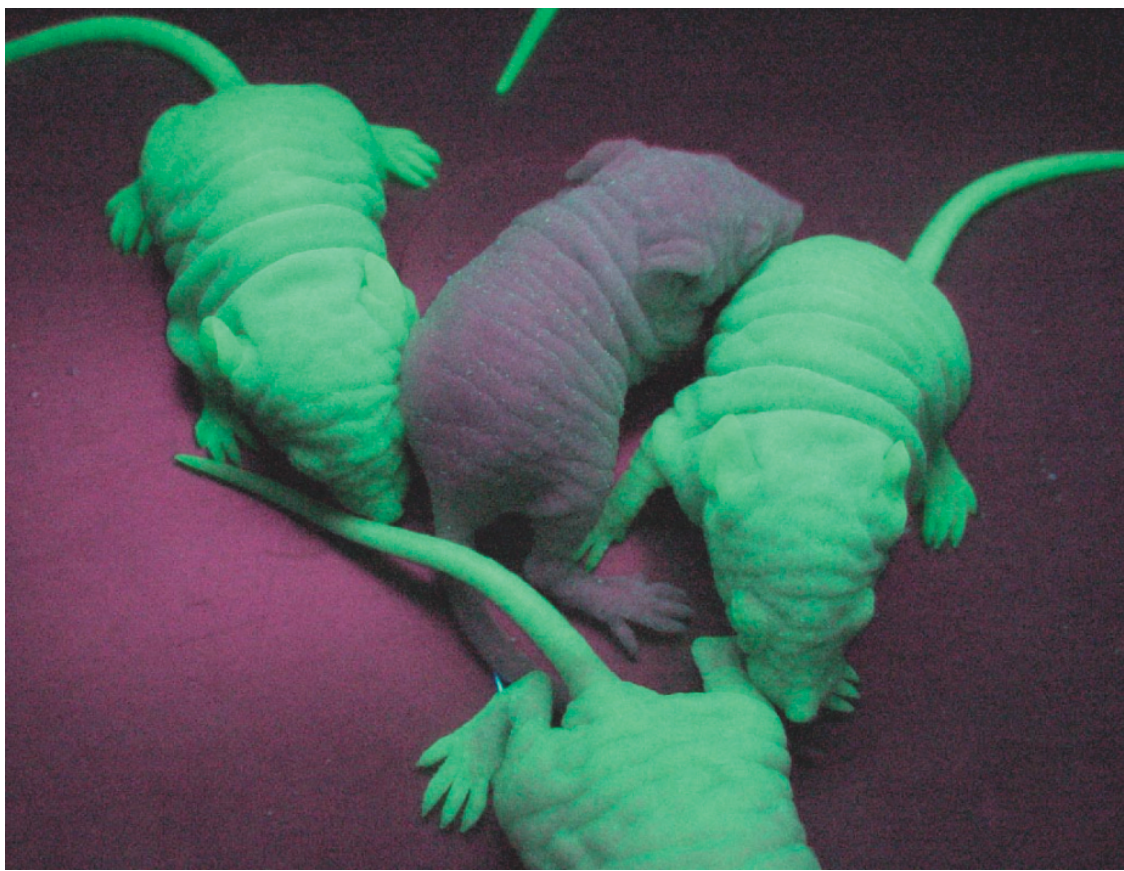


## GFP dans les os



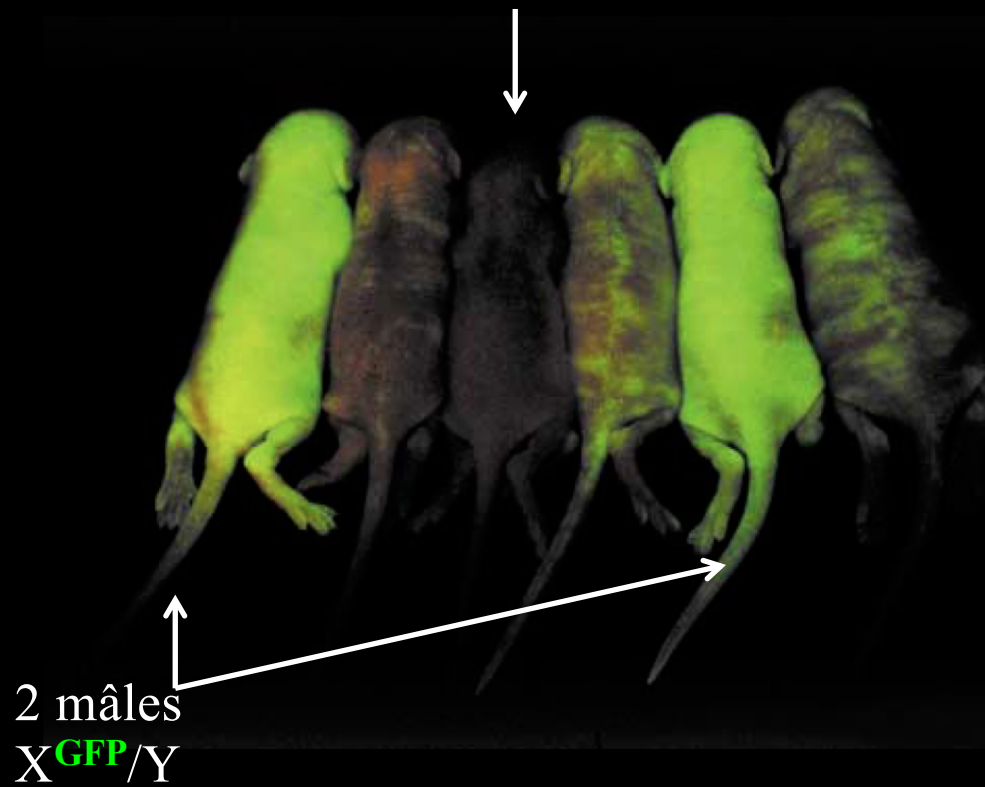


**Transmission of a GFP transgene directed by actin promoter from a transgenic mother to one of her 3 pups.**



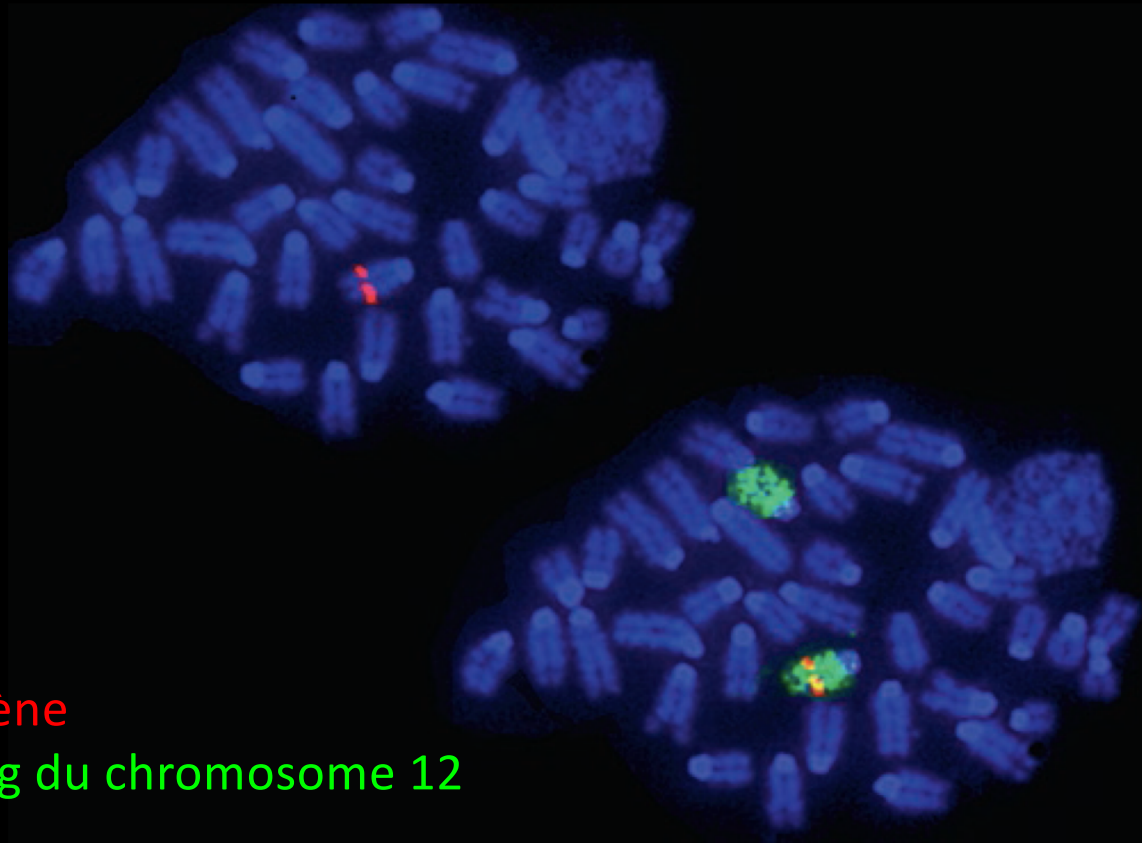
# Inactivation du X

non transgénique



FISH:

Souris transgénique



Transgène

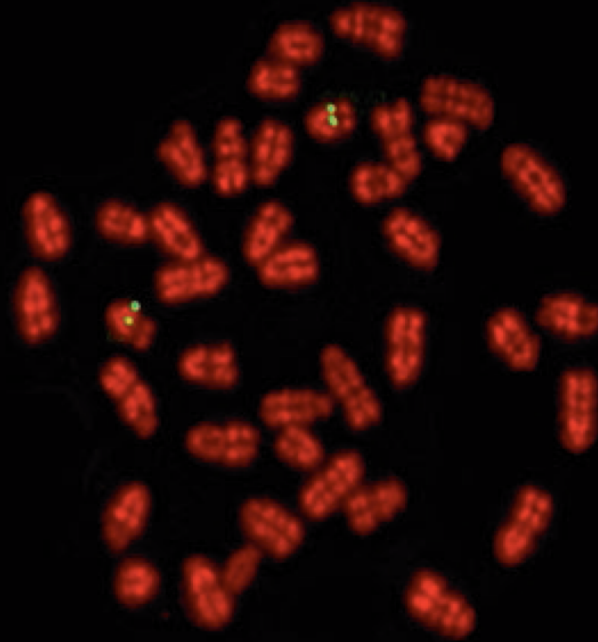
Painting du chromosome 12

Les souris fondatrices sont toujours hétérozygotes.

FISH:

Souris transgénique

Transgène



Souris homozygotes (  $\frac{1}{4}$  des F1 x F1).

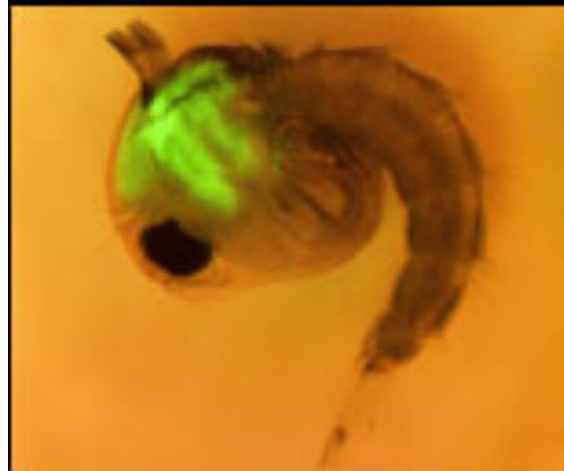
# On modifie génétiquement des moustiques

et d'autres insectes

Les muscles du vol  
qui font battre les  
ailes sont verts.



adulte



pupe

GFP is used as a proof of principle for gene transfer.





2008 : transgenic monkeys



des singes transgéniques en 2008