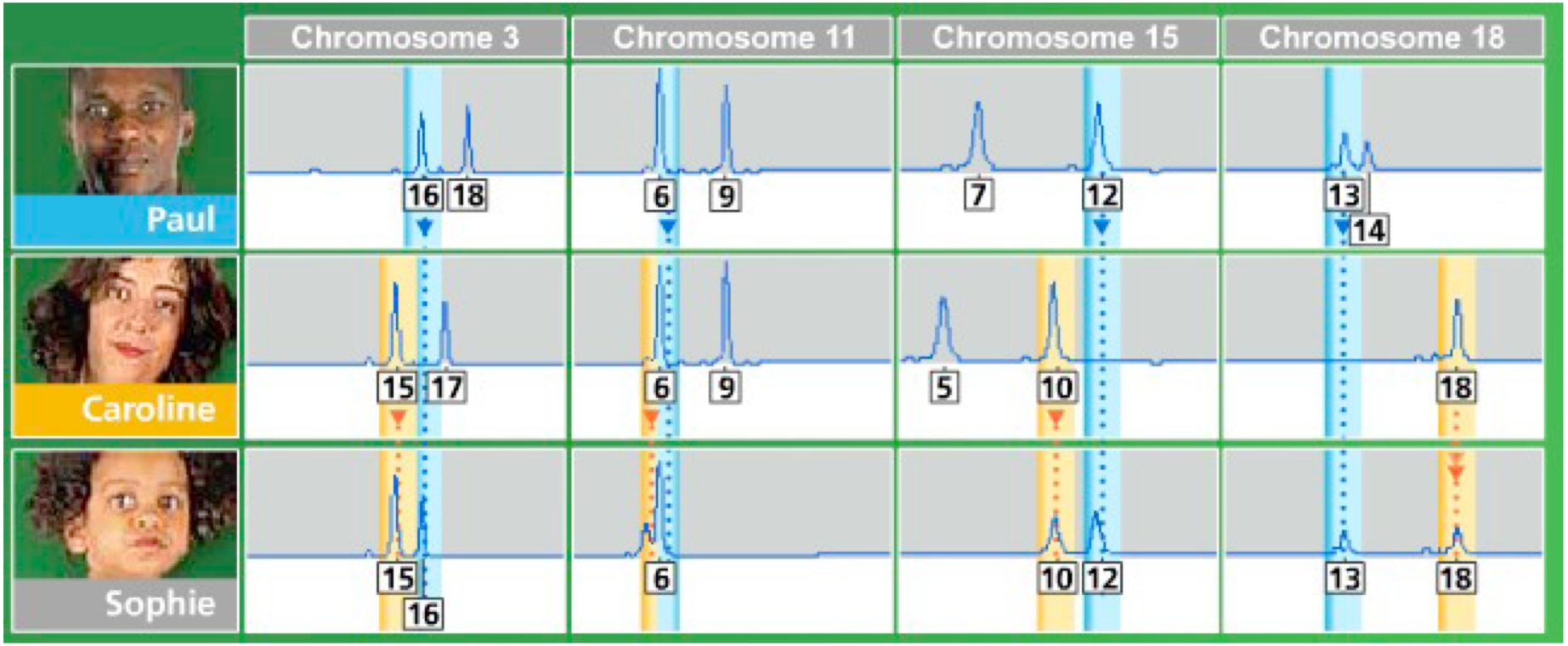
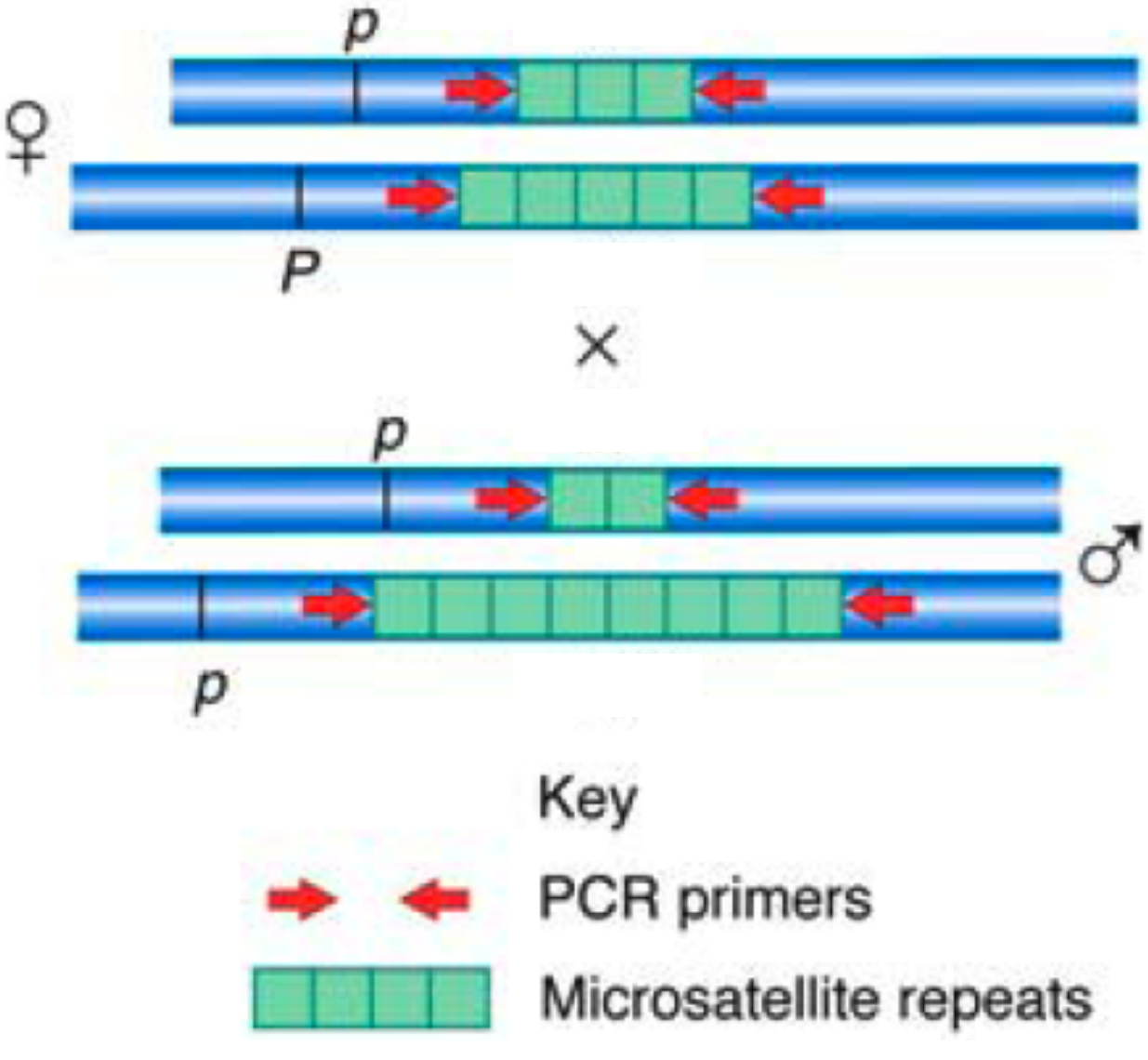
Test de paternité :



On dispose du profil ADN de l'enfant et de la mère.

1. On identifie l'allèle transmis par la mère
2. On en déduit quel allèle a été transmis par le père biologique

mère



3

5

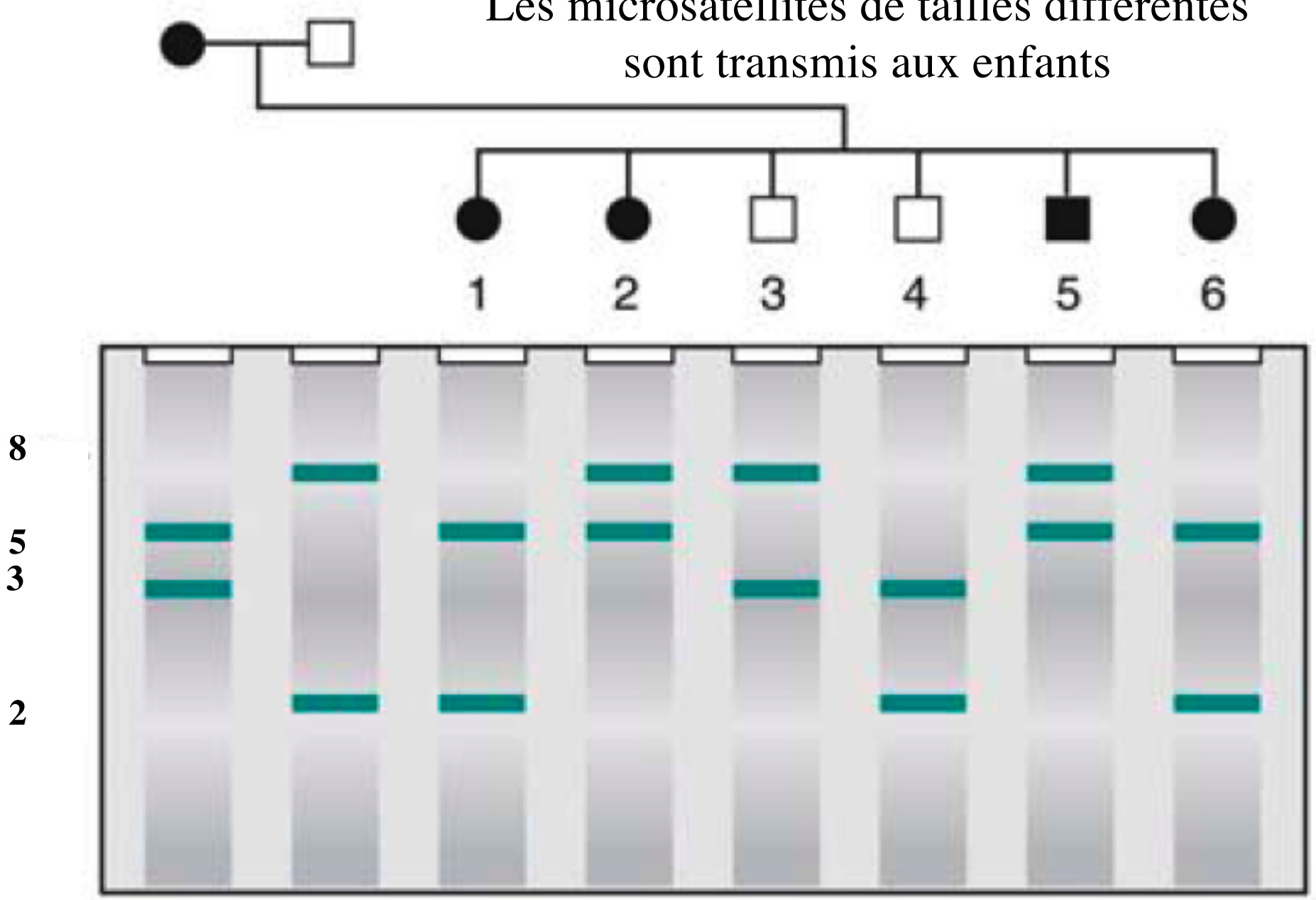
père

2

8

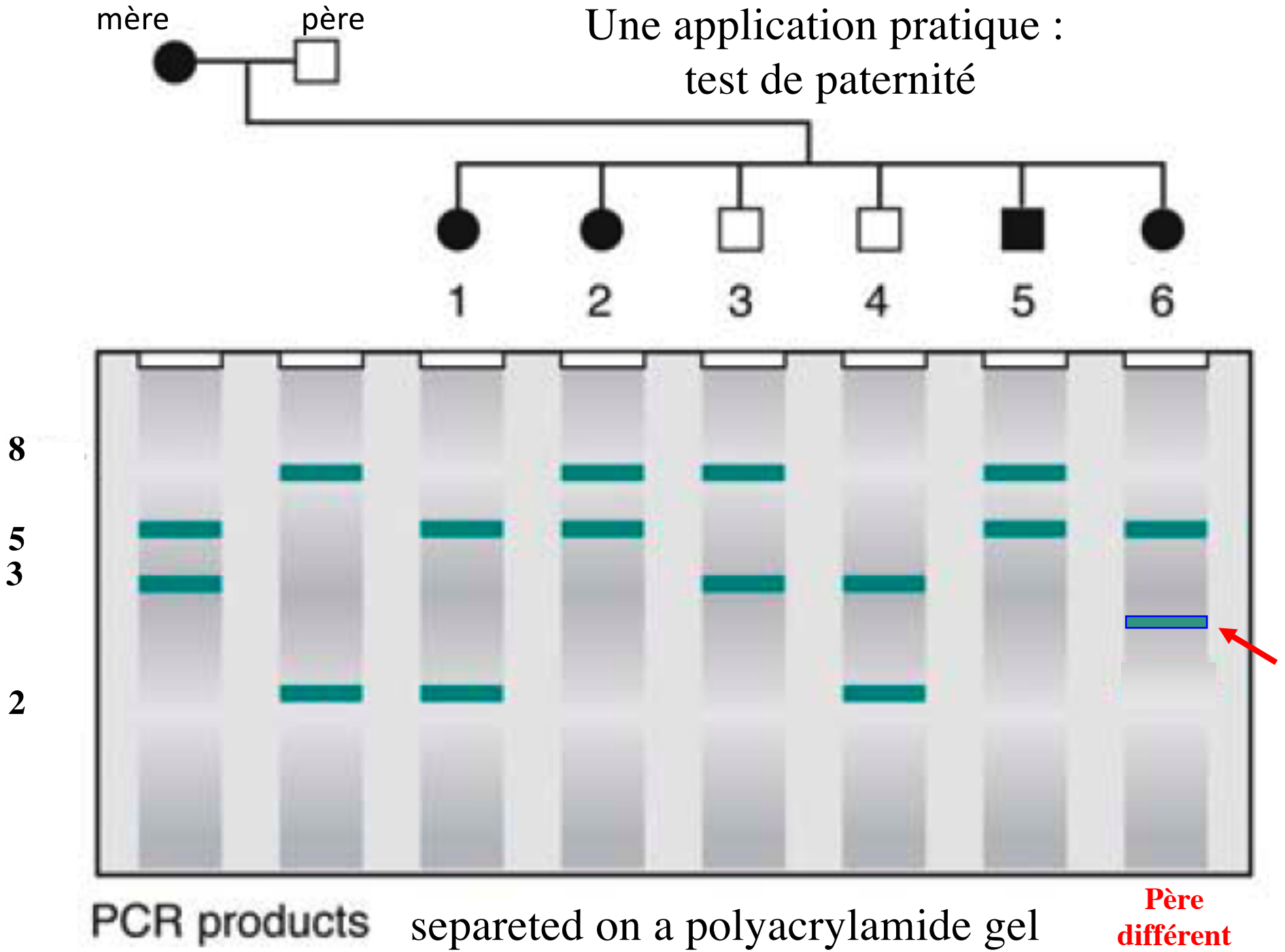
6 enfants naissent de ce couple

Les microsatellites de tailles différentes sont transmis aux enfants



separeted on a polyacrylamide gel

Une application pratique : test de paternité



La découverte de la ***disomie uniparentale*** chez cette fillette a été **purement fortuite**.

(à l'occasion d'un test de paternité)

Résultat du test :
9 microsatellites :
père compatible
1 microsatellite :
père incompatible

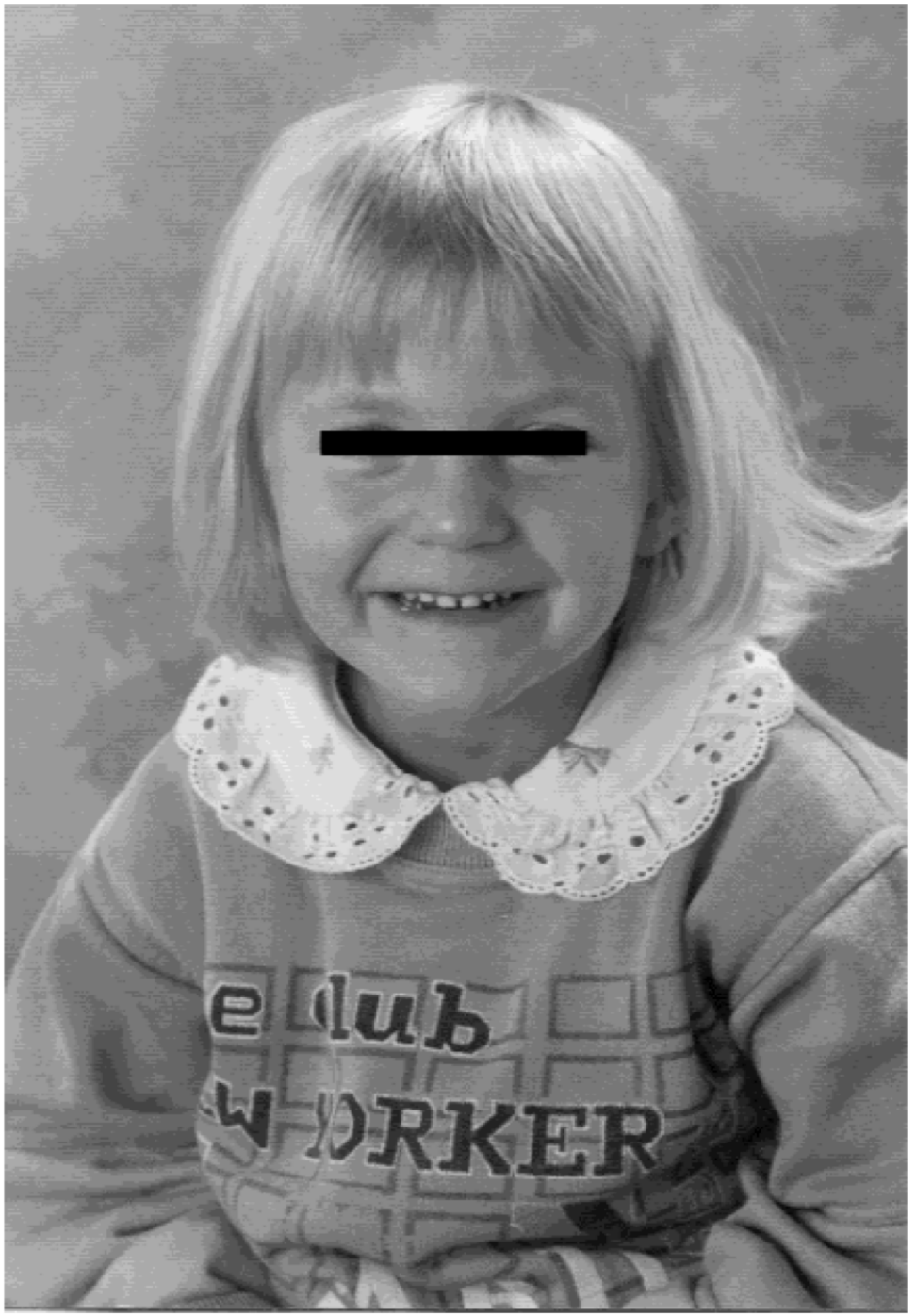
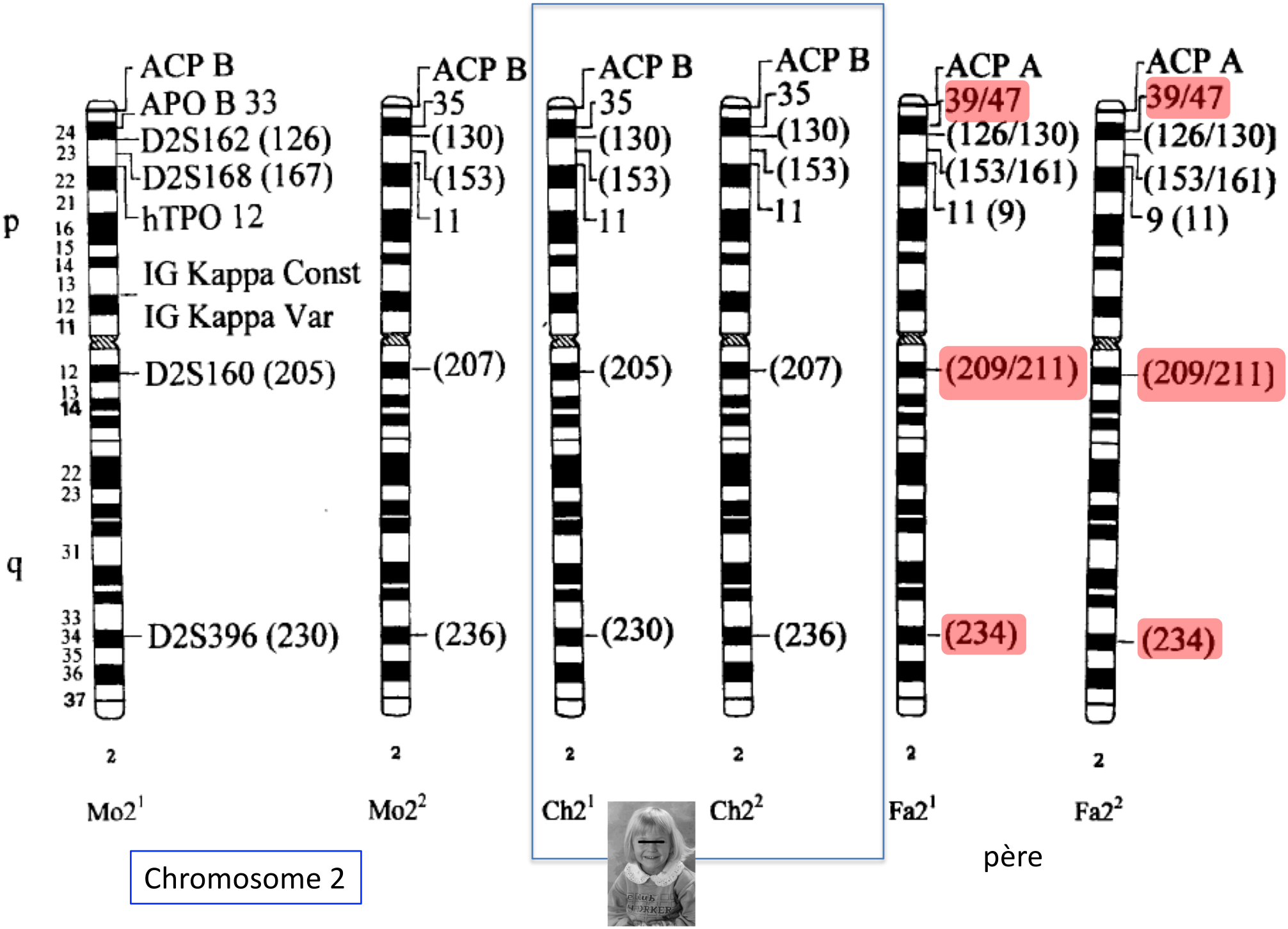


Fig. 1. The proposita with maternal disomy UPD of chromosome 2.


ACP B
APO B 33
D2S162 (126)
D2S168 (167)
hTPO 12
IG Kappa Const
IG Kappa Var
D2S160 (205)
D2S396 (230)
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q
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36
37
2
Mo2¹
ACP B
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(130)
(153)
11
(207)
(236)
2
Mo2²
ACP B
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(130)
(153)
11
(205)
(230)
2
Ch2¹
ACP B
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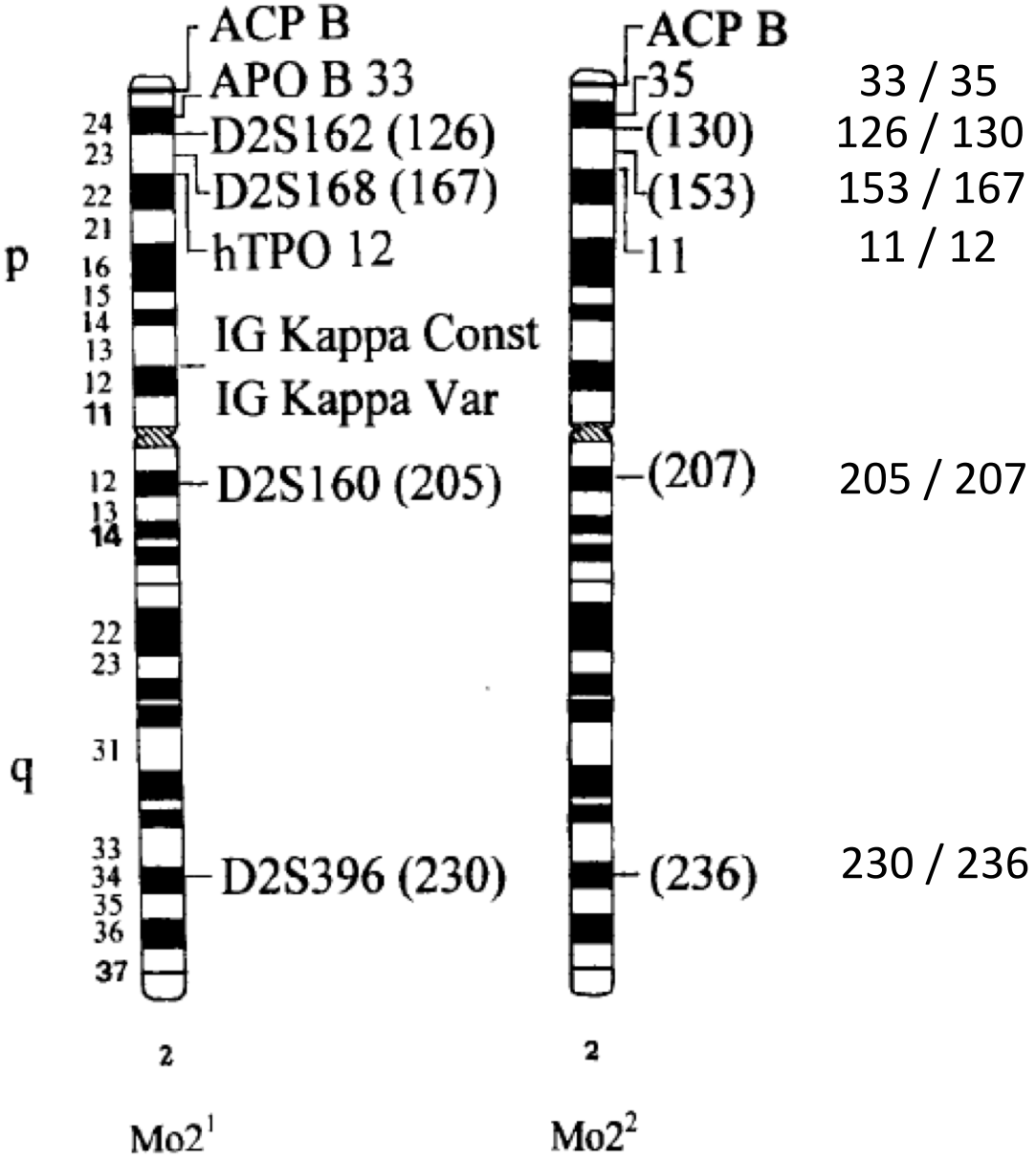
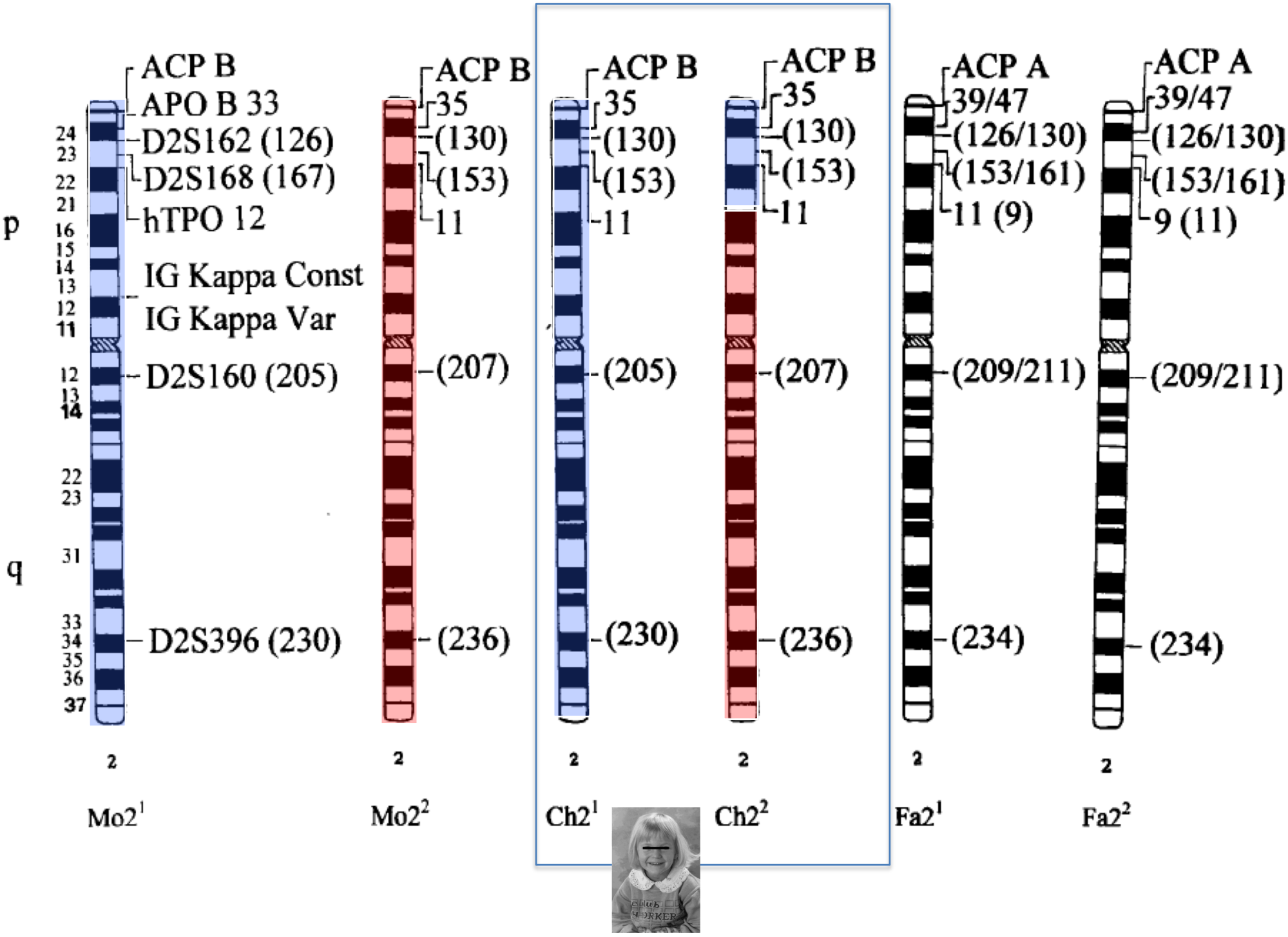
(130)
(153)
11
(207)
(236)
2
Ch2²
ACP A
39/47
(126/130)
(153/161)
11 (9)
(209/211)
(234)
2
Fa2¹
ACP A
39/47
(126/130)
(153/161)
9 (11)
(209/211)
(234)
2
Fa2²
Chromosome 2
père

Notez que la mère est hétérozygote pour 6 microsatellites



Chromosome 2


ACP B
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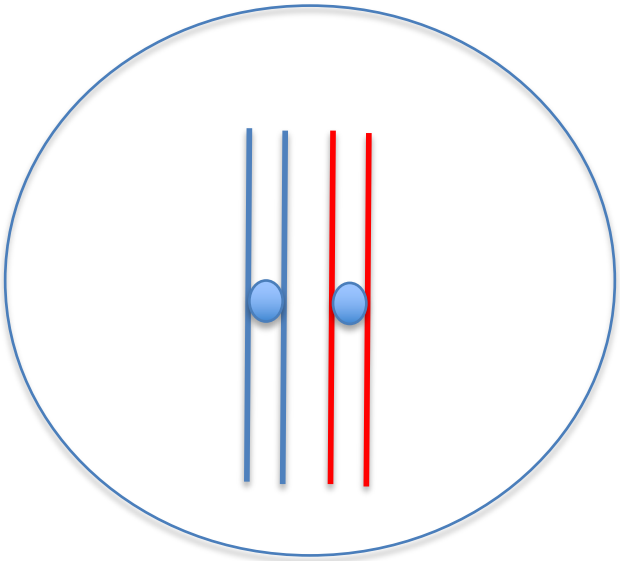
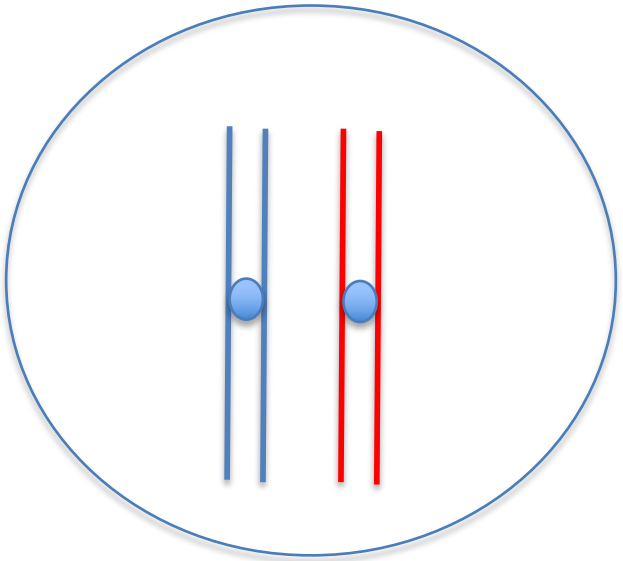
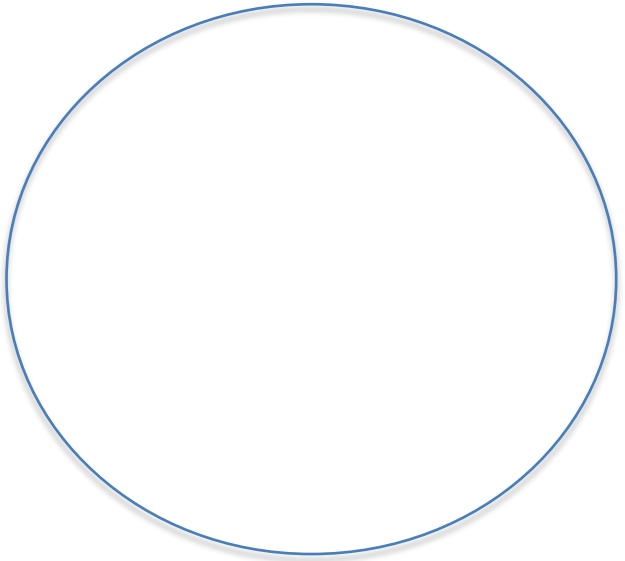


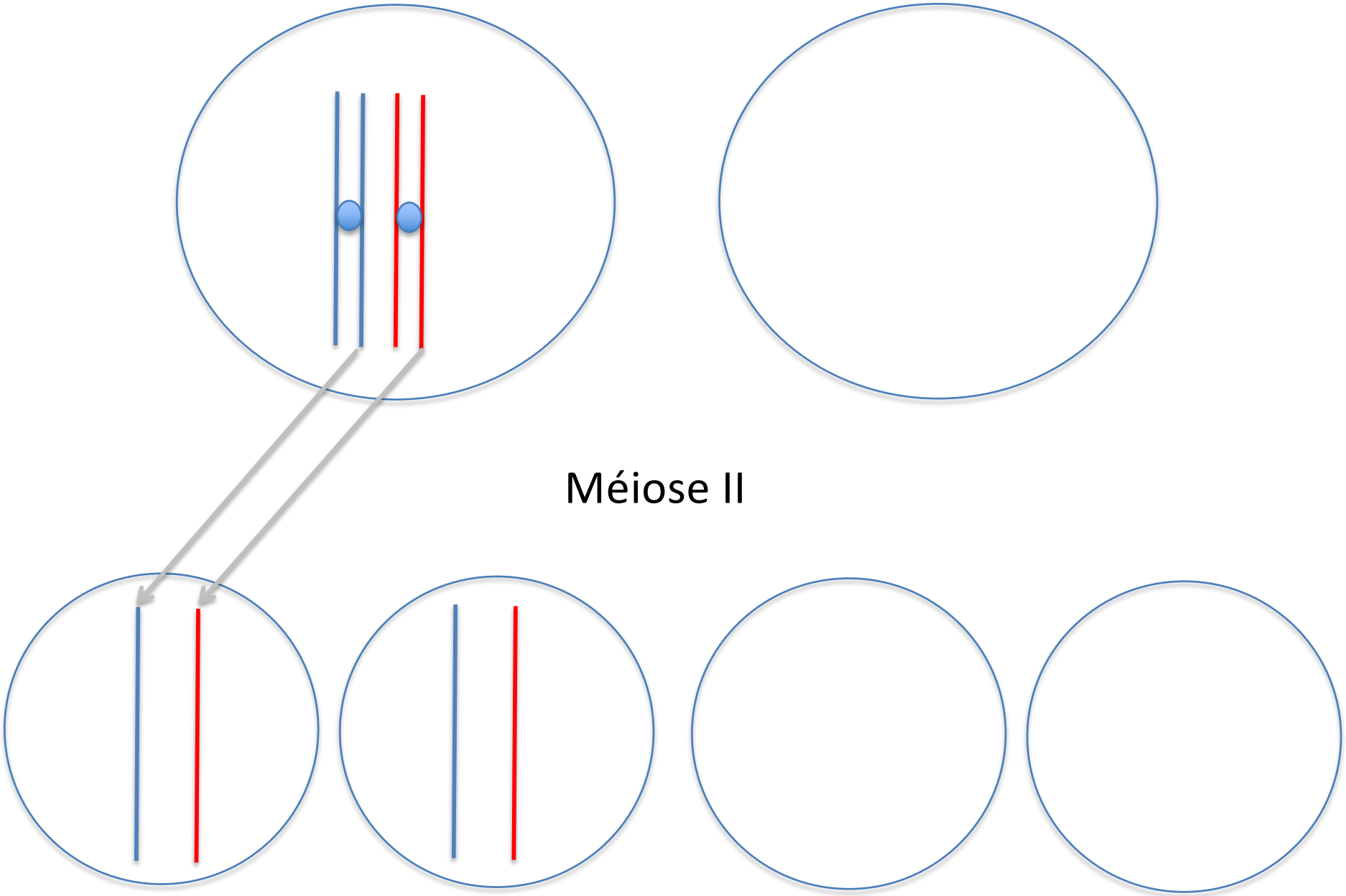
Non disjonction durant
la méiose I

Méiose I

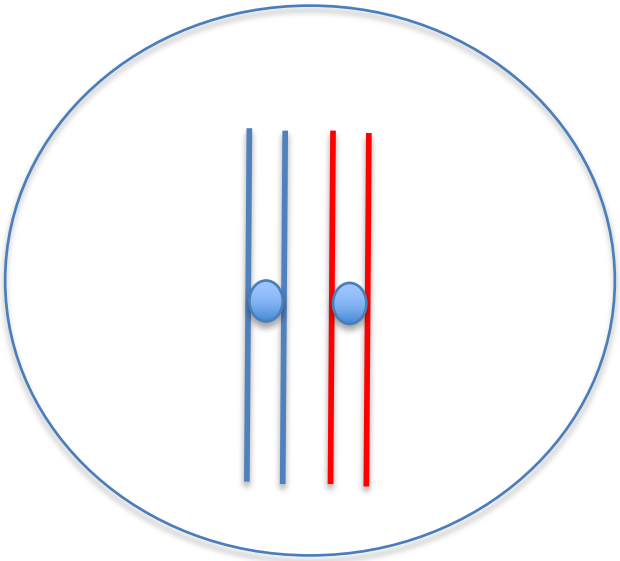




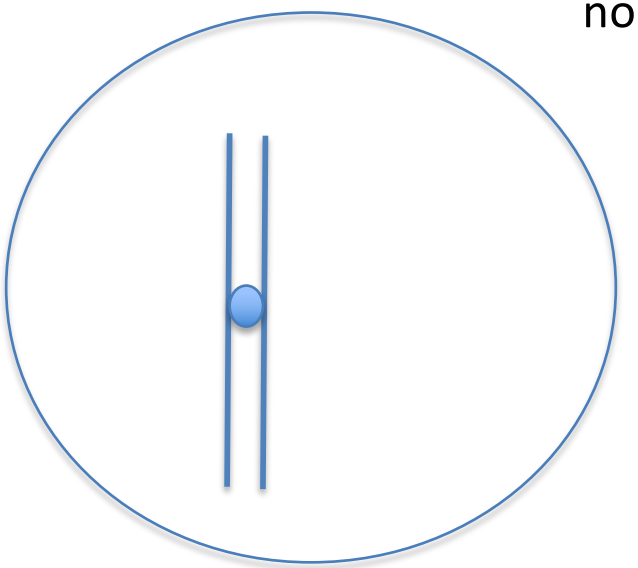
Pas de chromosome 2

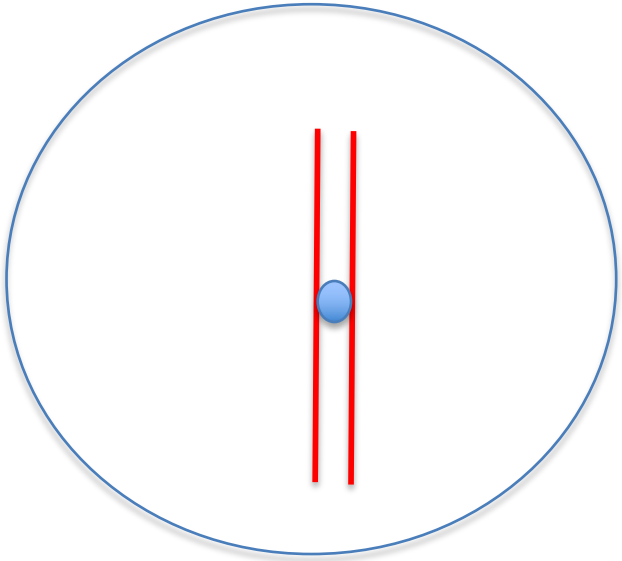


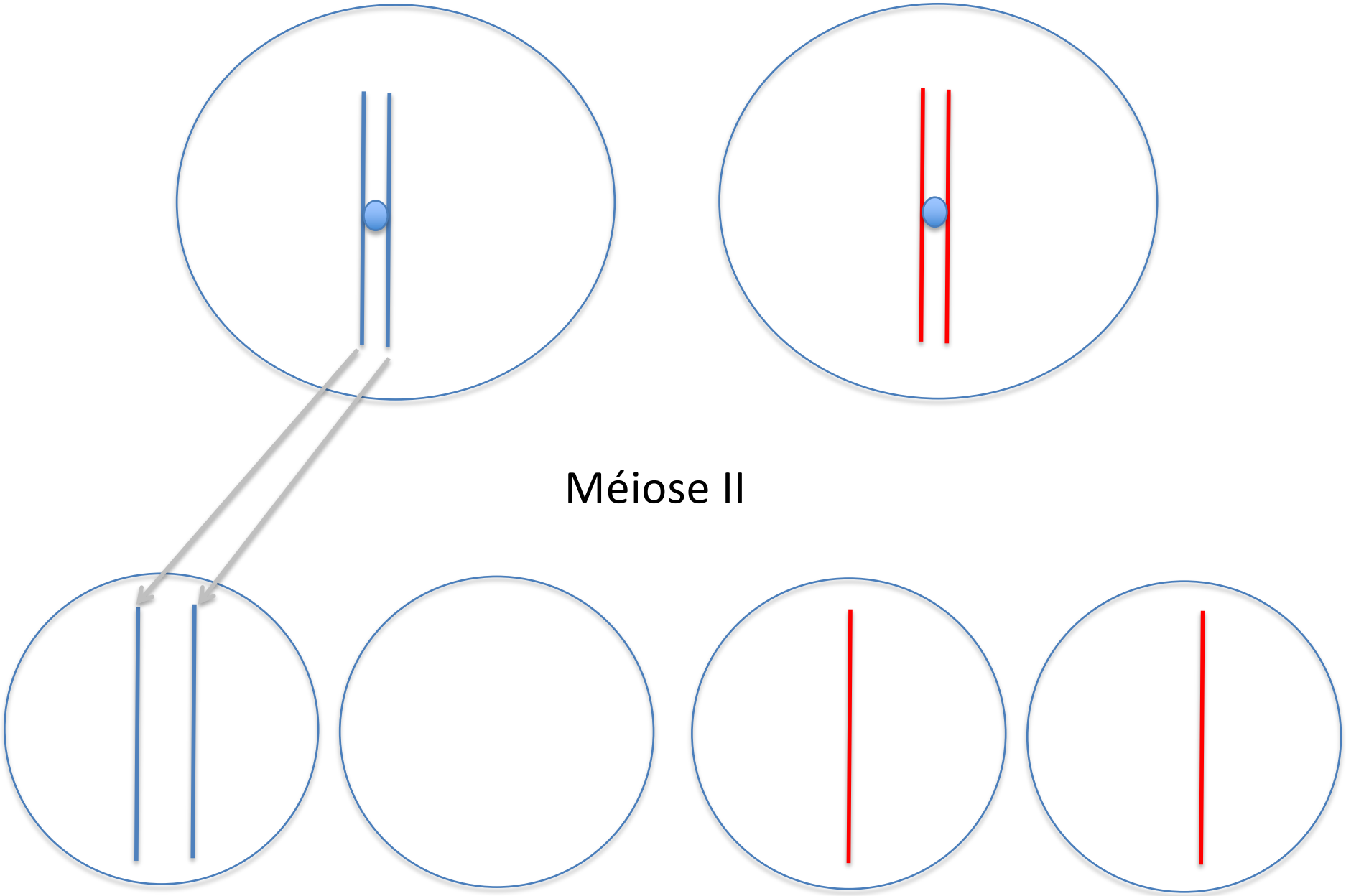
Hétérozygote pour tout
le chromosome



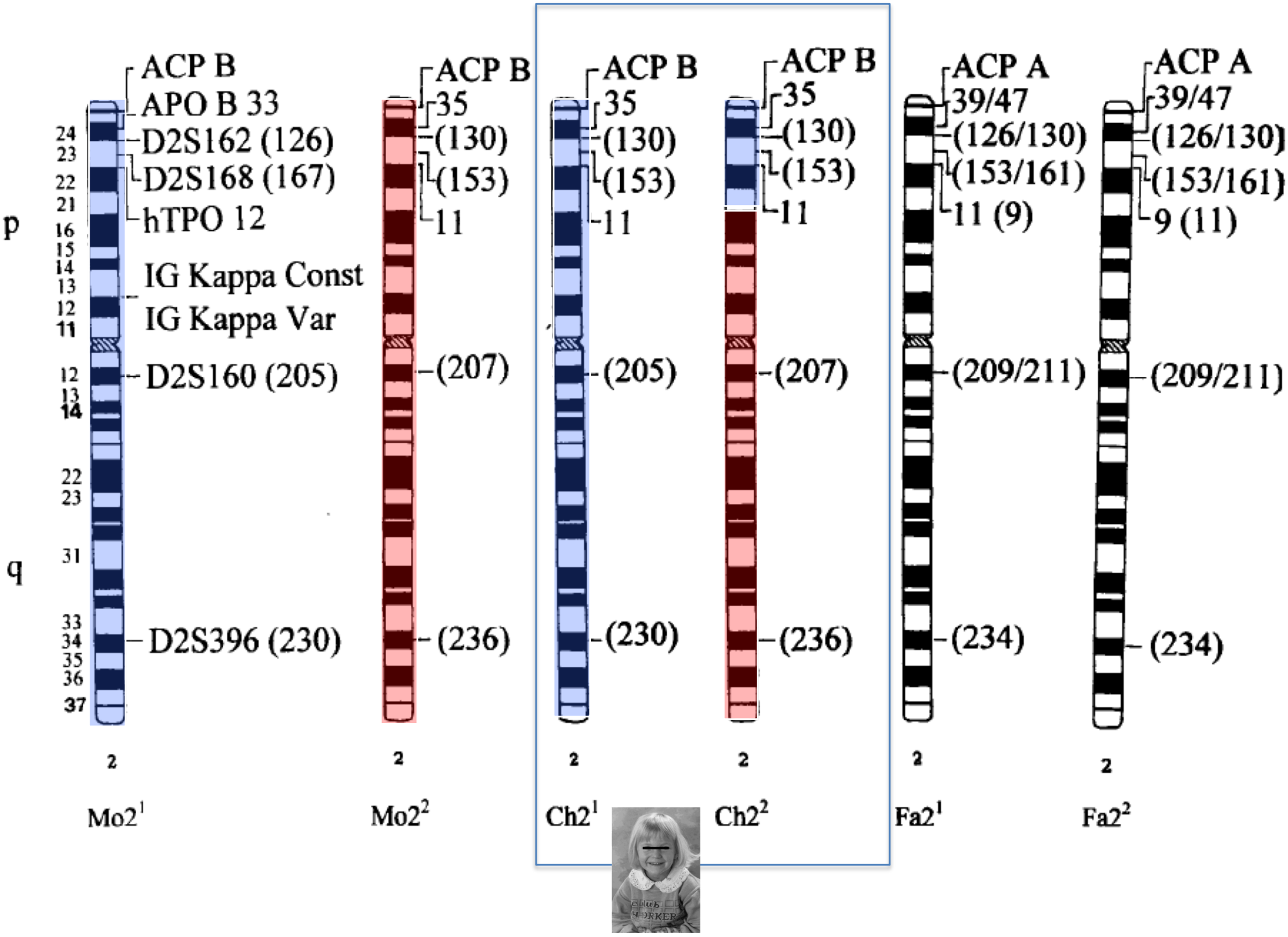
Méiose I
normale







Homozygote pour tout
le chromosome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ACP A
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(126/130)
(153/161)
9 (11)
(209/211)
(234)
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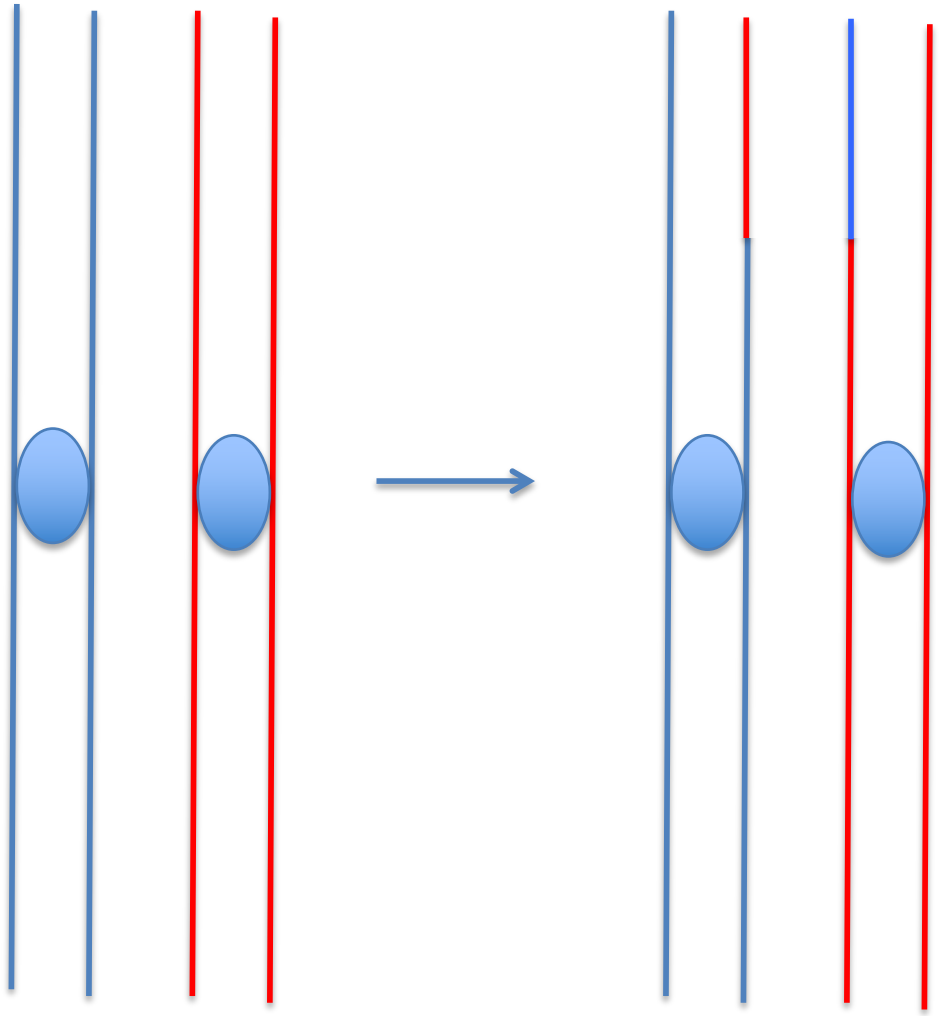
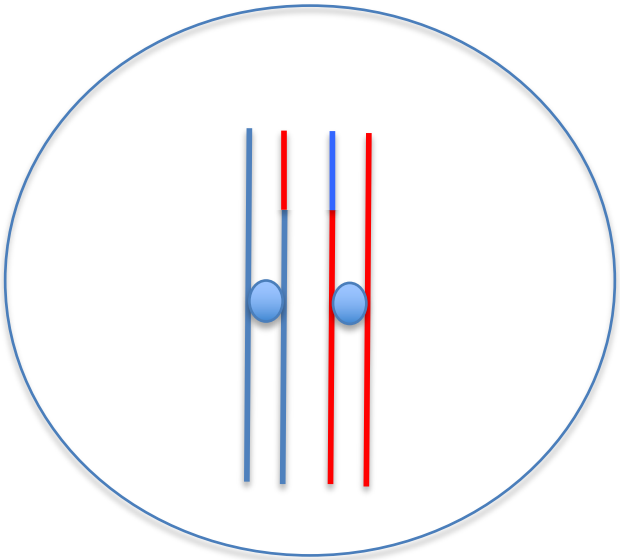
Fa2²

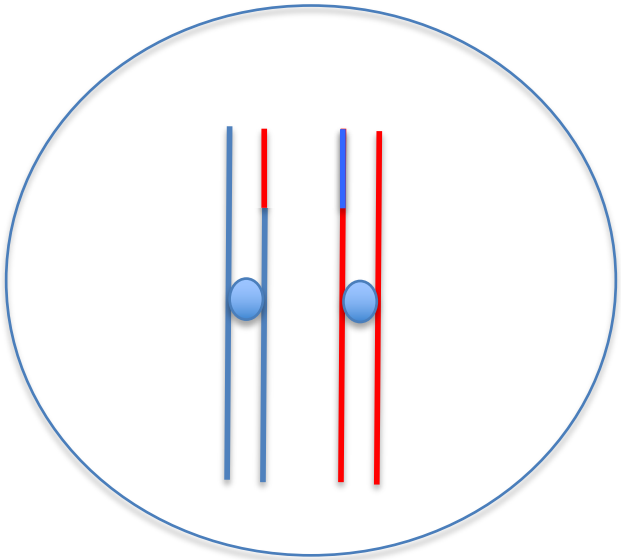
Crossing over chez la mère durant la méiose I

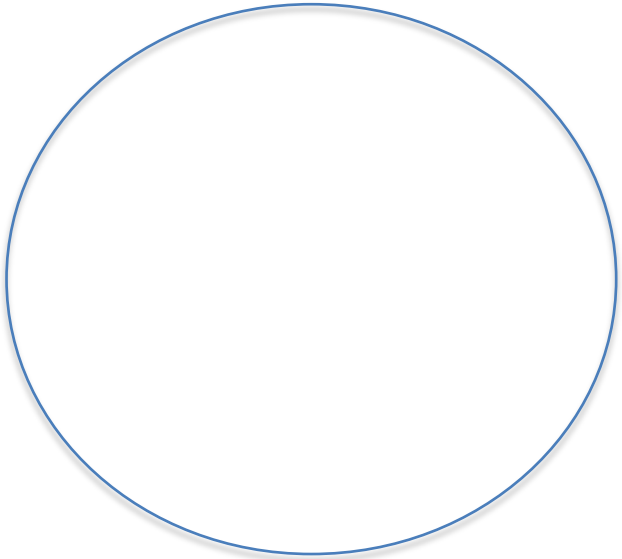




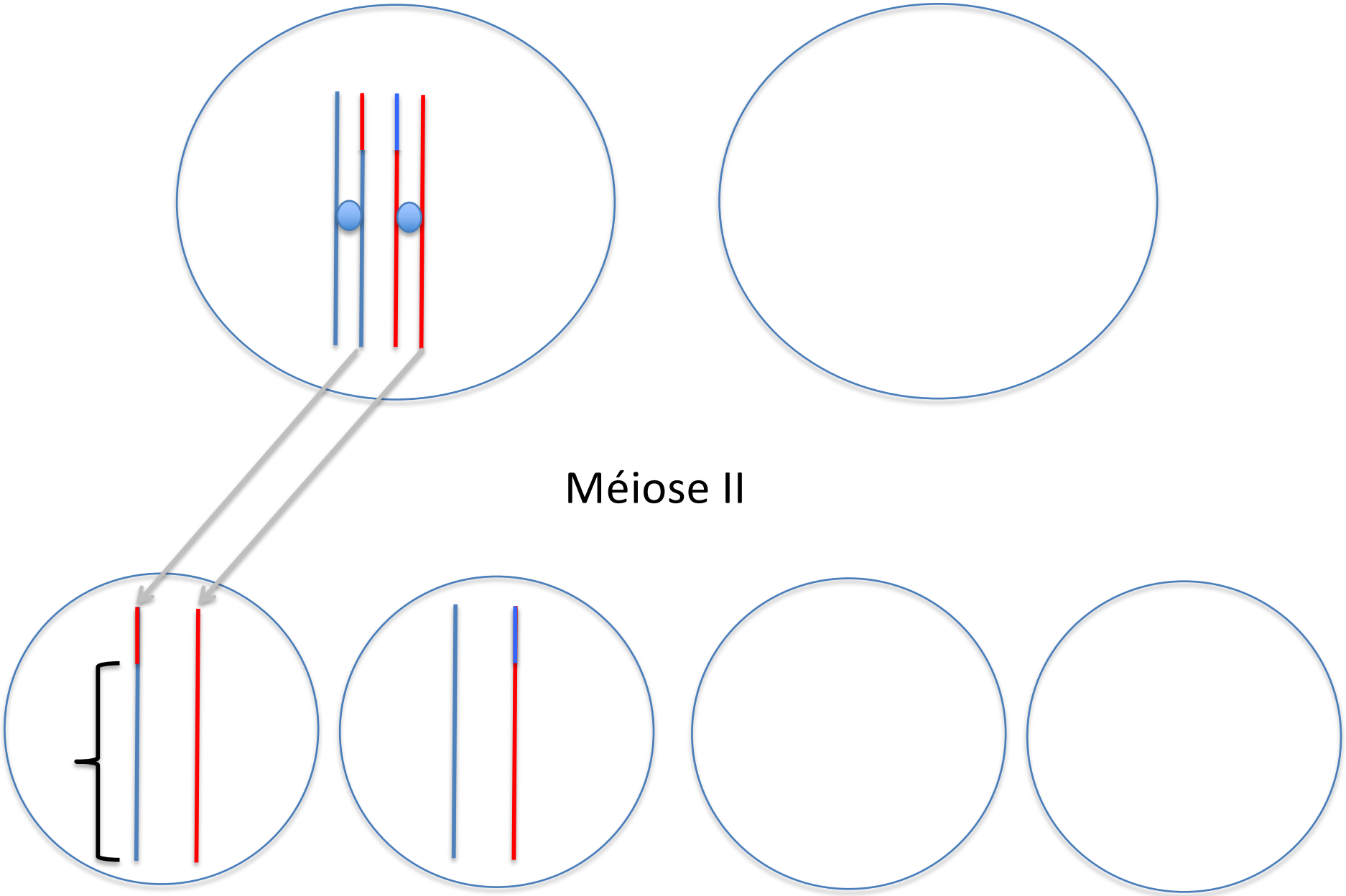
Non disjonction durant
la méiose I

Méiose I



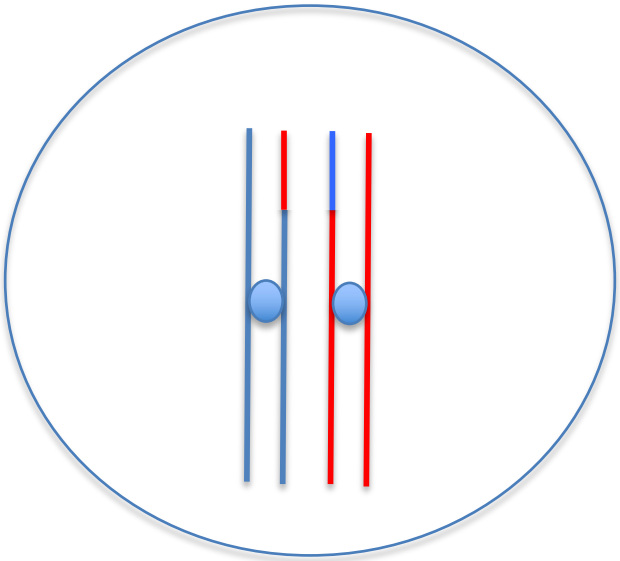


Pas de chromosome 2

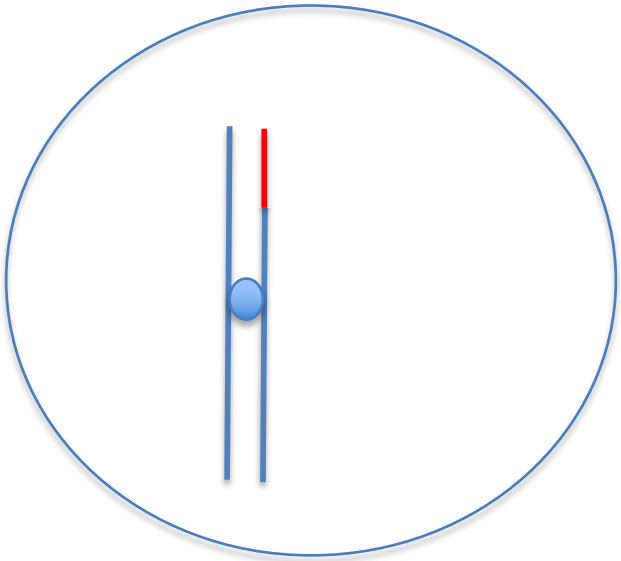


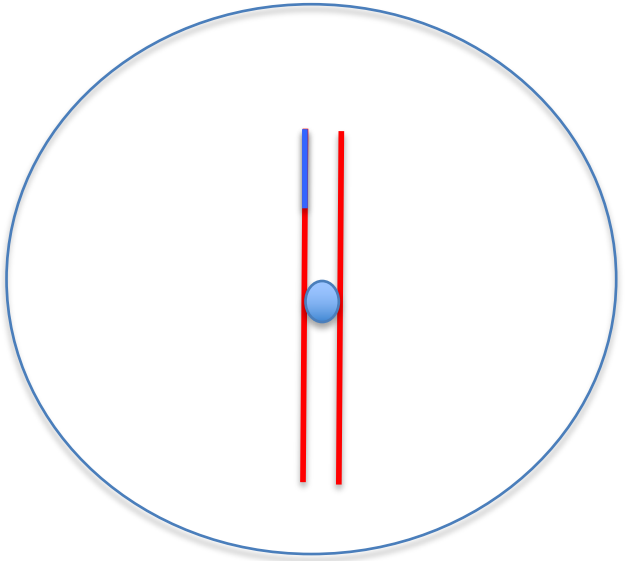
Hétérozygote pour la
majorité du chromosome

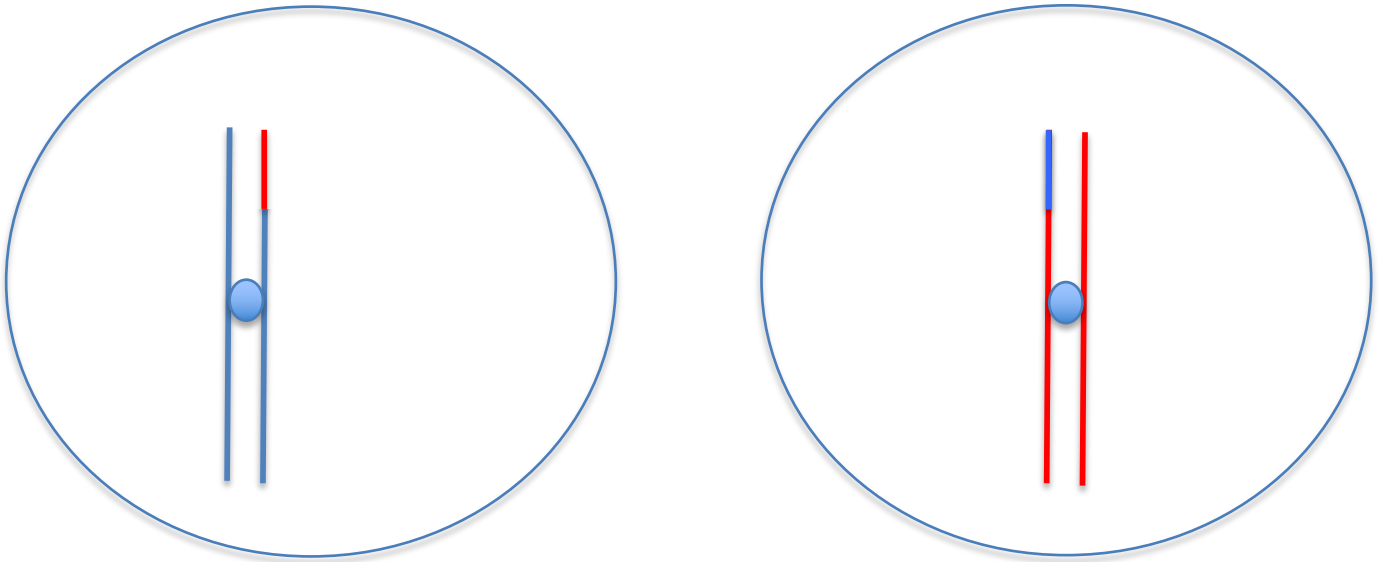
Si la méiose I
avait été normale



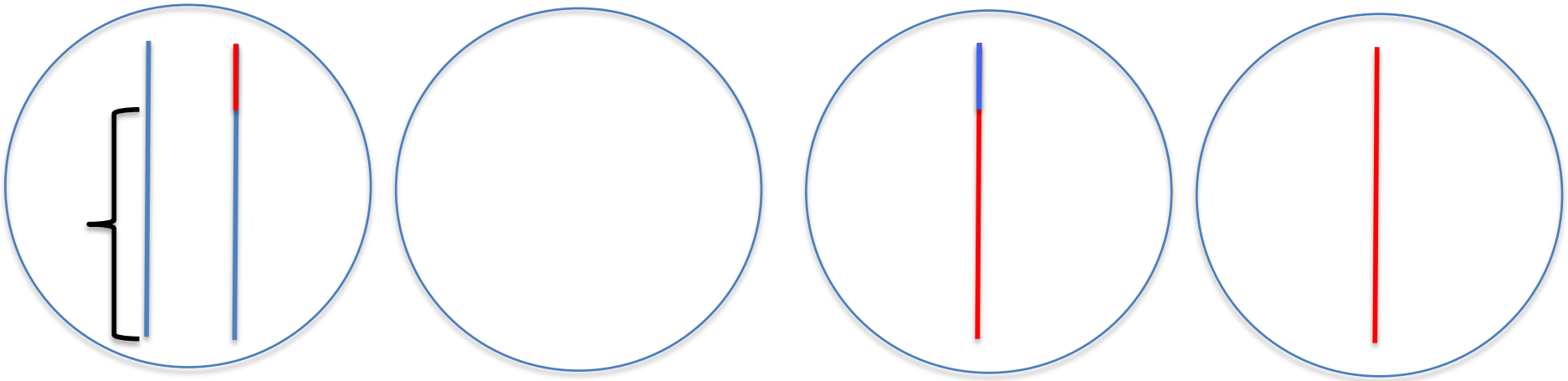
Méiose I







Méiose II

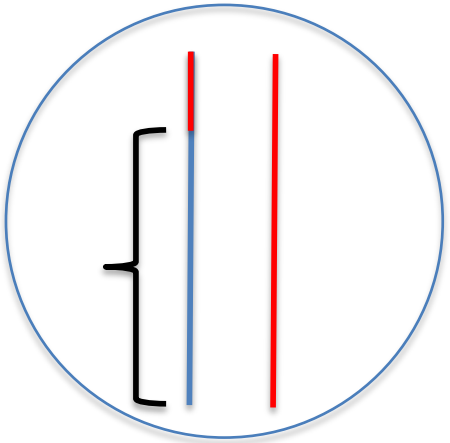


Homozygote pour la
majorité du chromosome

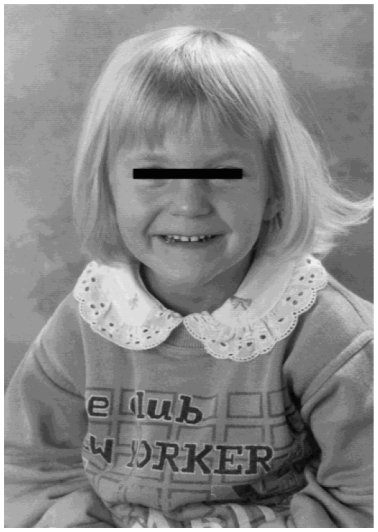
Comparaison

Enjambement en prophase I
puis

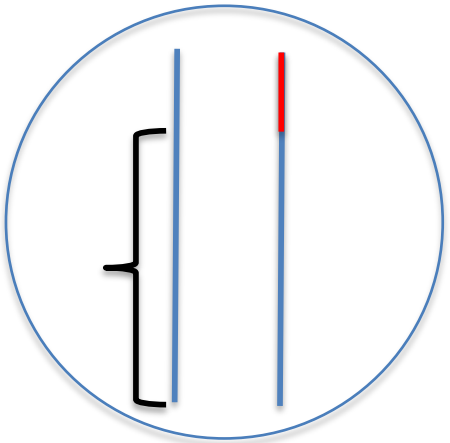
non-disjonction en méiose I



Hétérozygote pour la
majorité du chromosome



non-disjonction en méiose II



Homozygote pour la
majorité du chromosome

La découverte de la ***disomie uniparentale*** chez cette fillette a été **purement fortuite**.

La disomie uniparentale
signifie que cette fille
a reçu deux chromosome 2
de sa mère et
aucun chromosome 2
de sont père !!

Son caryotype est normal :
46, XX

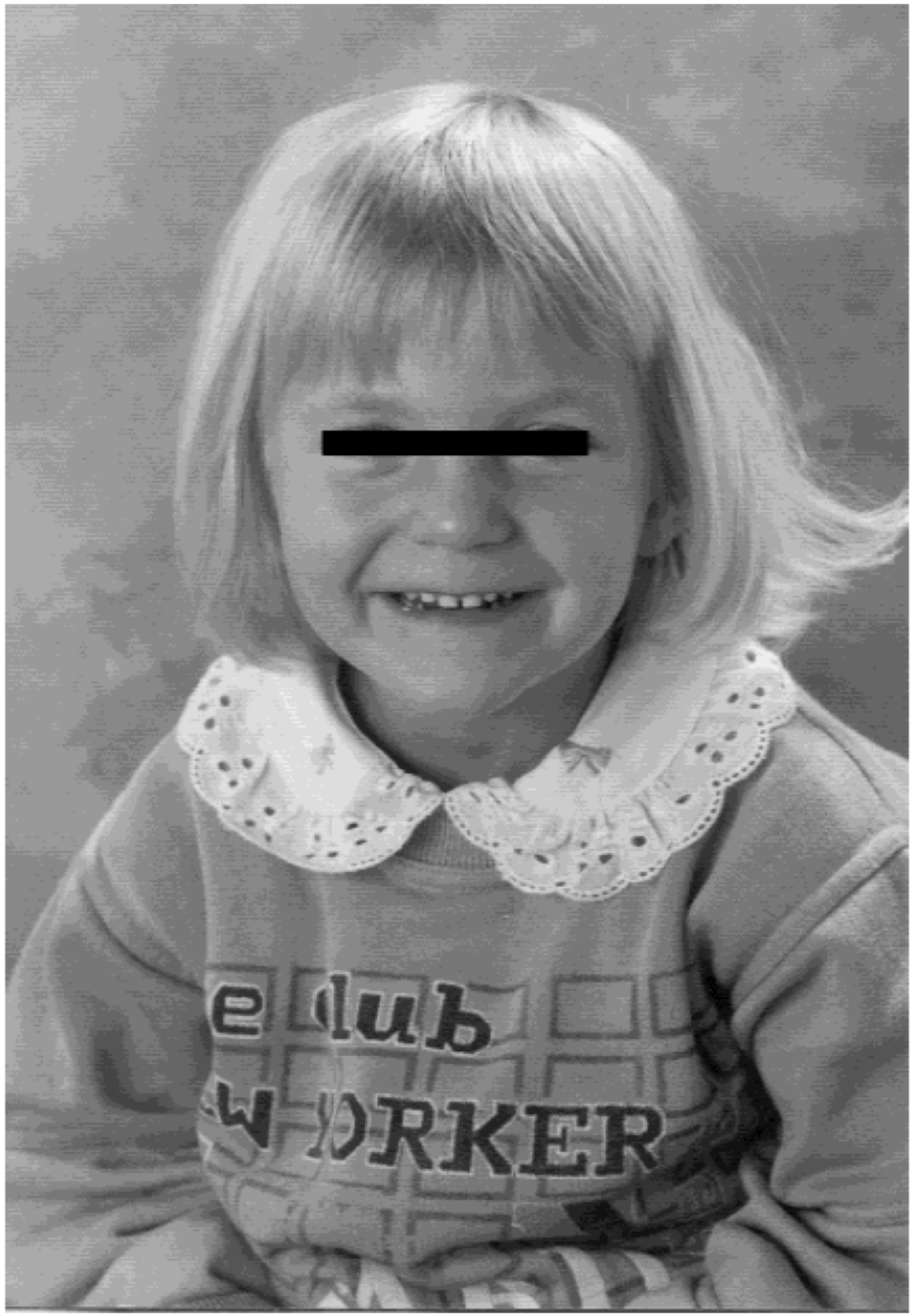


Fig. 1. The proposita with maternal disomy UPD of chromosome 2.