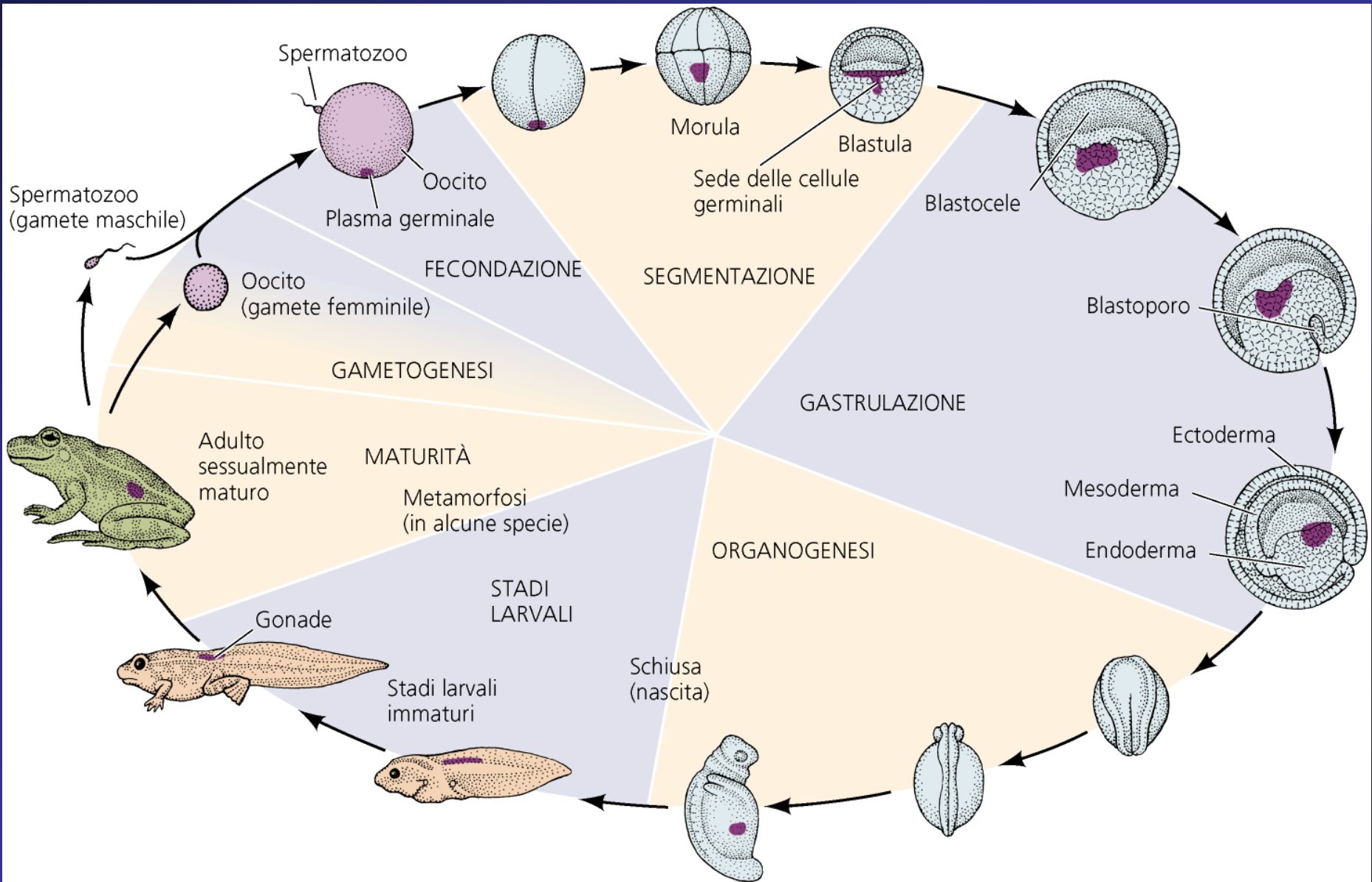
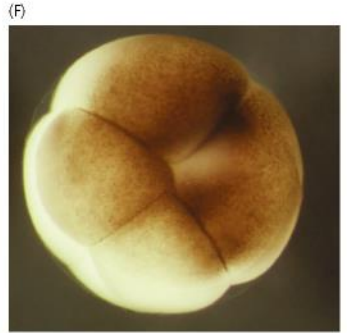
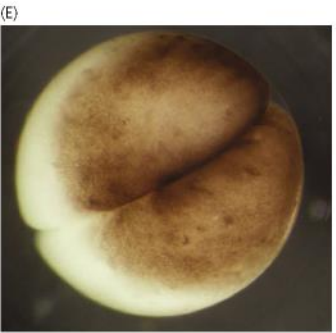
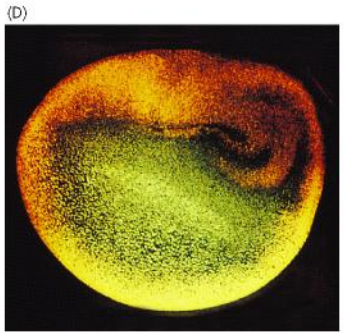
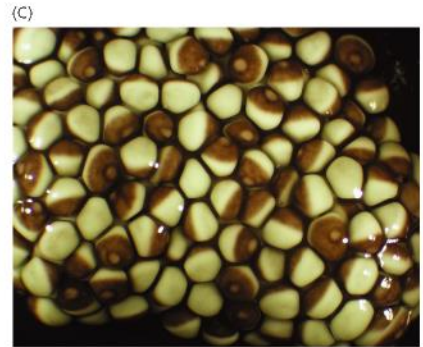
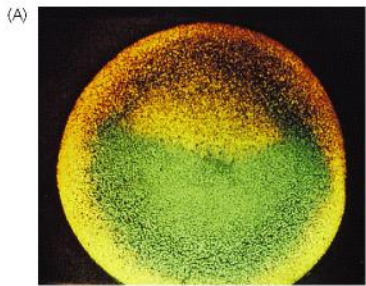
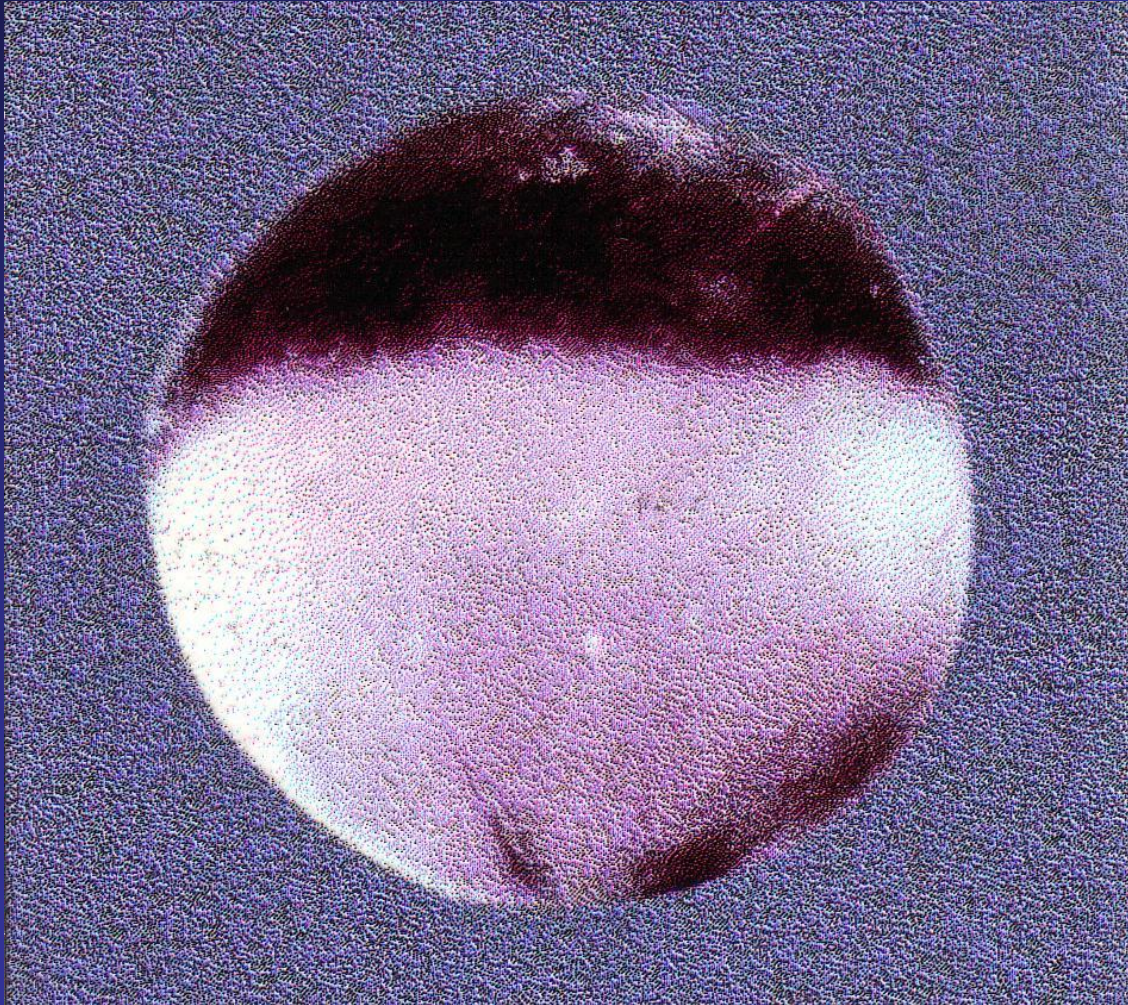


# Gli Anfibi





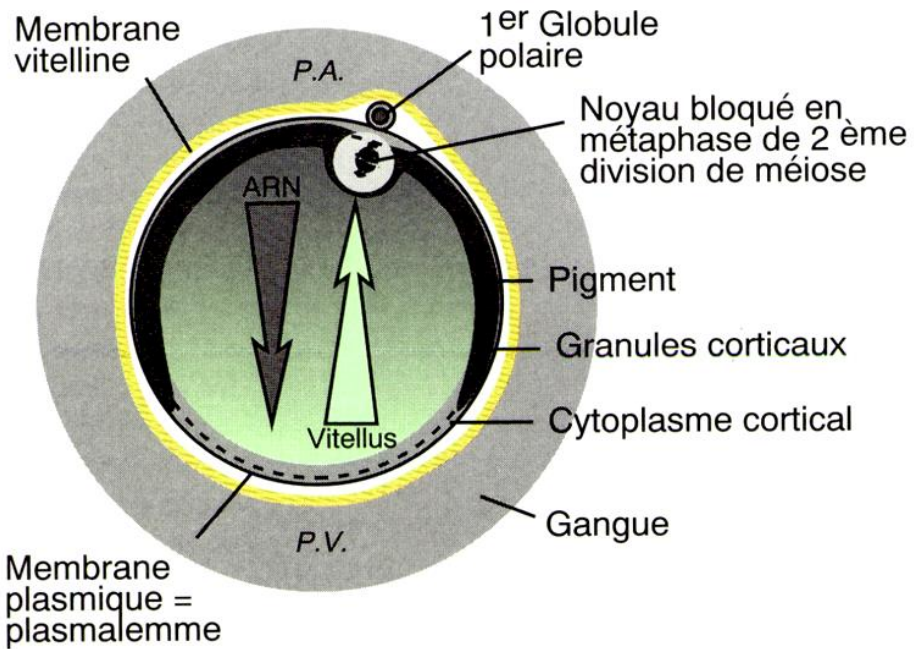


Uovo mesolecitico

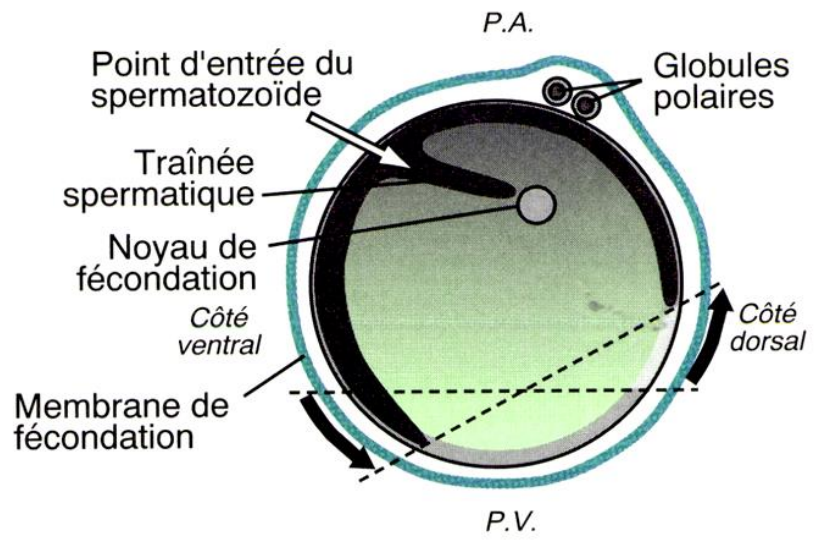
Sviluppo indiretto

# FECONDAZIONE

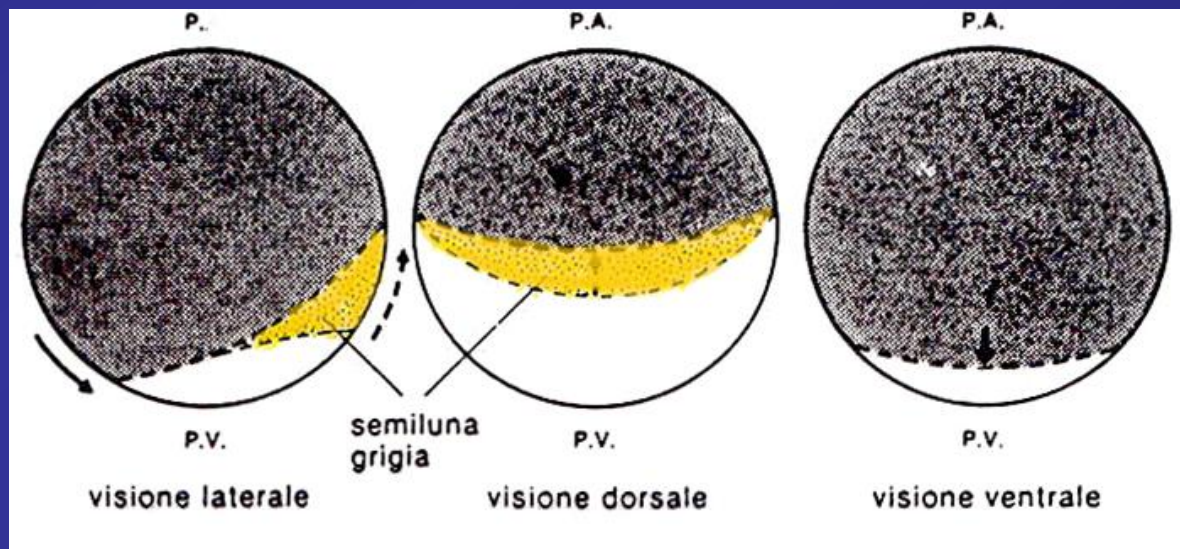
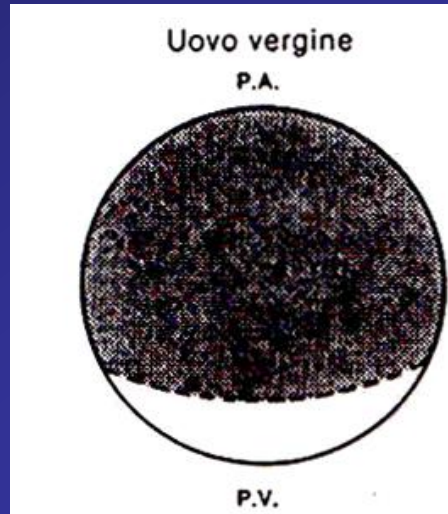
a) Œuf mûr, non fécondé



b) Rotation de symétrisation  
(l'œuf est représenté sans sa gangue)

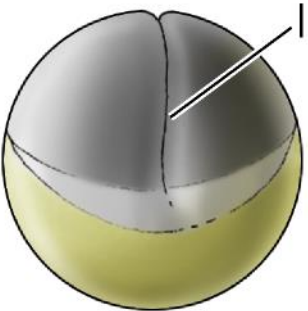


# ROTAZIONE CORTICALE

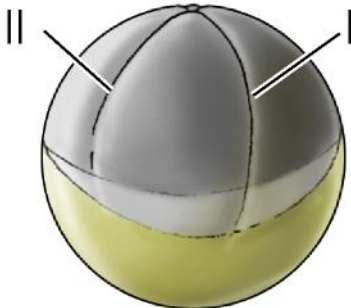


# Segmentazione oblastica diseguale bilaterale

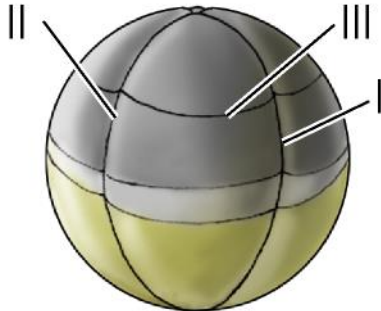
(A)



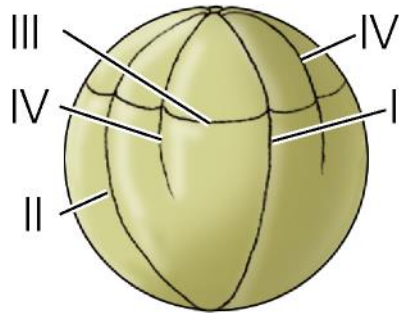
(B)



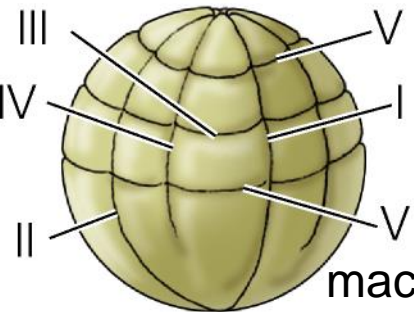
(C)



(D)



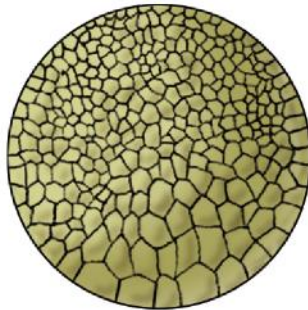
(E) micromeri



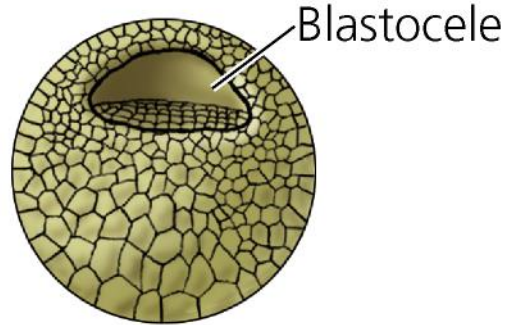
(F)



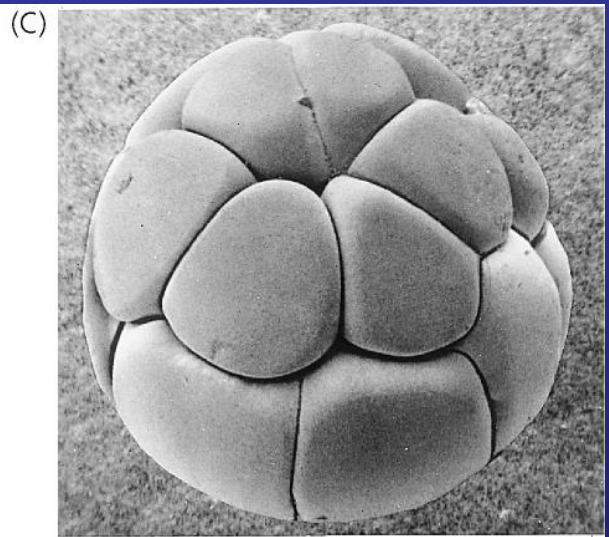
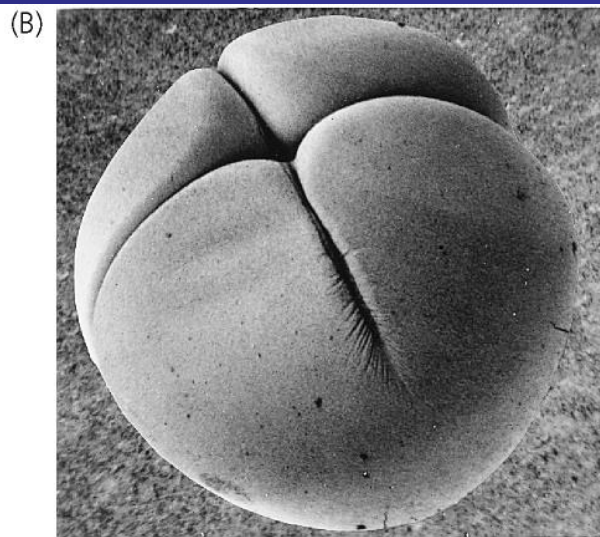
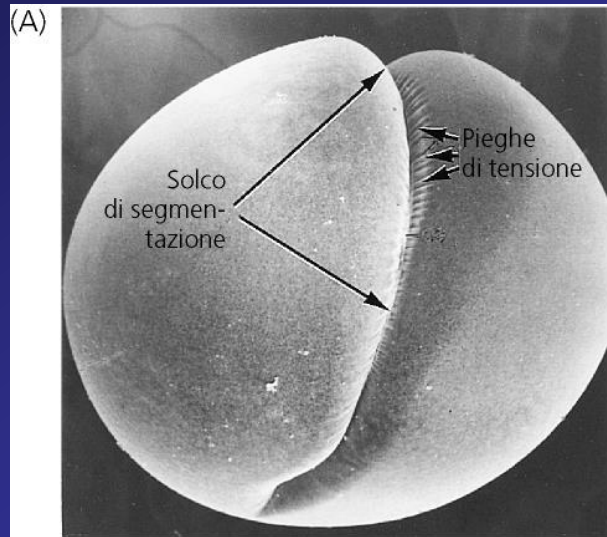
(G)



(H)



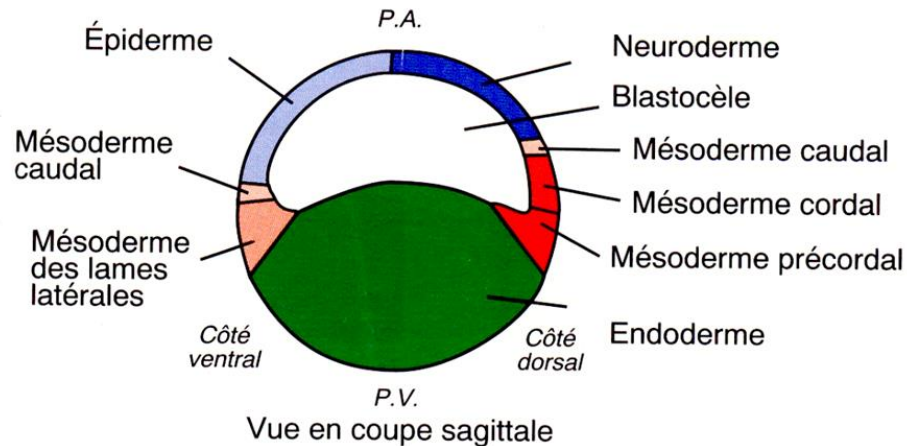
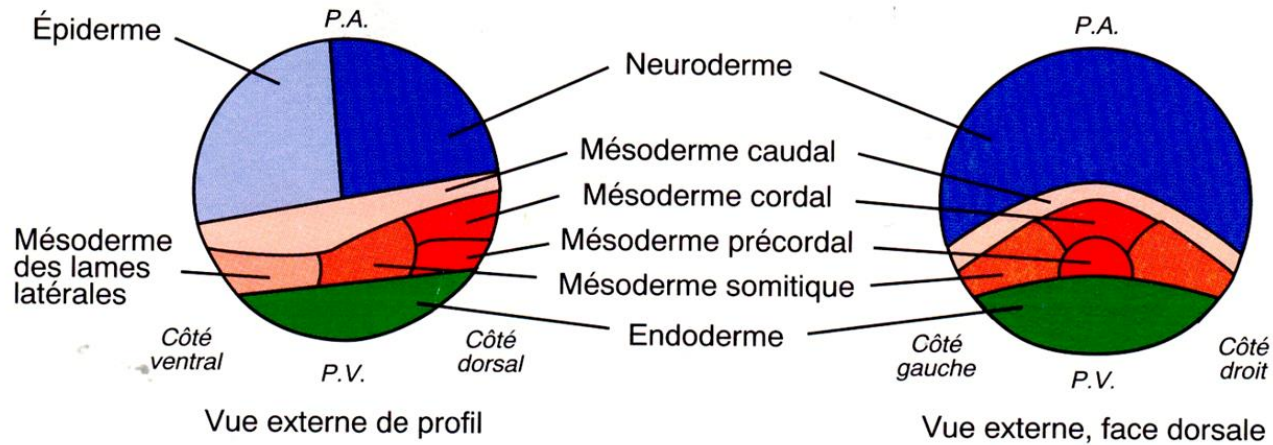
**MORULA**



# Territori presuntivi negli *Urodeli*

Ordine di Anfibi comprendente circa 560 specie suddivise in 9 famiglie di salamandre, tritoni, protei.

b) Urodèles

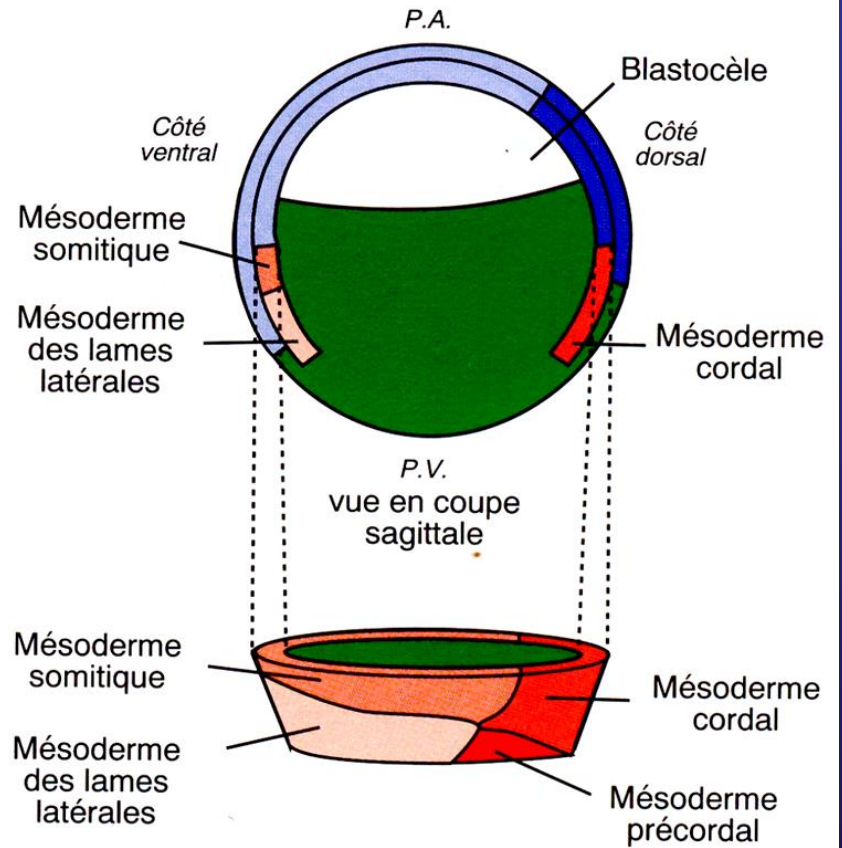
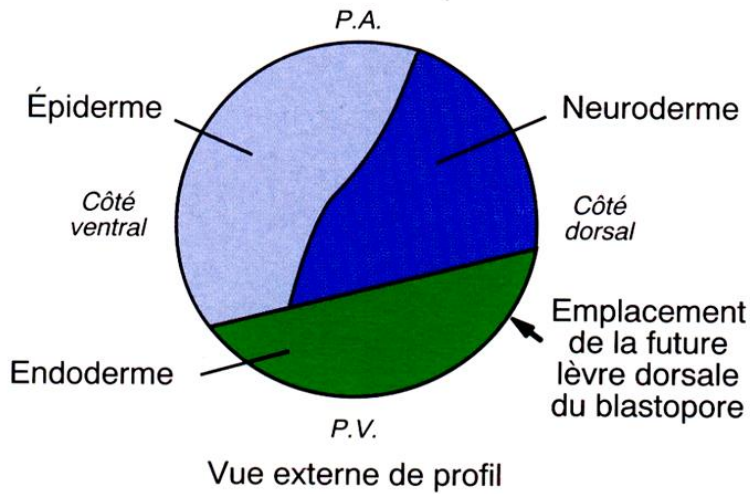




# Territori presuntivi Anuri

Ordine di anfibis cui appartengono oltre 7450 specie, comunemente definite rane, rospi e raganelle

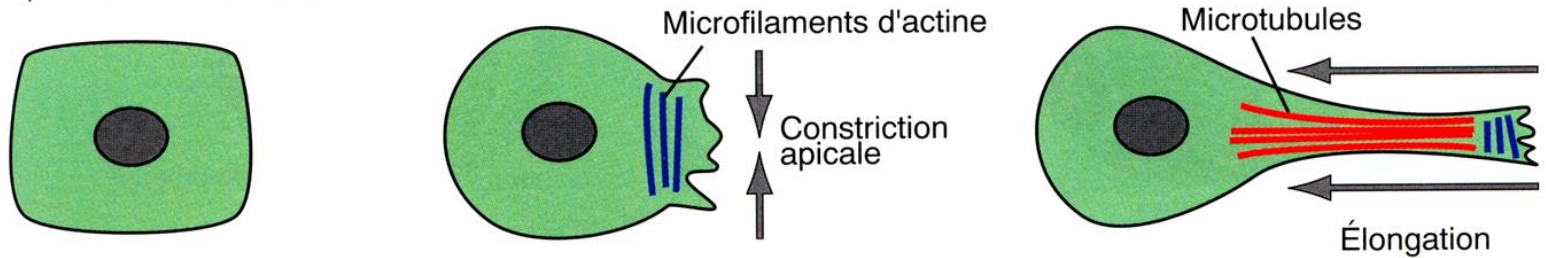
a) Xénope



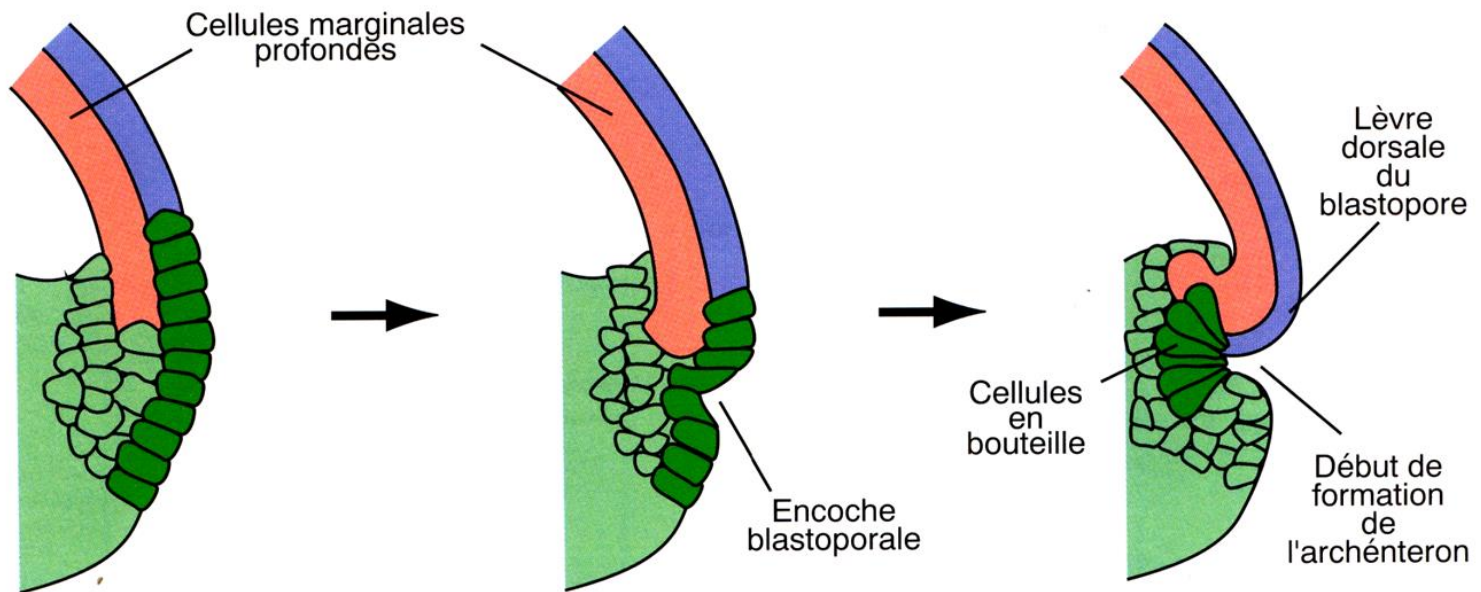
Projection montrant la répartition du mésoderme

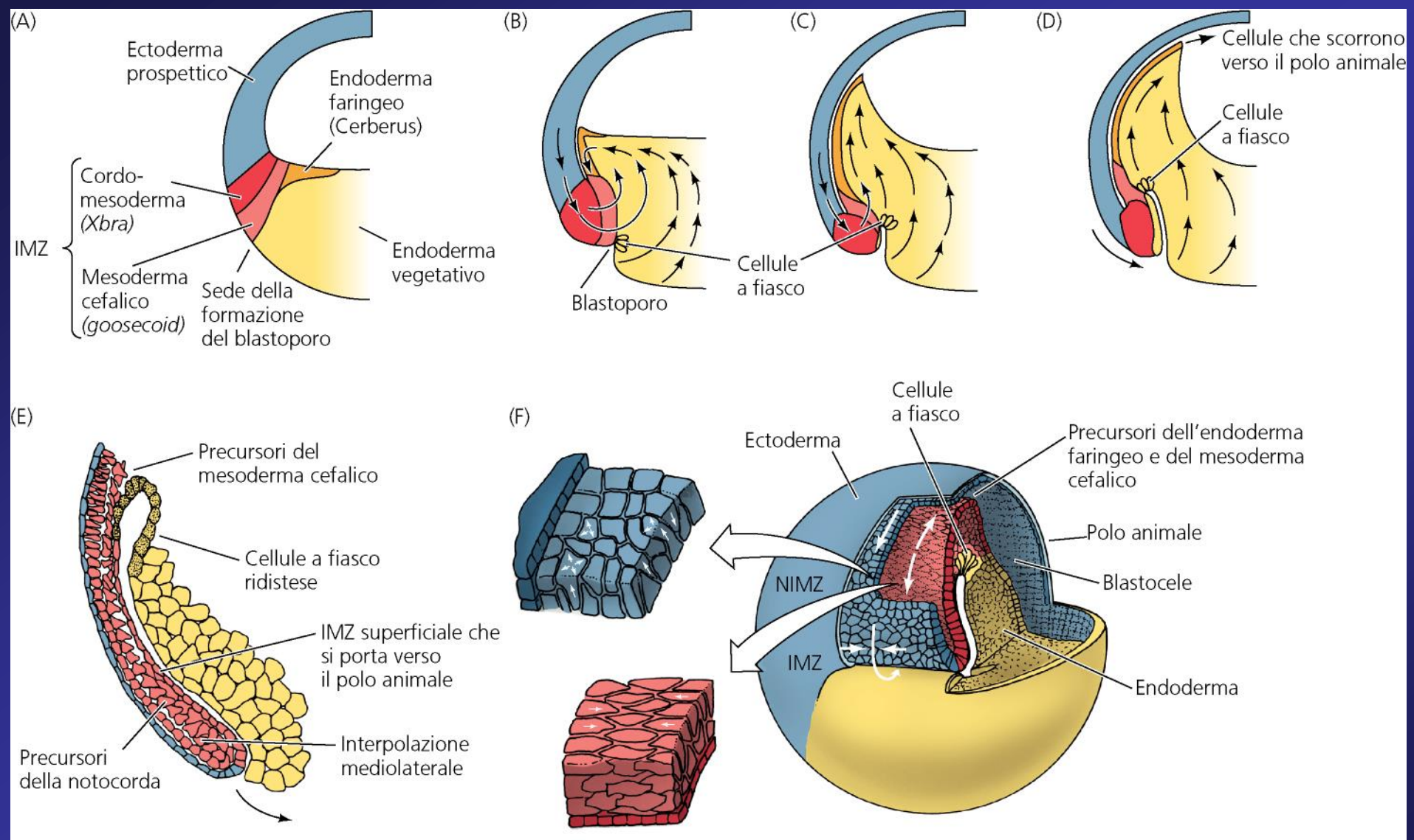
# Gastrulation

b) Formation des cellules en bouteille



c) Schémas de la formation de l'archentéron

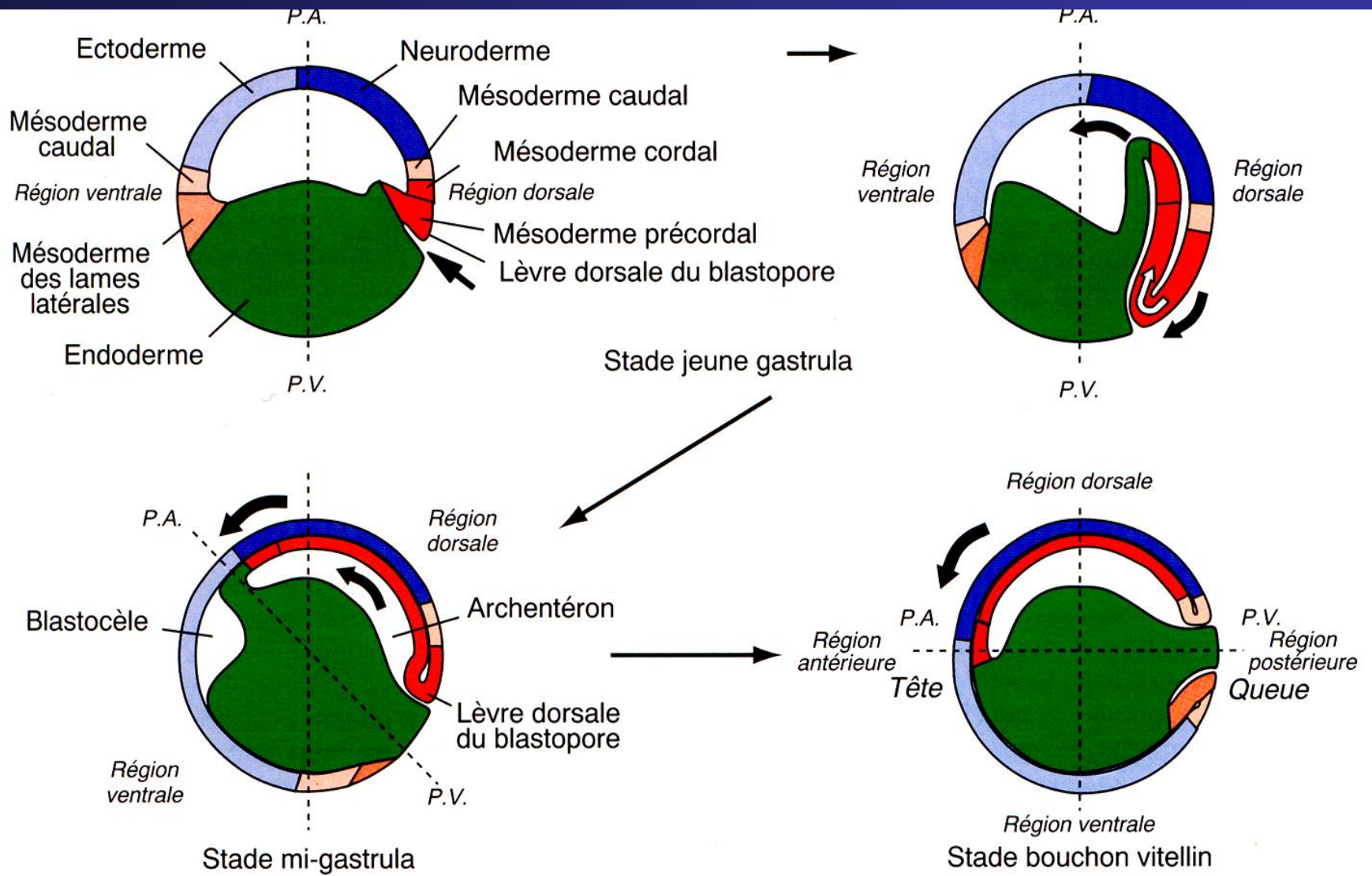




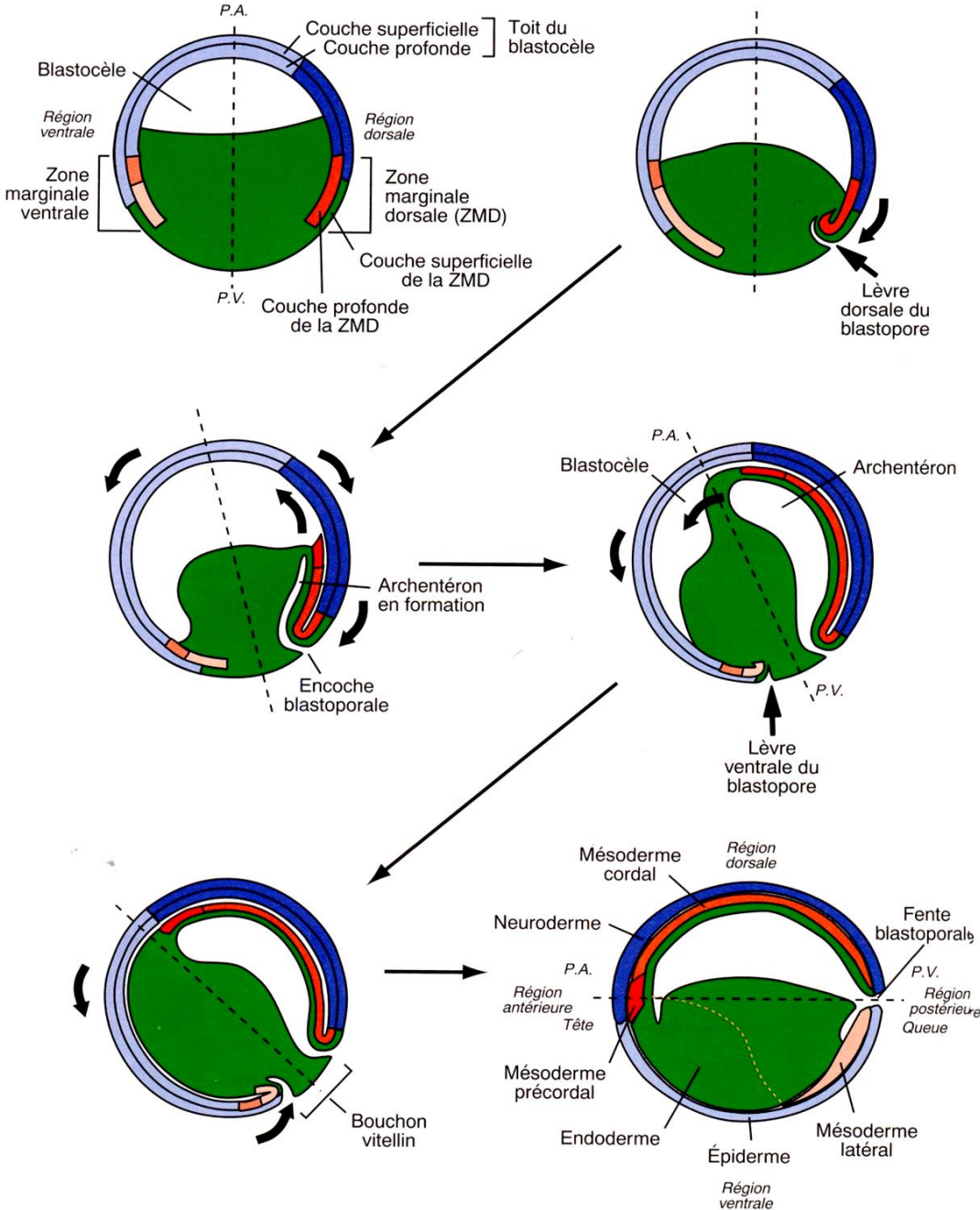
Invaginazione

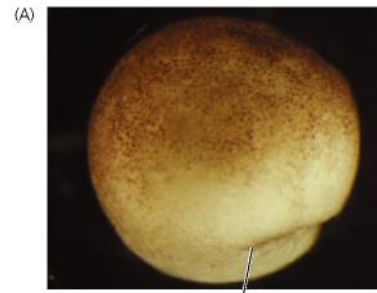
Involuzione

Epibolia



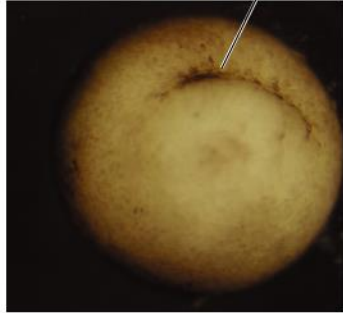
Urodeli



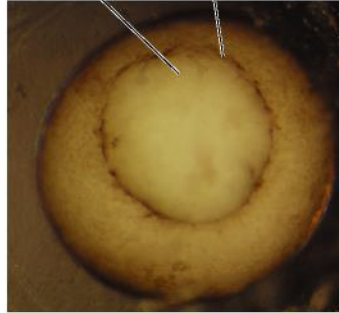


Labbro dorsale del blastoporo

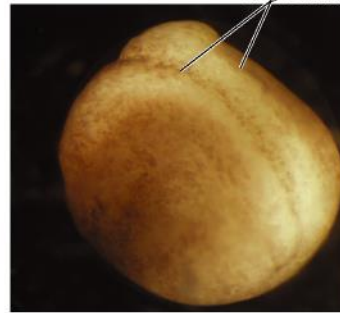
(B) Labbro dorsale del blastoporo



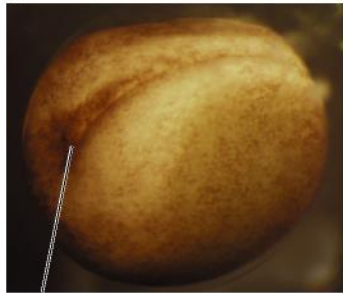
(C) Tappo vitellino Blastoporo



(D) Labbro dorsale del blastoporo Pieghe neurali

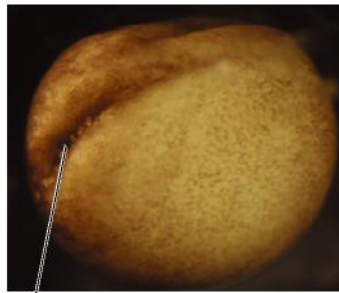


(E)



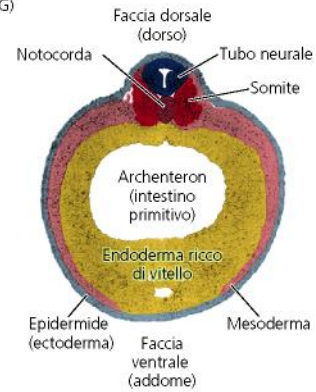
Doccia neurale

(F)

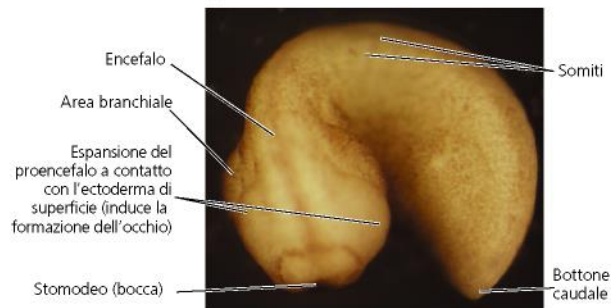


Tubo neurale aperto

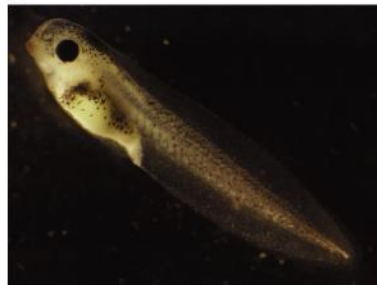
(G)

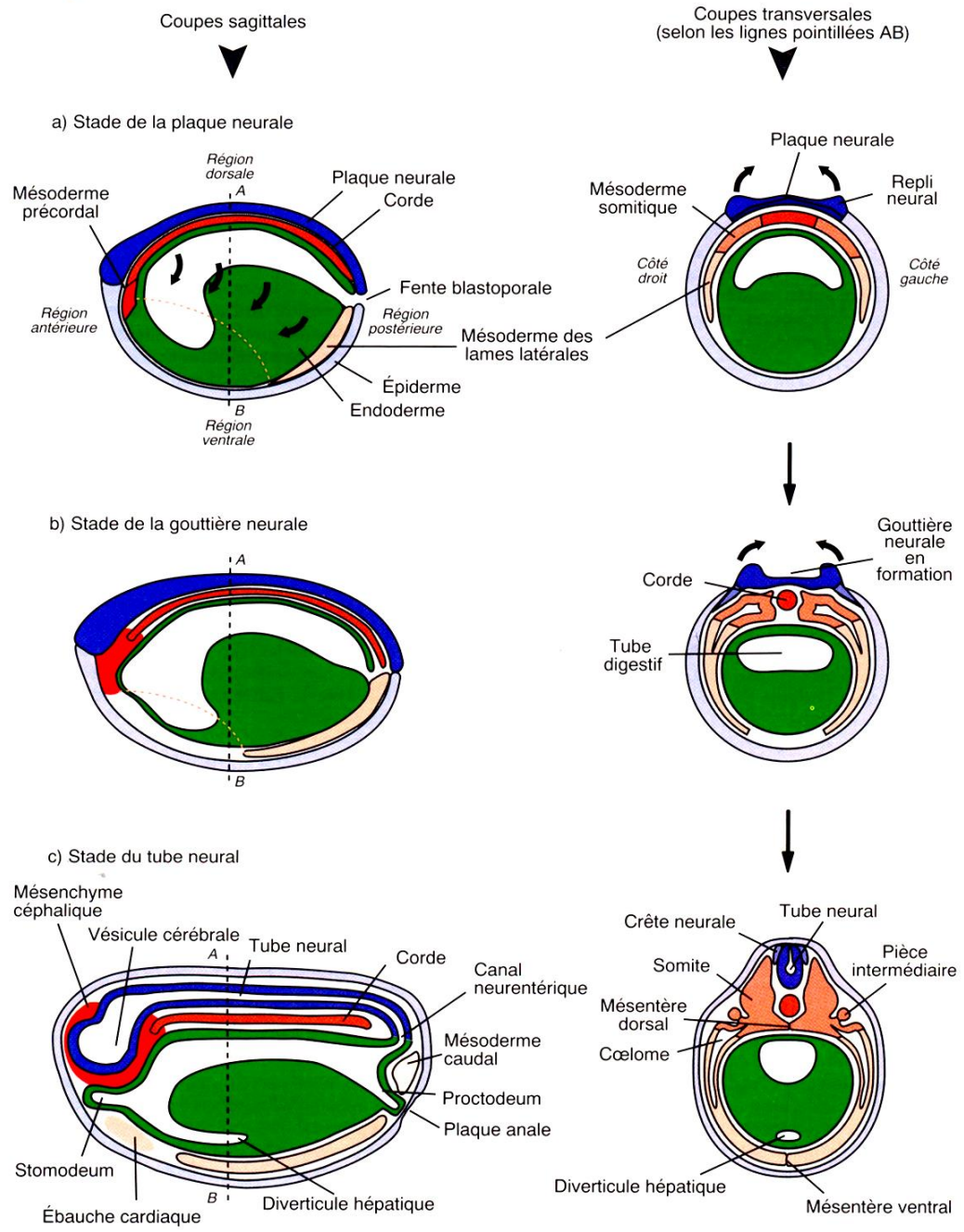


(H)



(I)

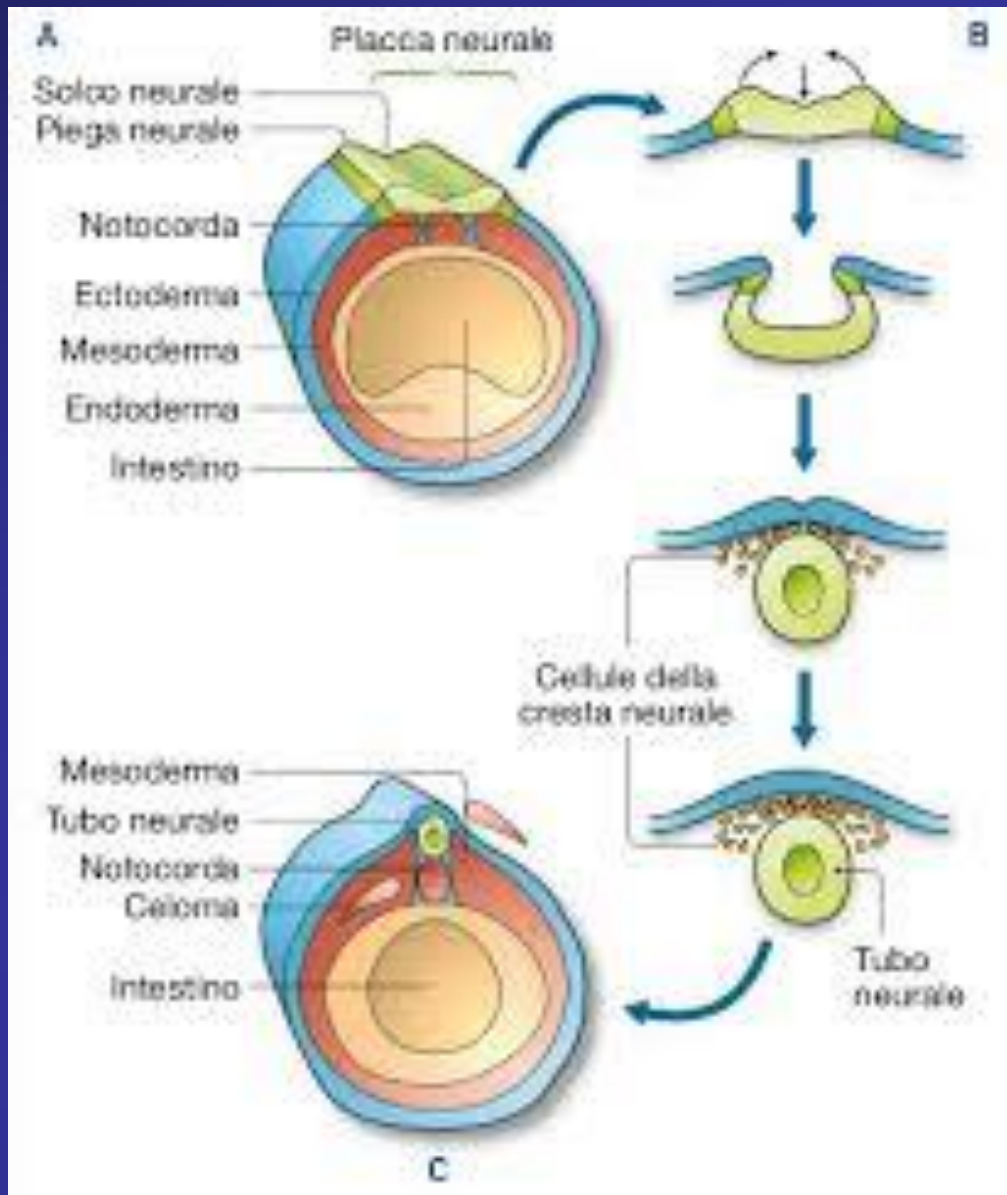




# Neurulation

- Piastra neurale
- Pliche neurali
- Creste neurali

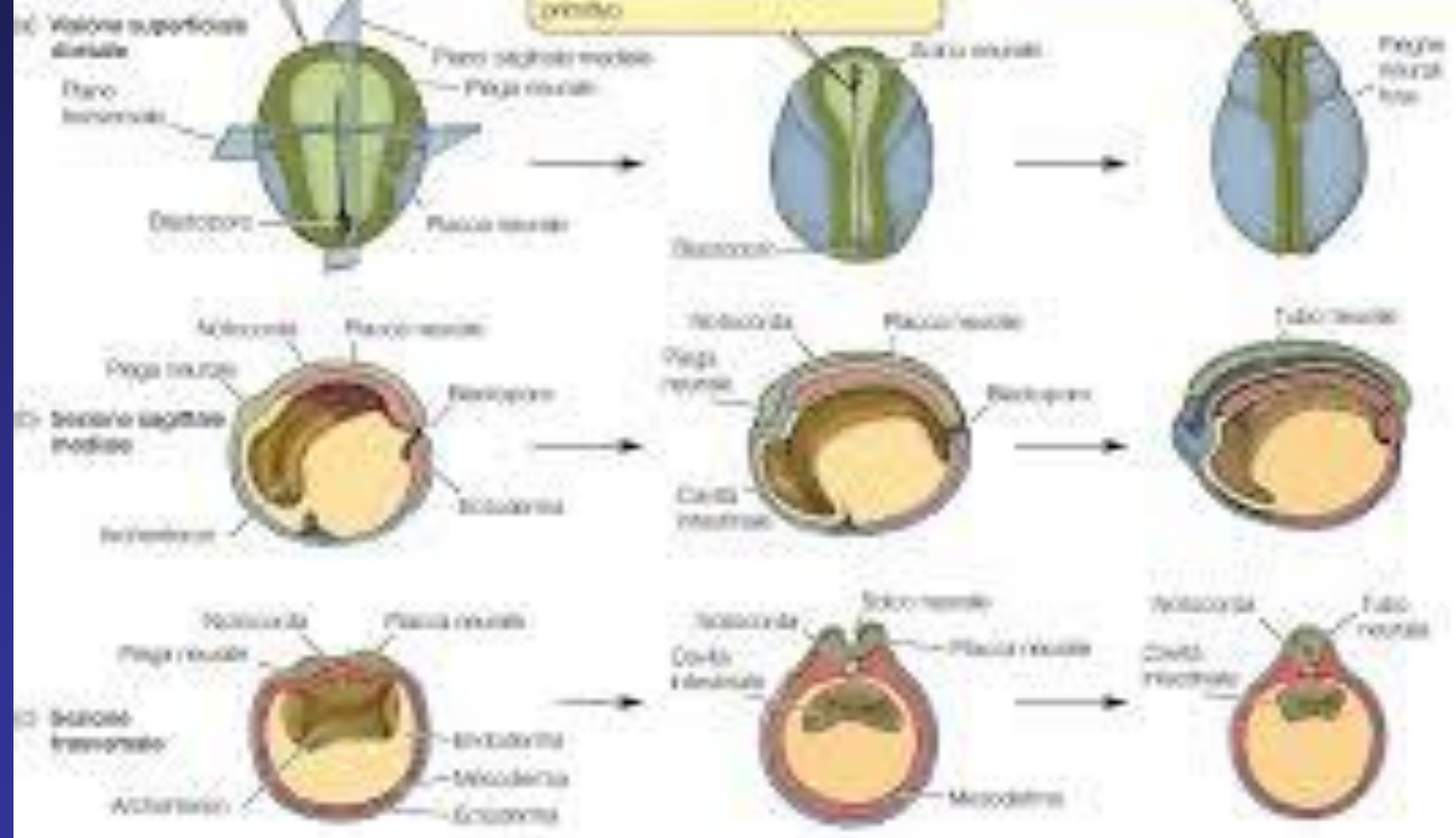
# Neurulazione

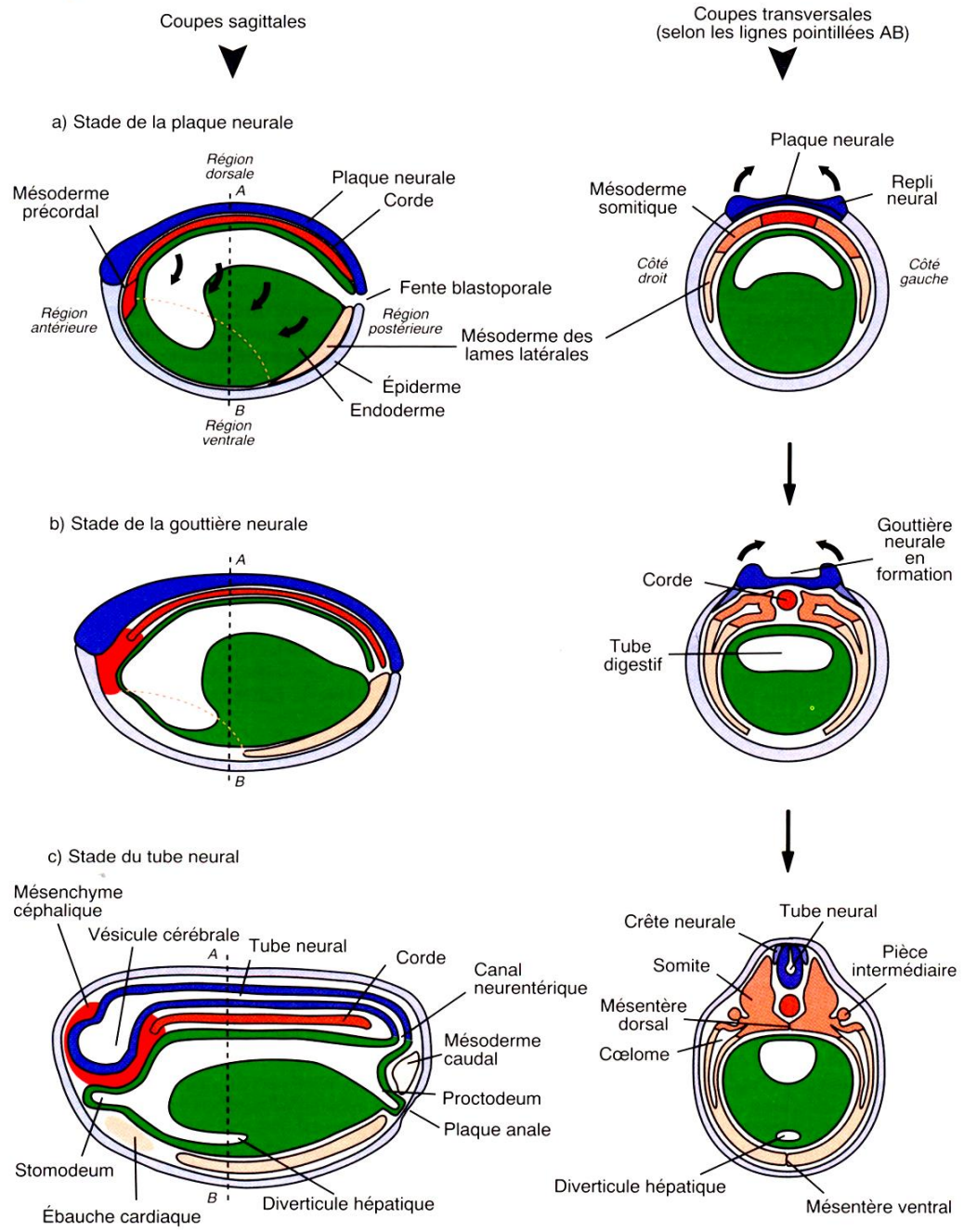


All'inizio della neurulazione si forma l'ectoderma dorsale e il tubo intestinale.

Fase intermedia della neurulazione: i margini della placca neurale si elevano e si accostano l'uno verso l'altro, mentre la porzione centrale della placca si approfondisce, dando origine al tubo primitivo.

Neurulatione avanzata: quando i margini della placca neurale si sono fusi, si forma una struttura cilindrica che si distacca dall'ectoderma e diventa il tubo neurale.

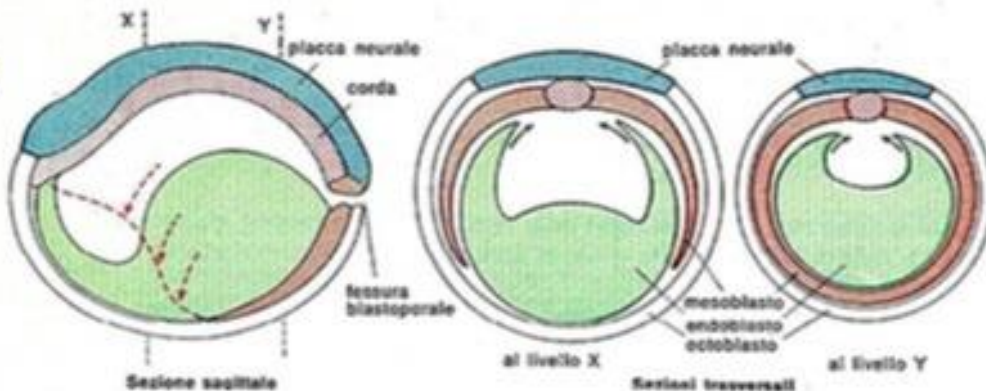




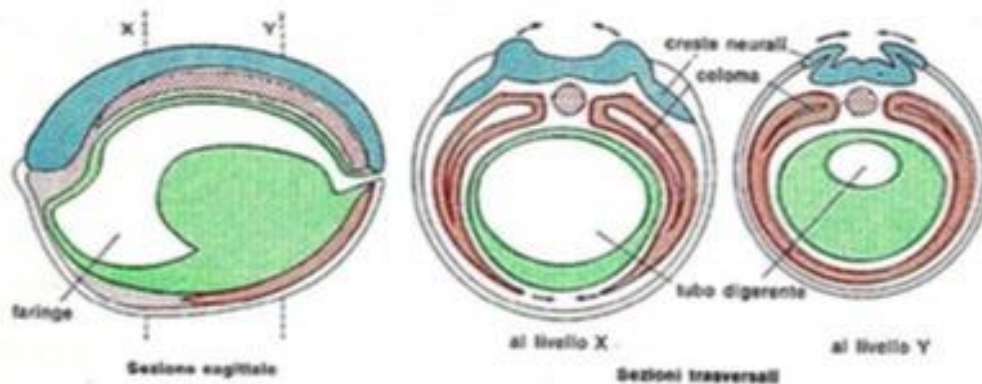
# Mesoderma

- Mesoderma
- M. Somitico
- M. Intermedio
- M. Laterale

I. PLACCA NEURALE

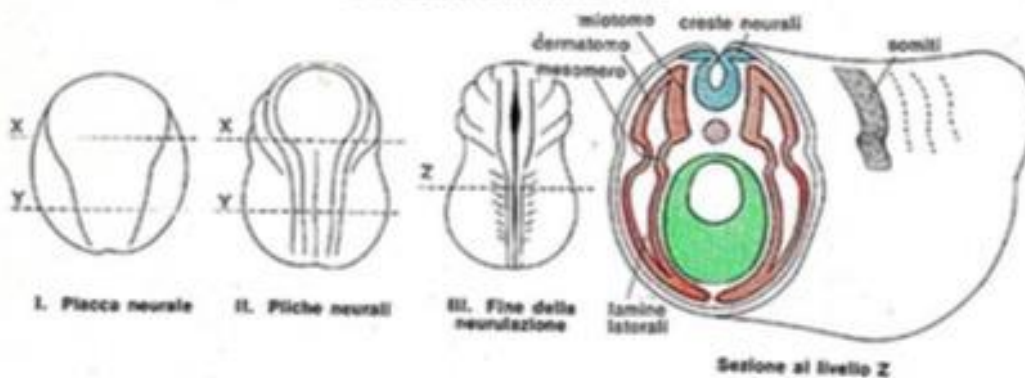


II. Pliche neurali

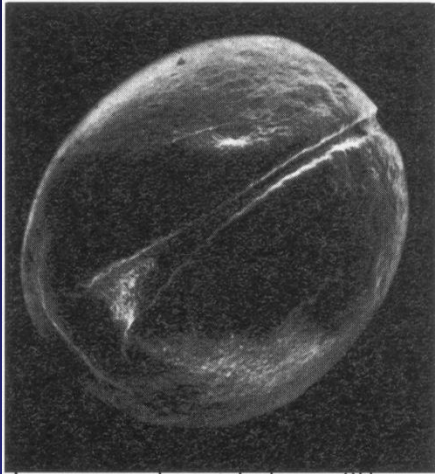


Creste neurali = 4° foglietto

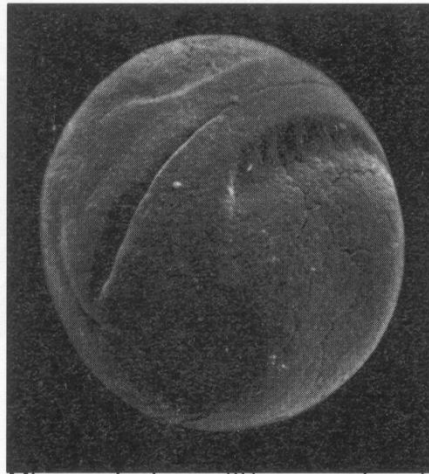
III. FINE DELLA NEURULAZIONE



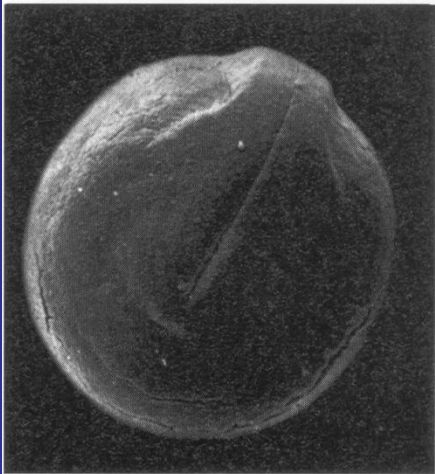
b) La neurulation, microphotographies d'embryons de xénope (les embryons sont dégangés et sans membrane de fécondation, x 50)



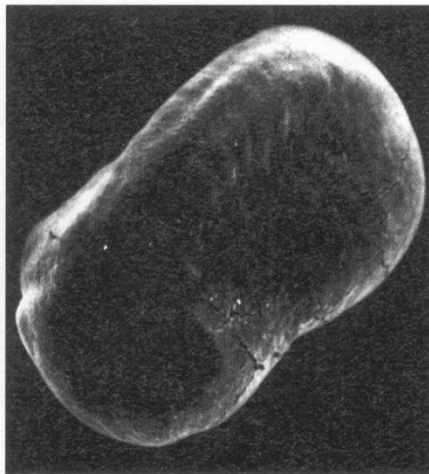
Jeune neurula au stade gouttière neurale



Mi-neurula, la gouttière neurale est fermée dans la région troncale

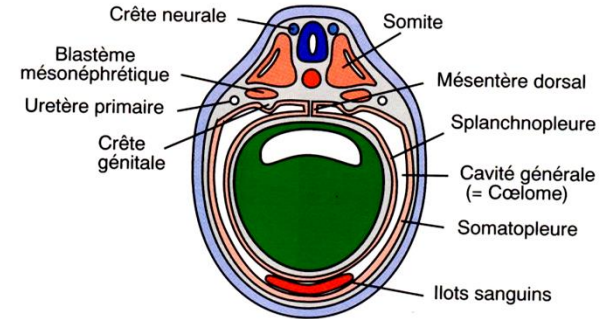


Neurula âgée



Jeune bourgeon caudal

b) Coupe transversale selon AB



## Somite

1. Cartilagine vertebrale e costale
2. Muscolo striato
3. Derma

# Metamorfosi

**Pre-metamorfosi: accrescimento girino, Presenza di branchie, progressivo sviluppo arti posteriori.**

**Metamorfosi: arti anteriori, regressione pinna caudale e coda, modificazione tubo digerente, sviluppo polmoni.**

**Controllo ormonale:  
ipofisi- ormone tireotropo  
Tiroide- ormone tiroxina**

