

# Cellules trophoblastiques extra villoses et leur potentiel en DPN

FISH'tre alors !!

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Margot VanRiel, Vincent Gatinois



COLLOQUE

**ATC**

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ASSOCIATION DES TECHNICIENS  
EN CYTOGÉNÉTIQUE

Comité d'organisation :  
Ophélie Petit-Prenant

Cinéma Pathé Wilson  
**TOULOUSE**

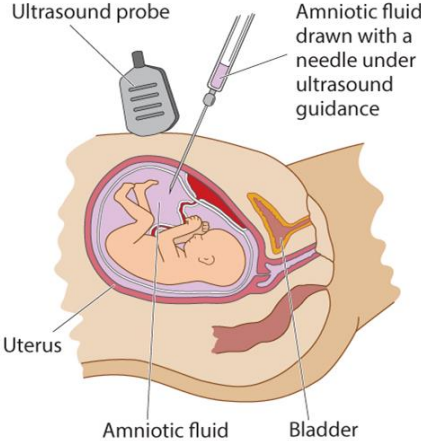
26 & 27  
SEPTEMBRE  
2024



# Prélèvements prénataux

## Invasifs

Amniocentèse



Choriocentèse



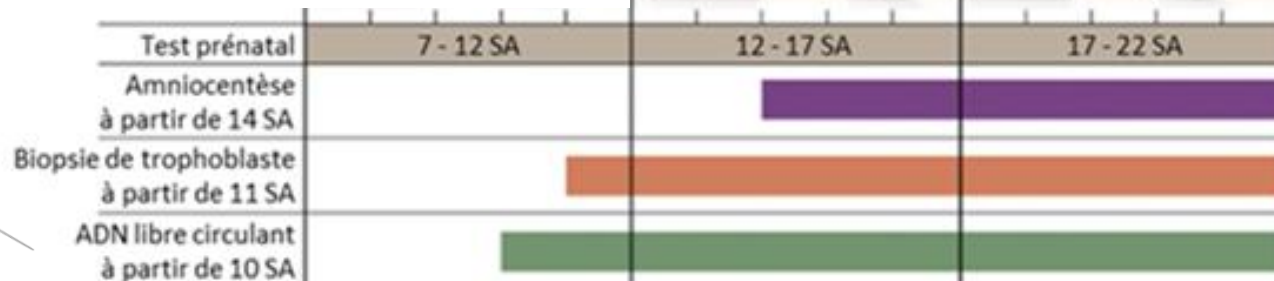
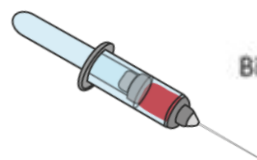
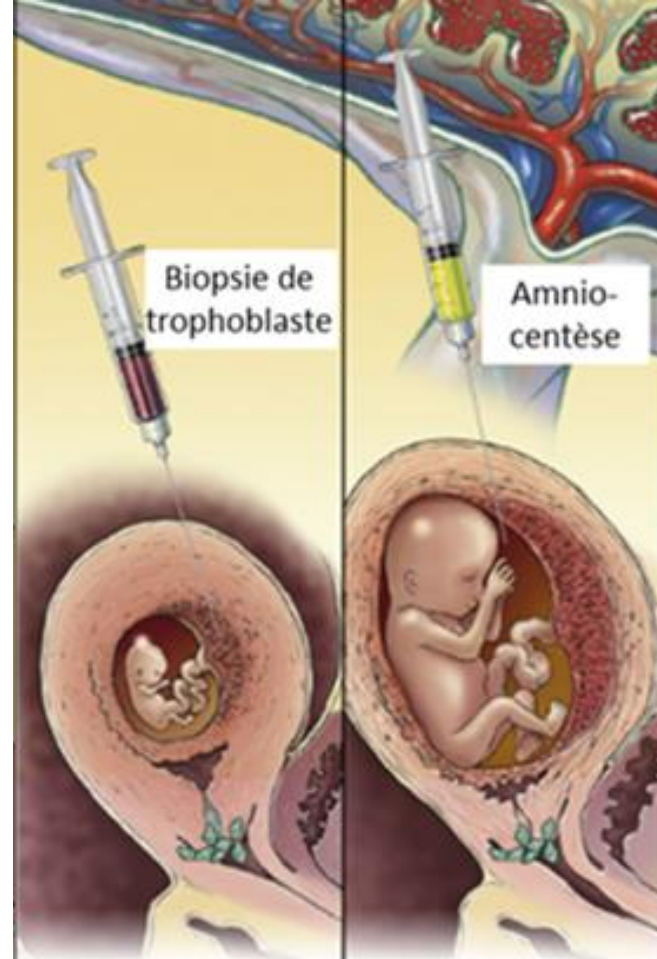
## Non- Invasifs

ADN foetale libre  
circulant (*cff-DNA*)



Cellules foetales  
libres circulantes

# Prélèvements prénataux

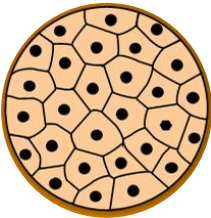


# Le trophoblaste

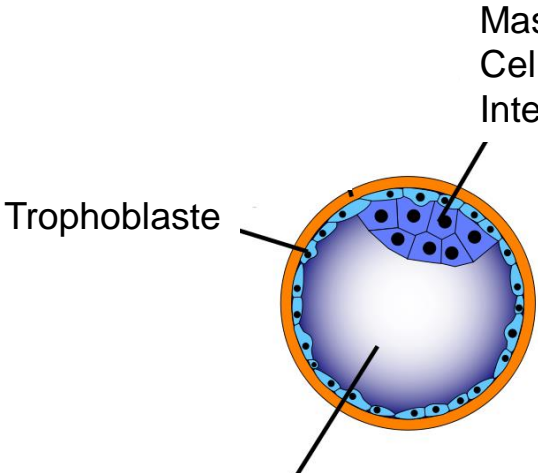
## Vie embryonnaire précoce



Zygote

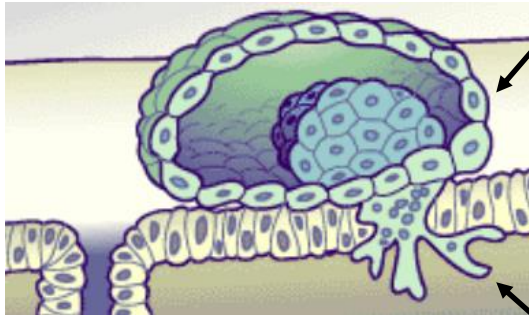


Morula



Blastocèle

Blastocyste



Cytotrophoblaste

Syncytiotrophoblaste



J0

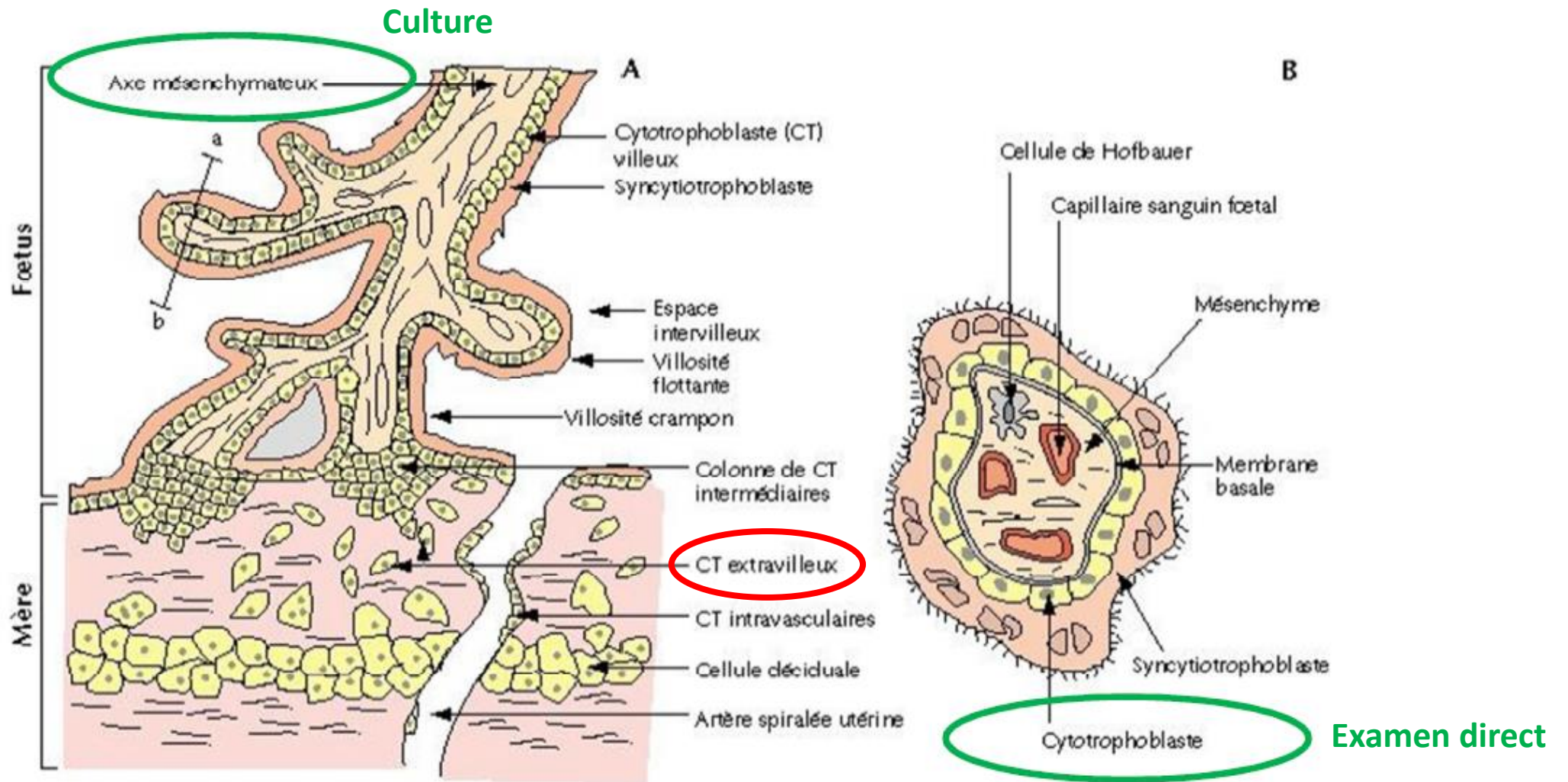
J4

J5 - J7

J7 - J10

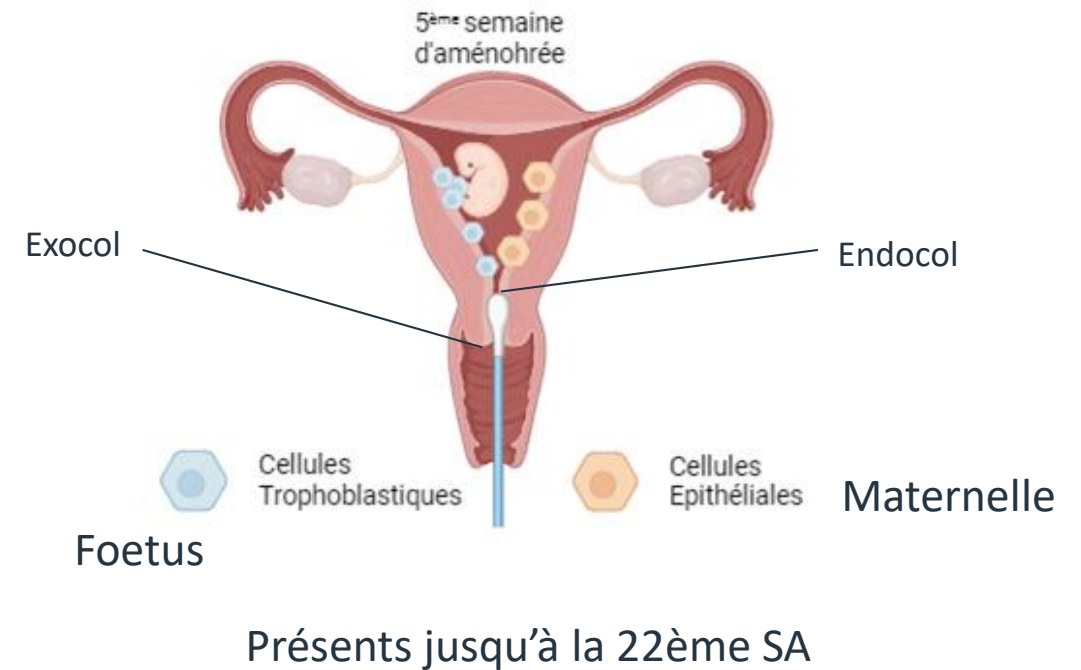
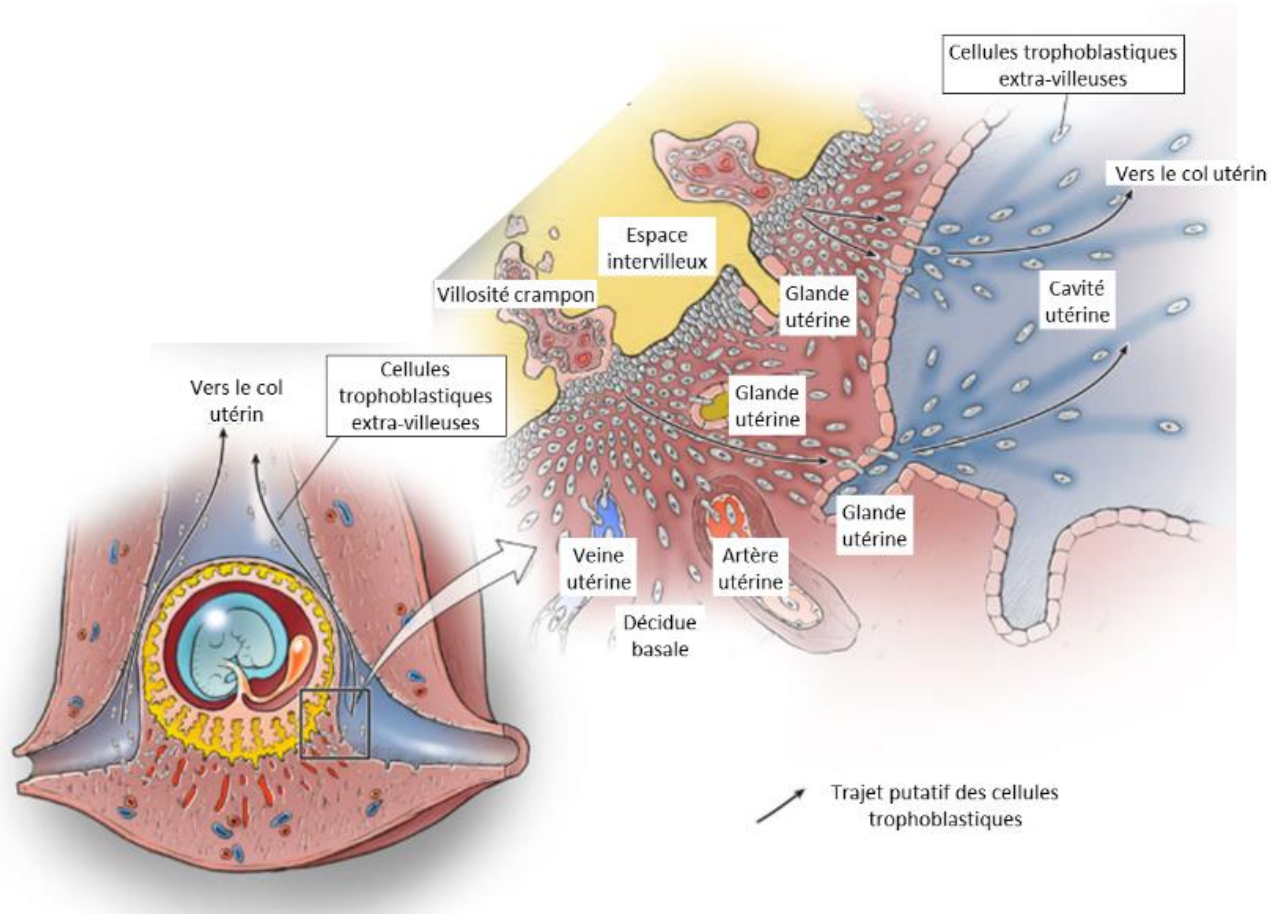


# Le trophoblaste



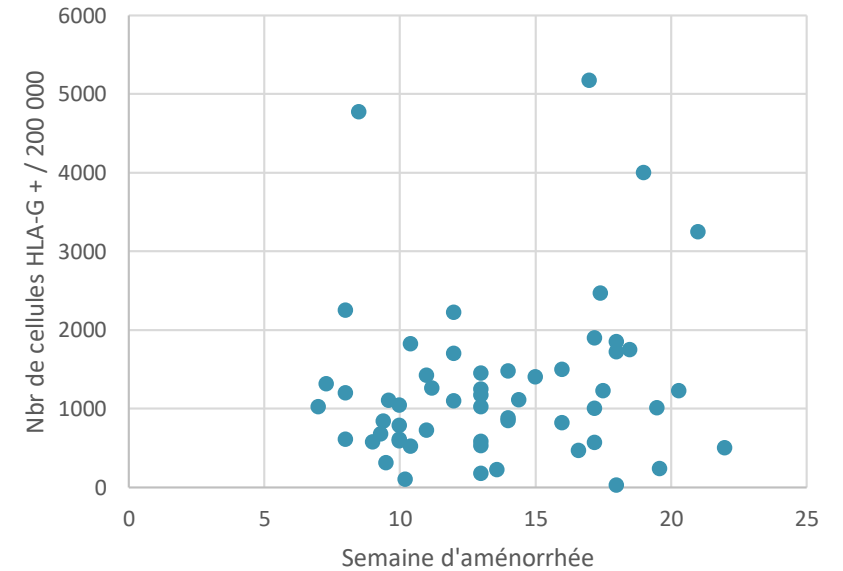
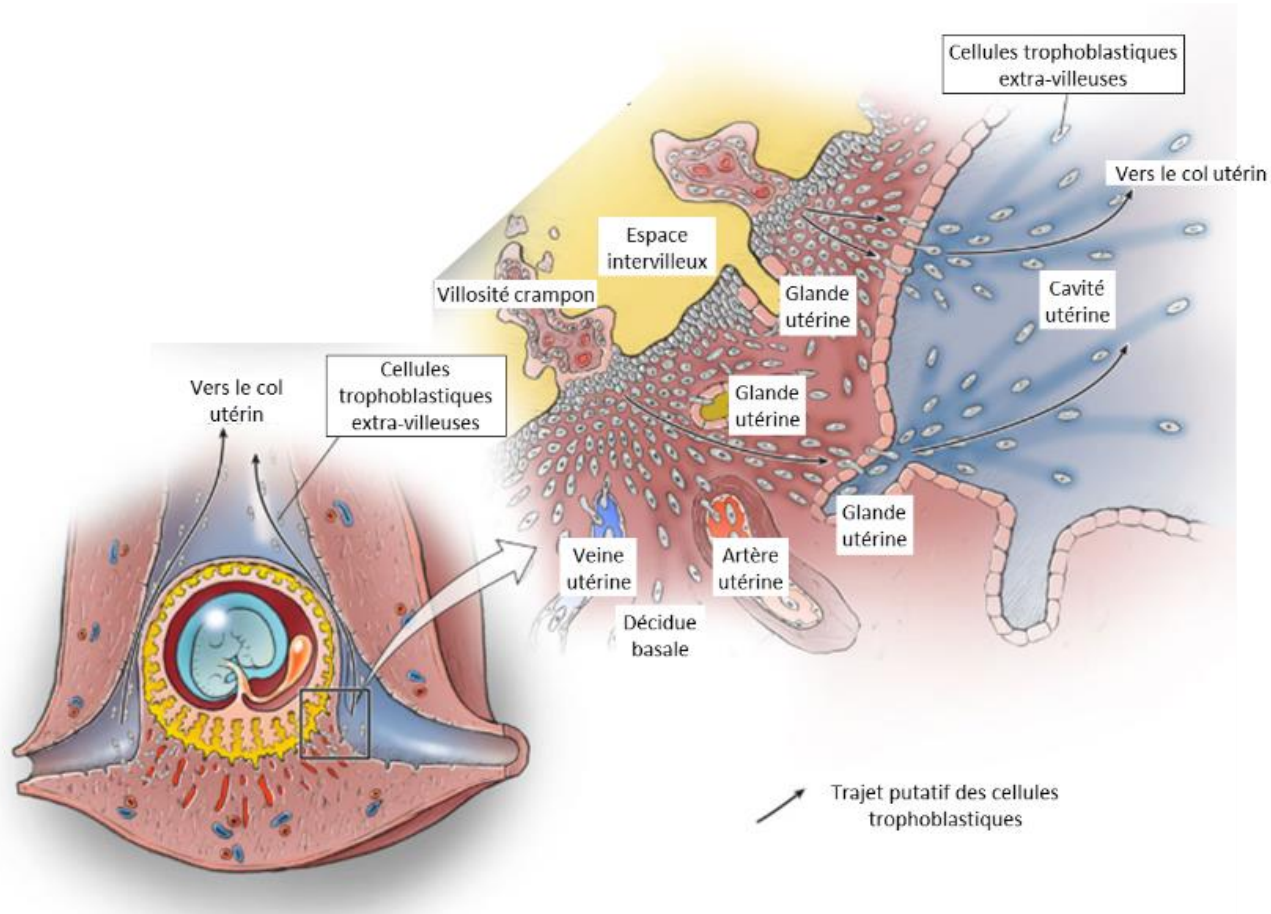


# Cellules trophoblastiques extra-villeuses





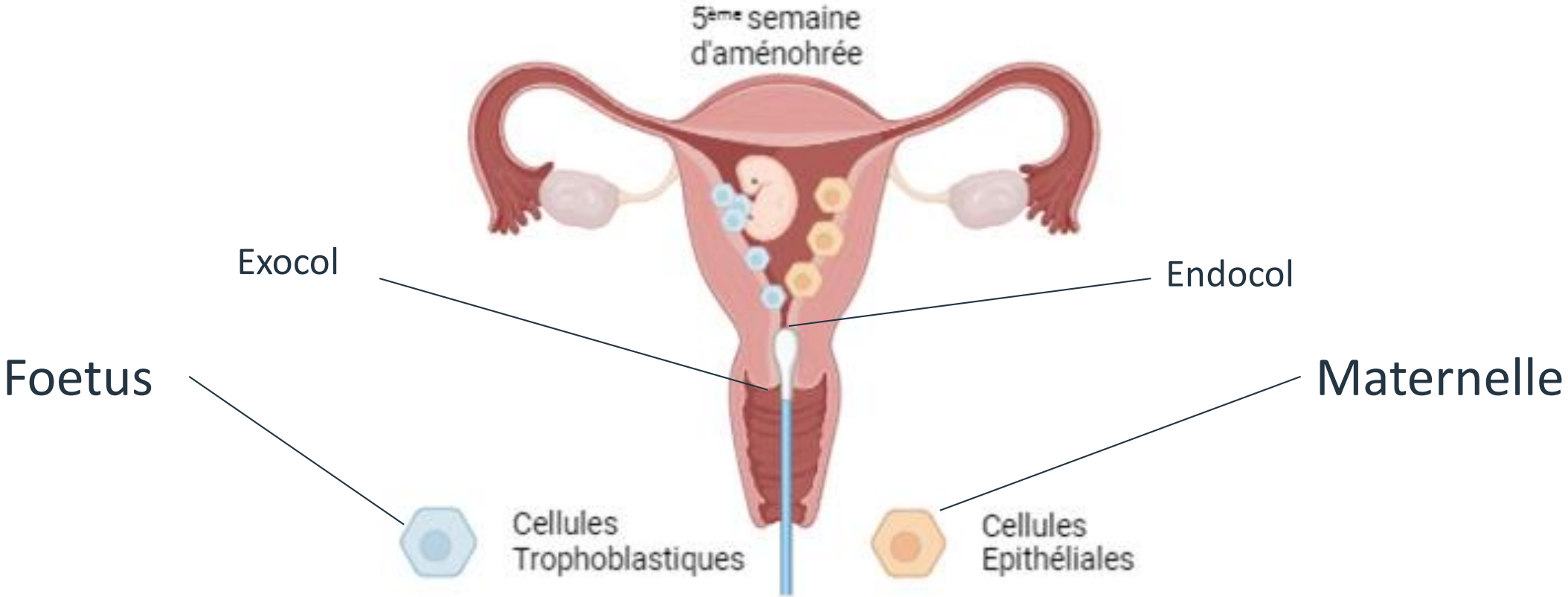
# Cellules trophoblastiques extra-villeuses



*Drewlo S. et al. Placenta, 2017*  
*Bolnick JM. et al., Sci Rep, 2016*

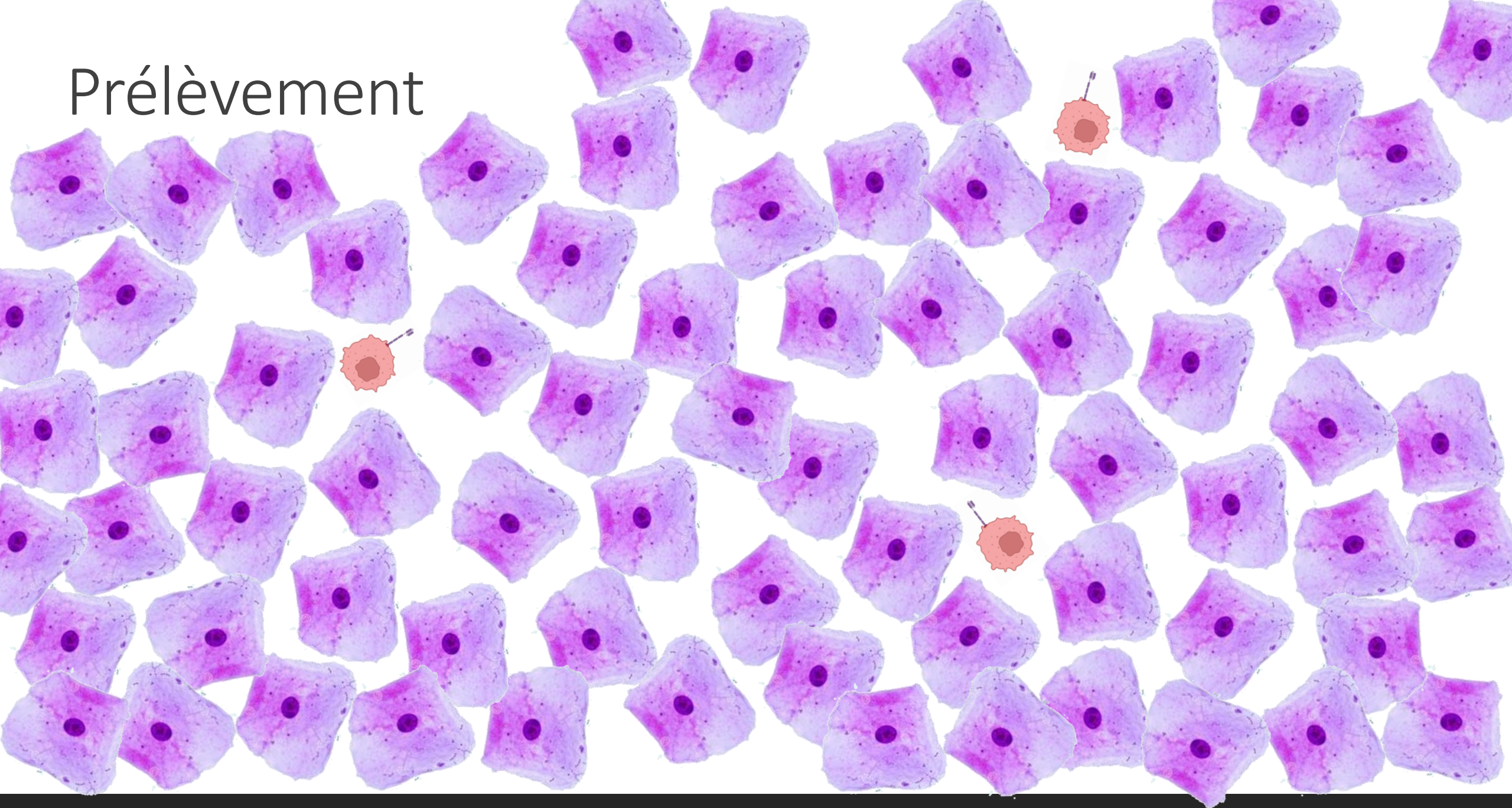


# Prélèvement



Présents jusqu'à la 22<sup>ème</sup> SA avec une concentration de 1/2000

# Prélèvement



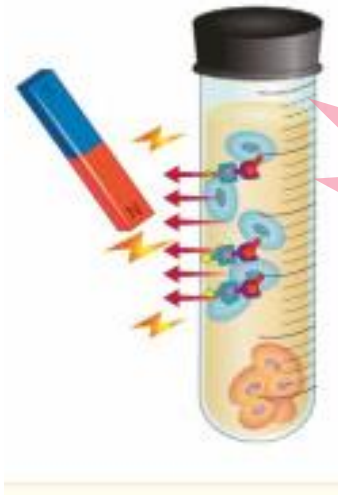


# Prélèvement



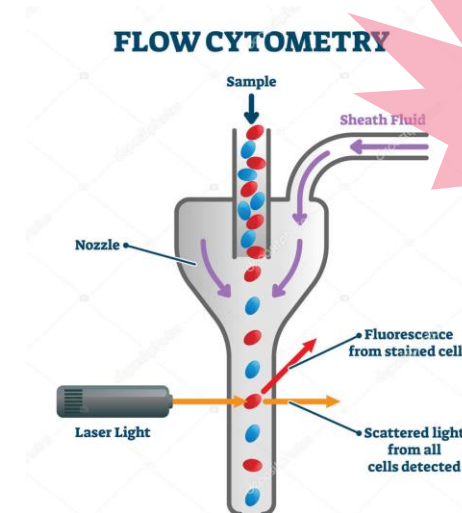


# Stratégies analytiques

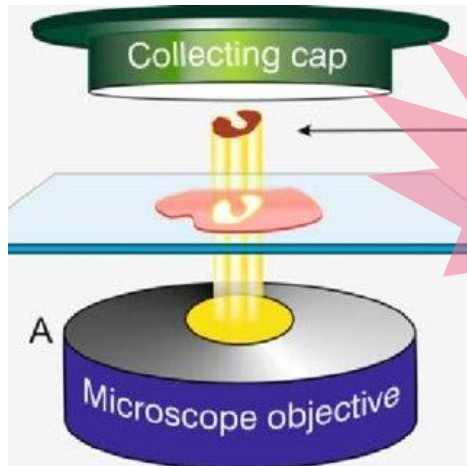


Non-Reproductible

Bolnick, 2014

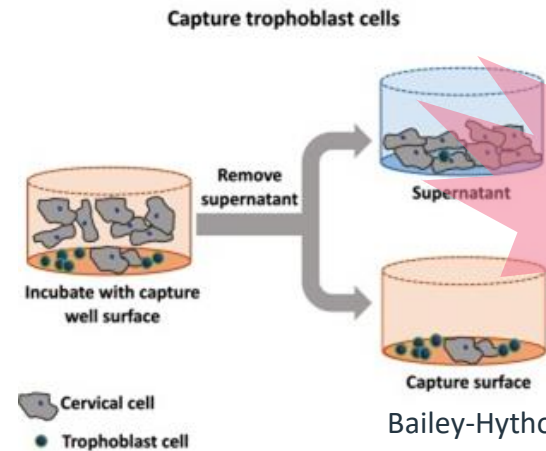


Pores bouchées



Cher et pas assez précis

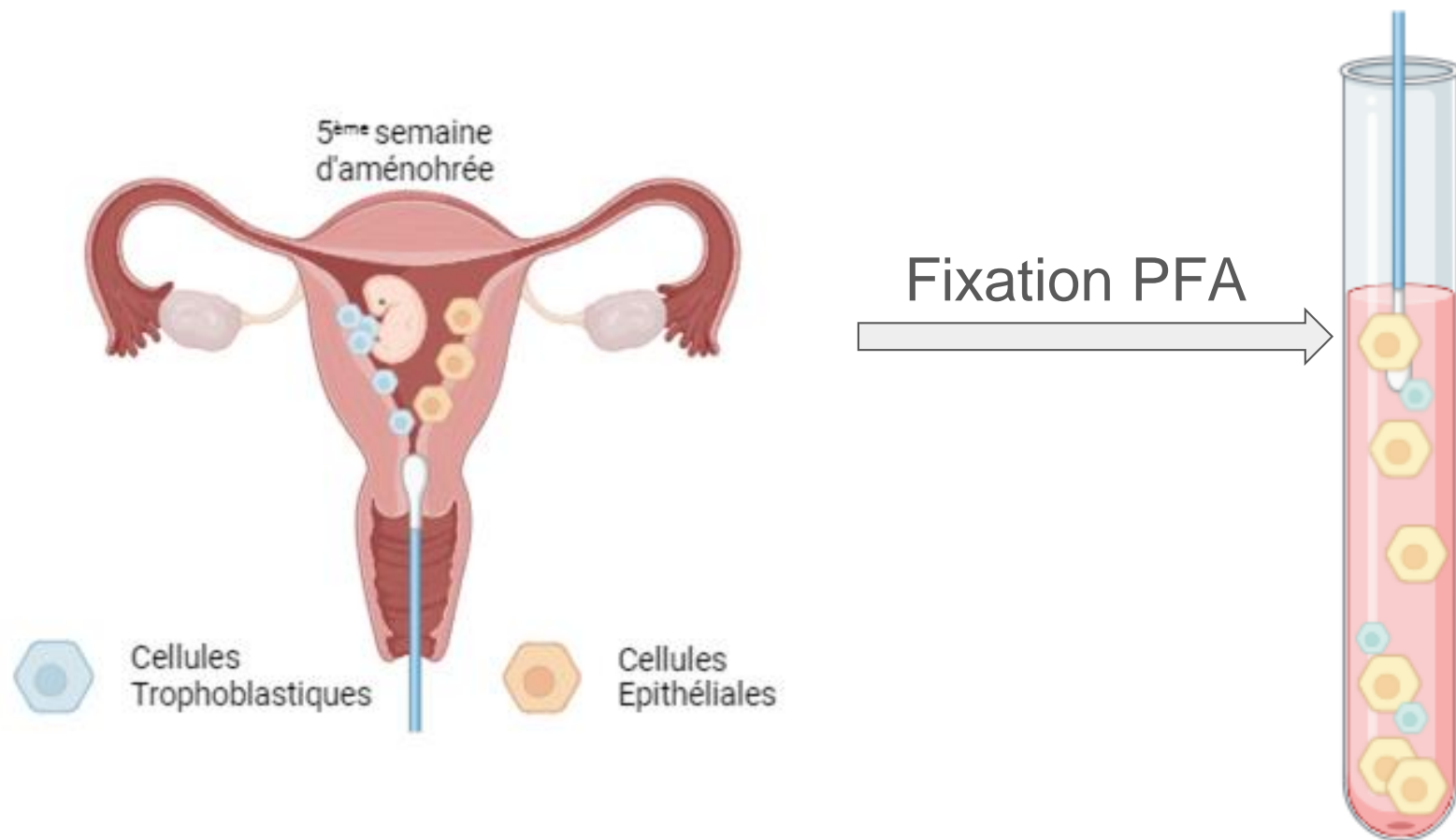
Pfeifer, 2016



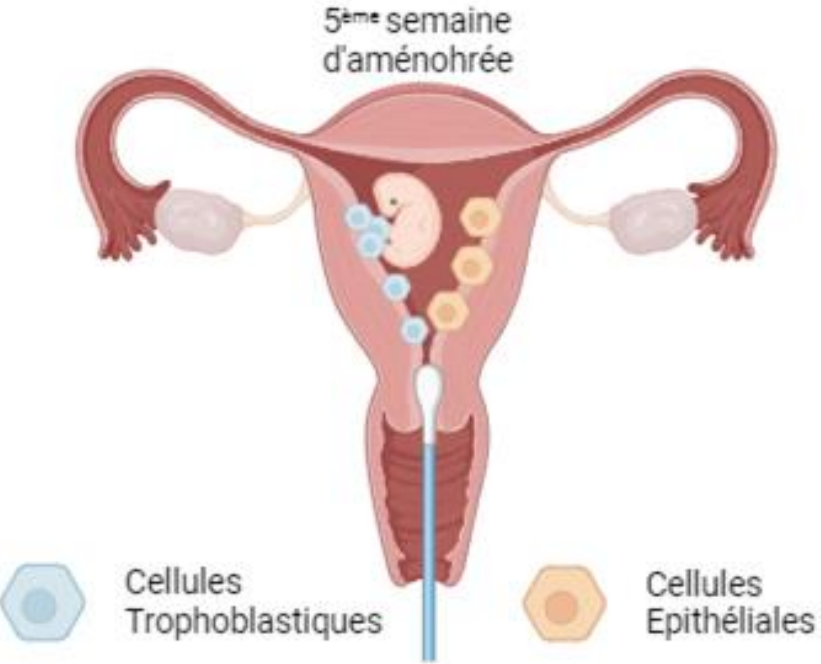
Pas fiable

Bailey-Hytholt, 2019

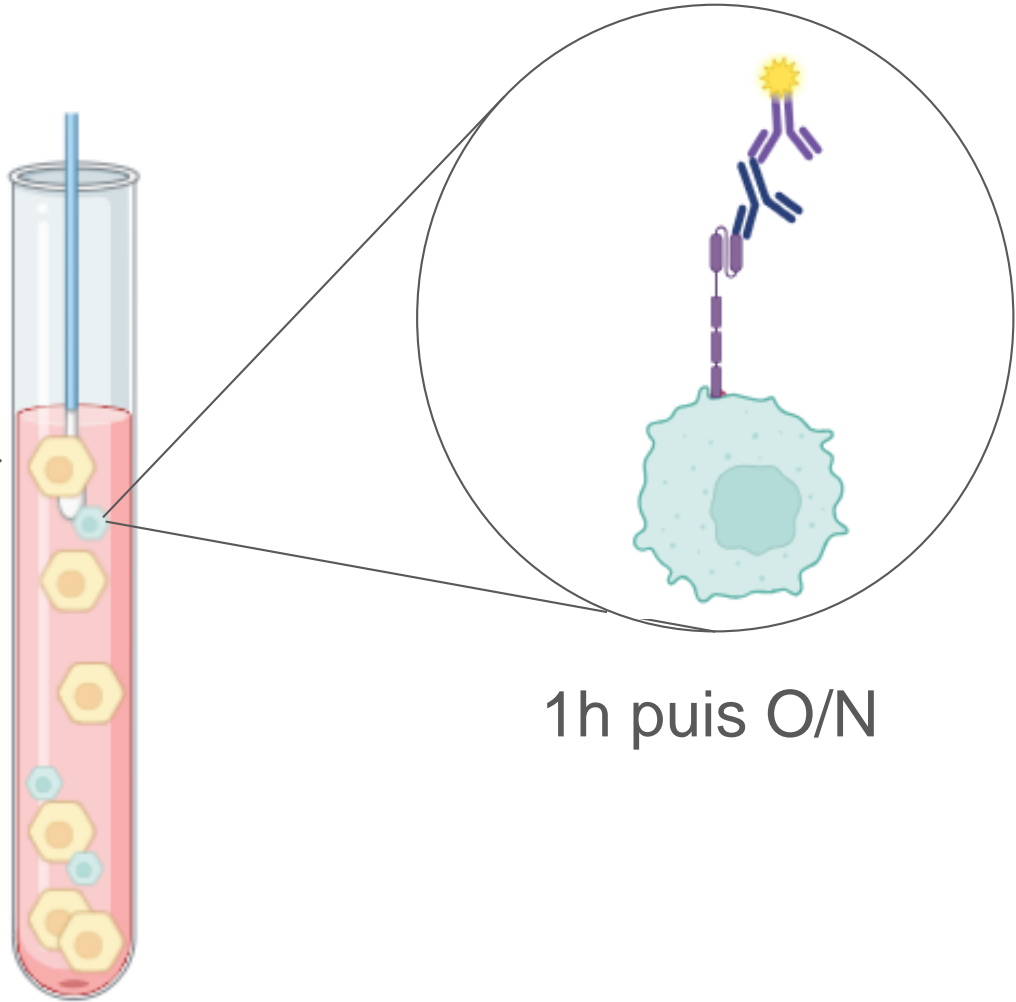
# Protocole : prélèvement



# Protocole : IF

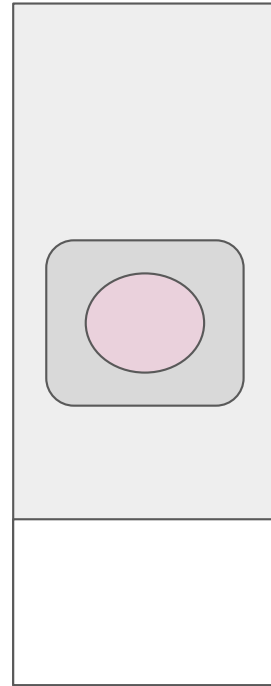
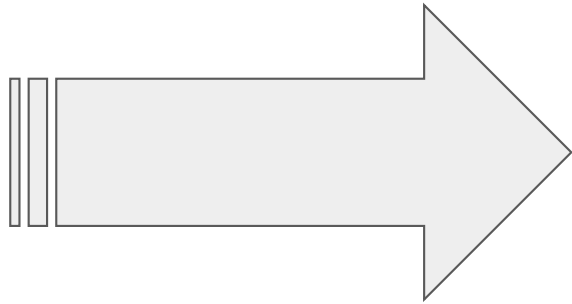
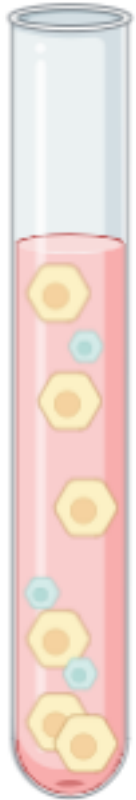


Fixation PFA



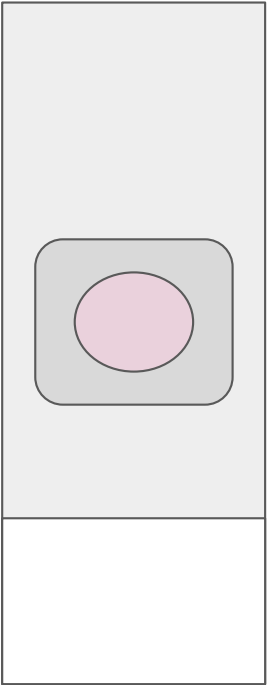
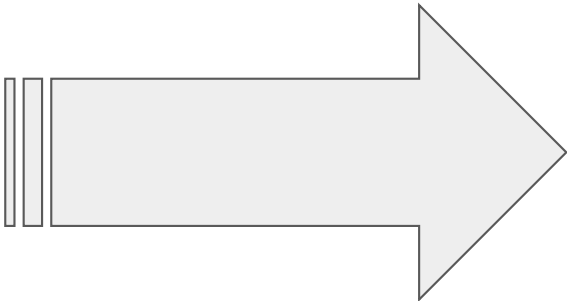


# Protocole : IF

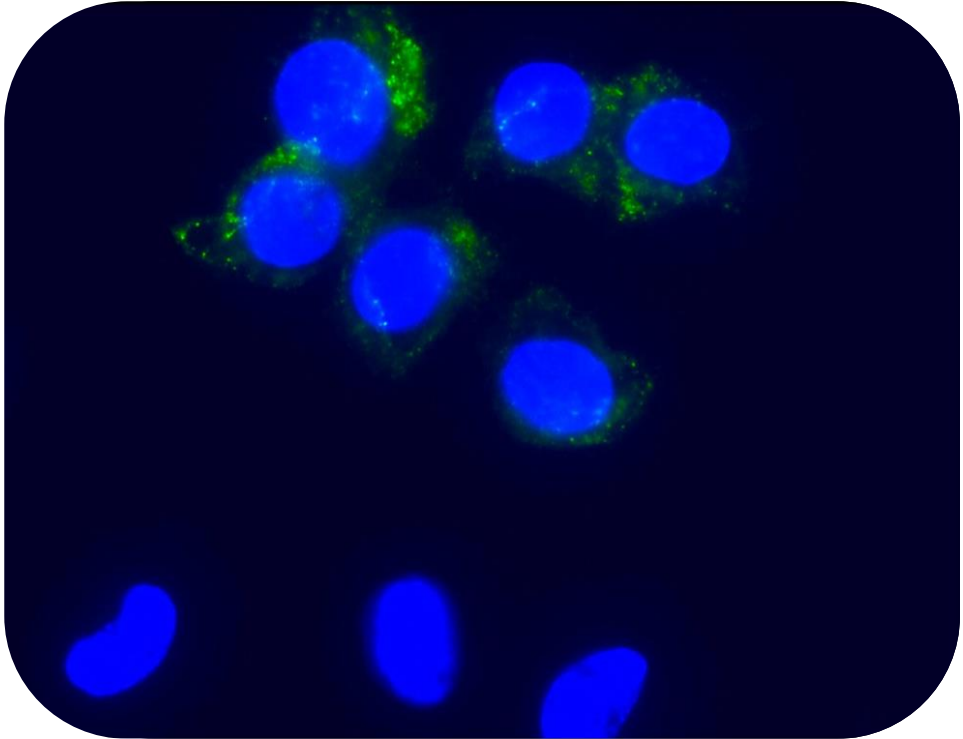


**~30 000  
Cellules**

# Protocole : IF

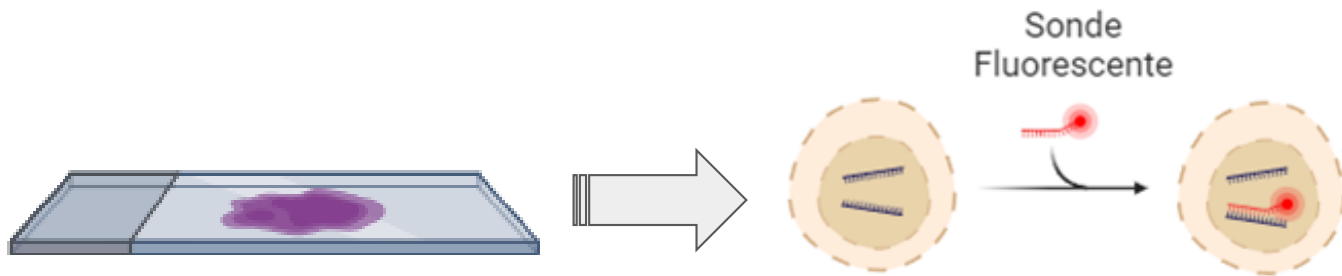
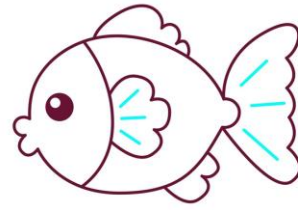


**~30 000  
Cellules**

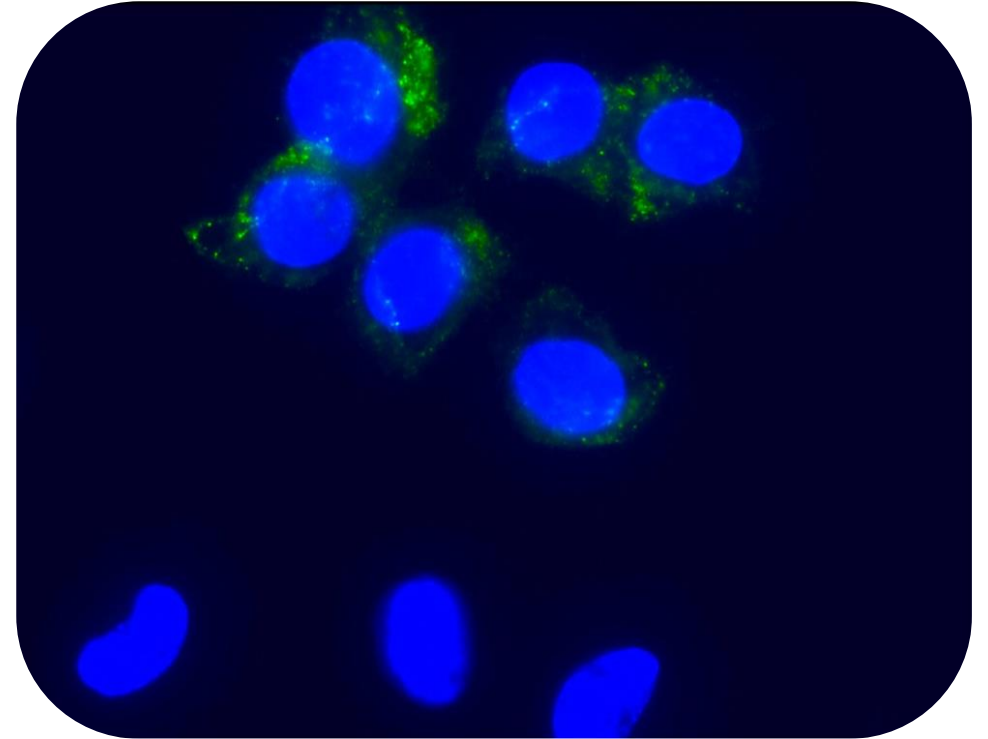


$x = 83,86... / y = 15,78...$

# Protocole : FISH



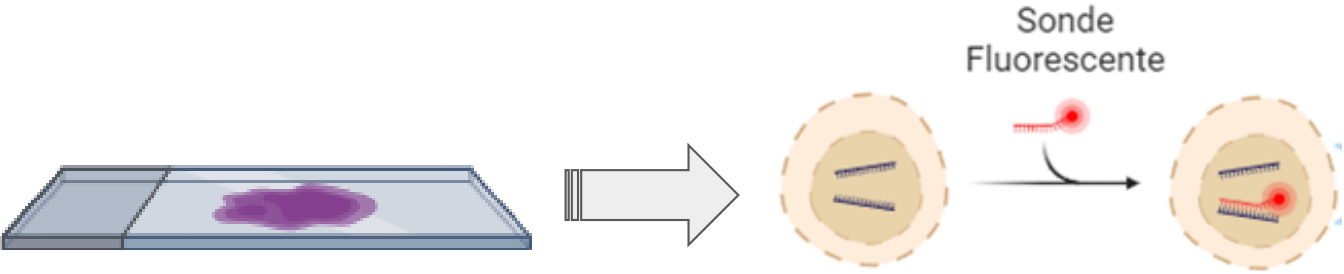
!!! Il faut conserver la position des cellules sur la lame !!!



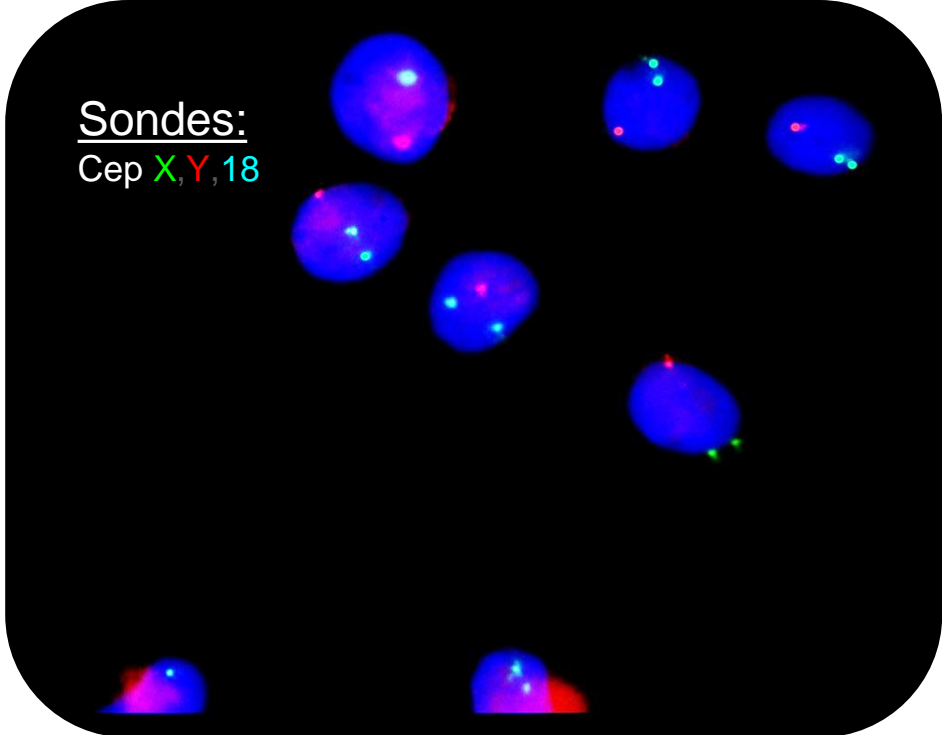
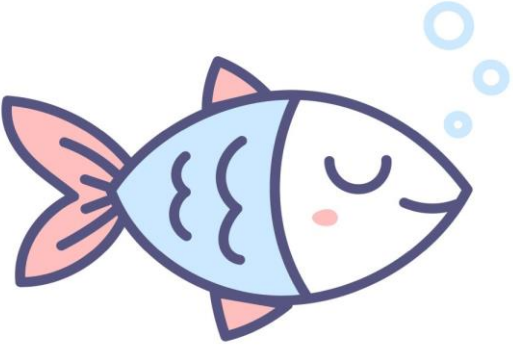
x = 83,86... / y = 15,78...



# Protocole : FISH



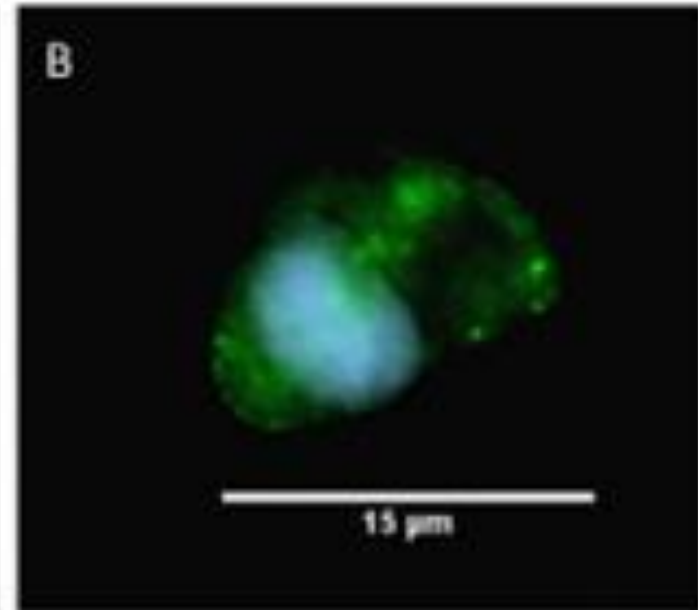
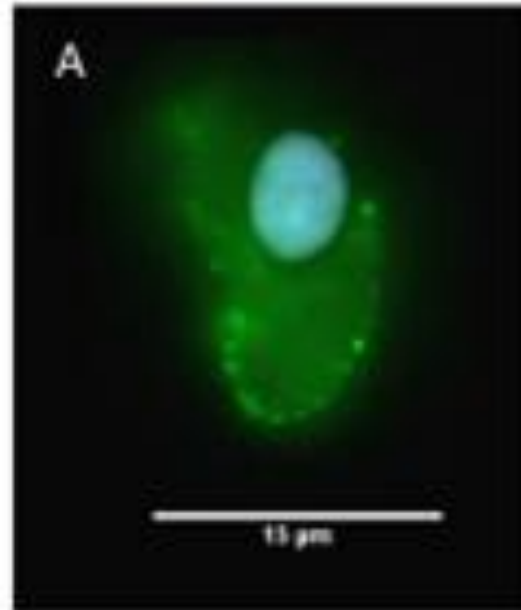
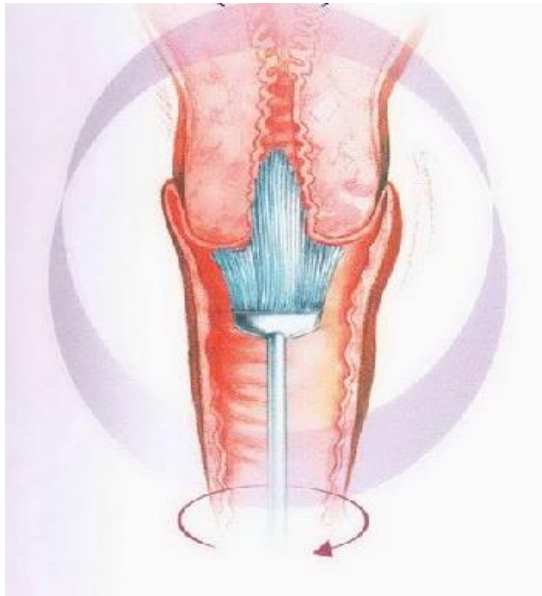
!!! Il faut conserver la position des cellules sur la lame !!!



x = 83,86... / y = 15,78...

# Mise au point

## 1. Validation type d'écouvillon



# Mise au point

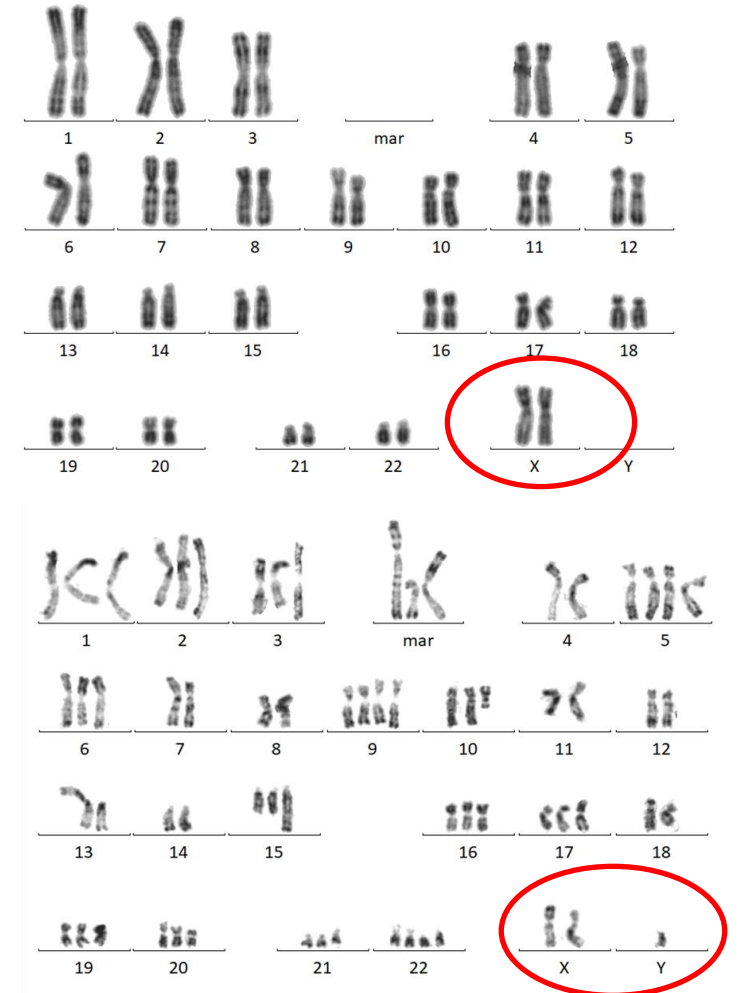
## 2. Modélisation cellulaire



Fibroblastes témoin  
Caryo féminin  
HLA-G négatives



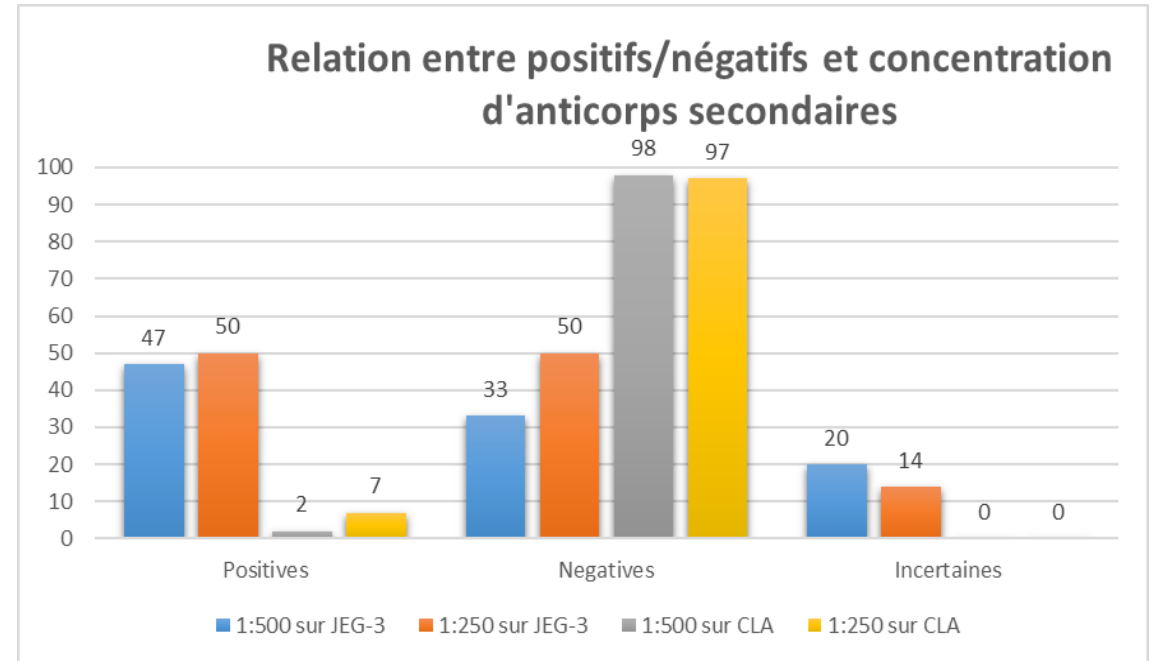
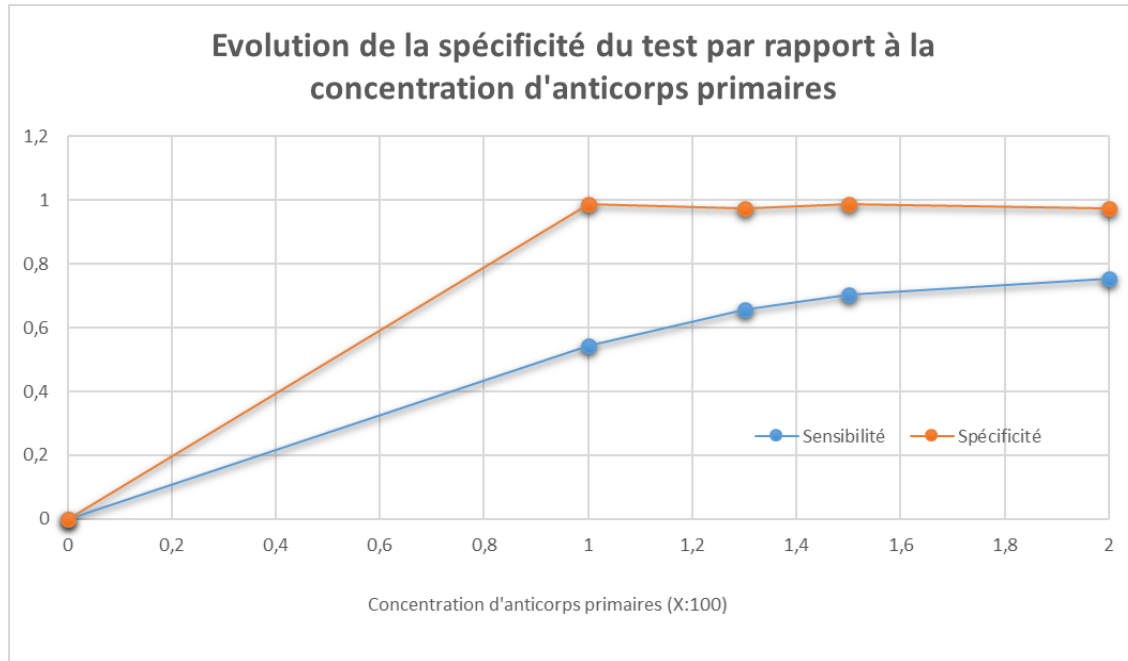
Lignée JEG-3  
Caryo masculin  
HLA-G positives





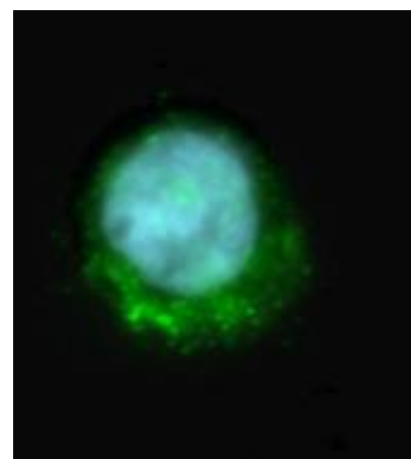
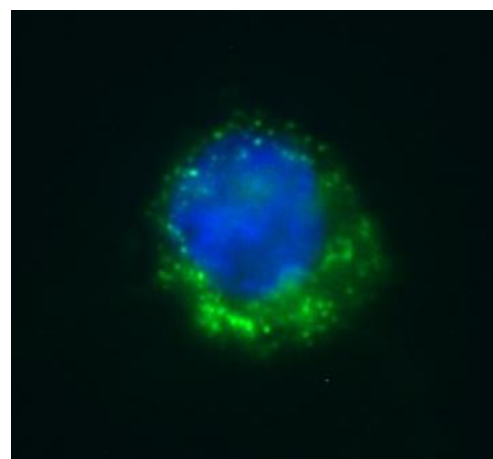
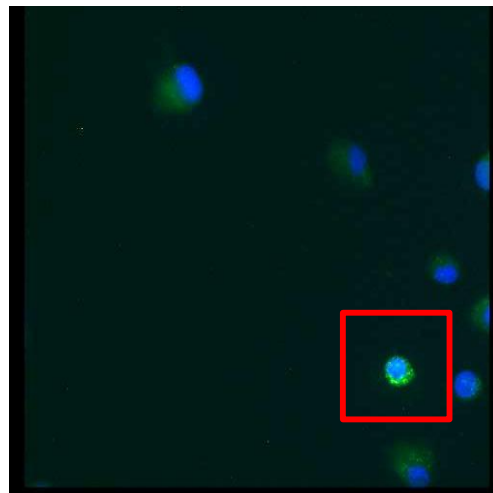
# Mise au point

## 3. Concentrations Ac I<sup>aire</sup> et II<sup>aire</sup>



# Mise au point

## 4. Automatisation



Metacyte

Manuel

# Projet CellF-Cervix

## Evaluation clinique du protocole

### Objectifs

1. Estimer les performances diagnostiques
2. Insertion dans le parcours de soin actuel.

### Principe

Déterminer le sexe chromosomique du fœtus

Inclusion de 25 patientes enceintes entre 7SA et 16SA

Concordance avec échographie 2<sup>ème</sup>/3<sup>ème</sup> trimestre ou naissance



# Merci !!



Baptiste Oblette



Romane Giroudeau



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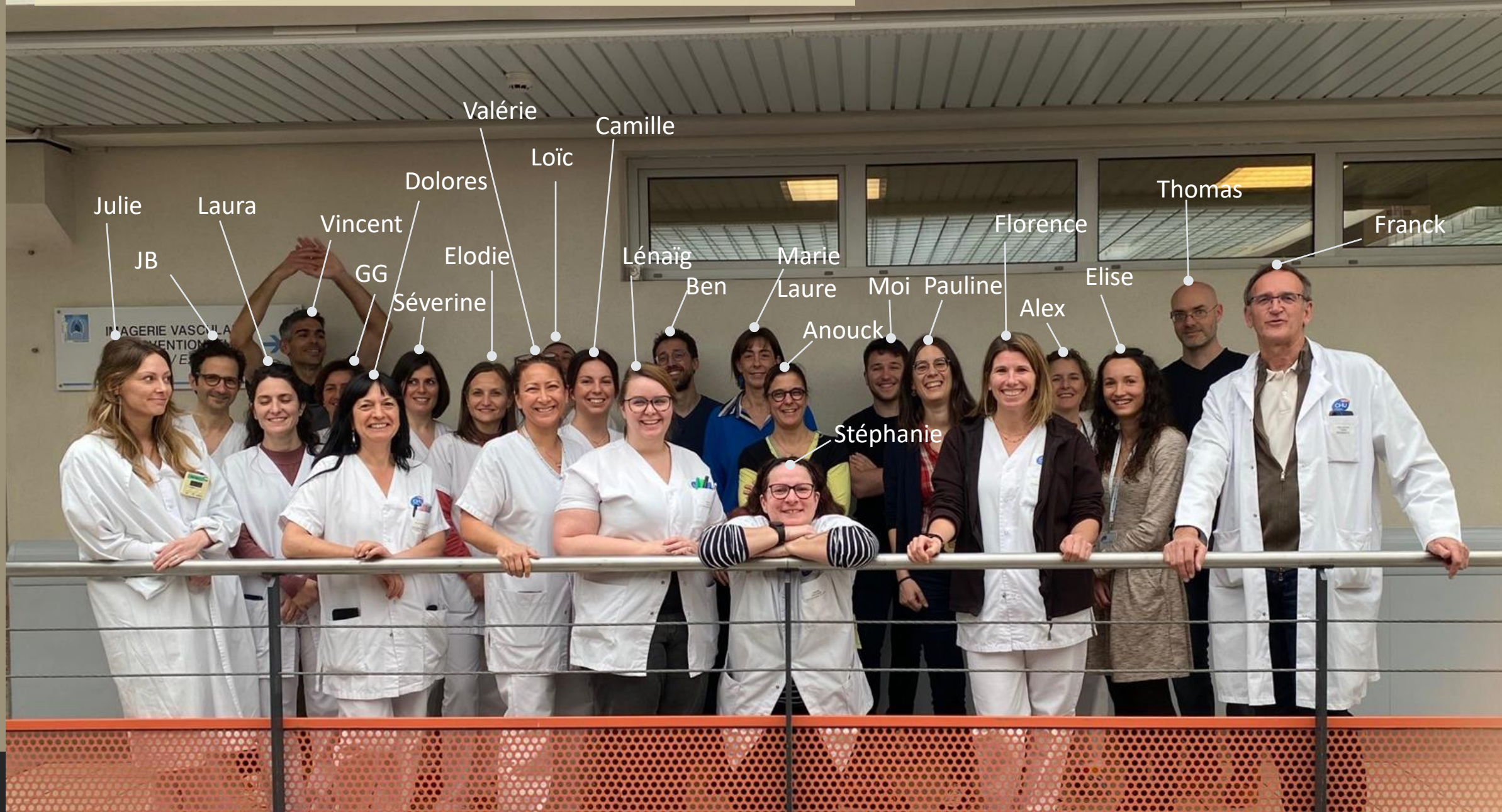
Cinéma Pathé Wilson  
**TOULOUSE**

**26 & 27  
SEPTEMBRE  
2024**





# La belle équipe !





Merci !!



Franck, on t'a reconnu !!!!

Dominique

Ophélie

Mercedes

# leboncoin des emplois

Baptiste Oblette M2

23 ans

[oblettebaptiste@gmail.com](mailto:oblettebaptiste@gmail.com)



Ingénieur de recherche  
ou  
Ingénieur d'étude

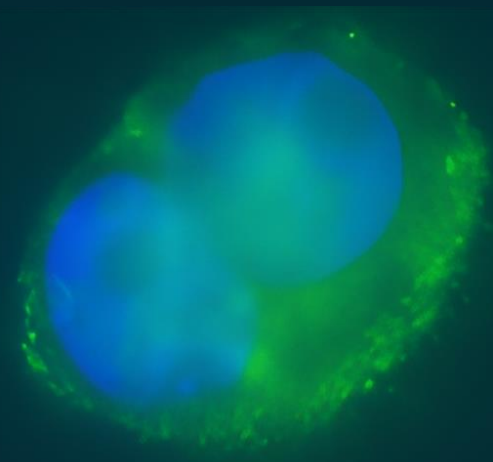
Dynamique, Sérieux, Appliqué, Curieux, Social 😊

## WANTED

Ingénieur hosp.  
PhD

DPI cytogénétique

Diagnostic  
Développement  
technologique



Merci à vous pour votre attention !

