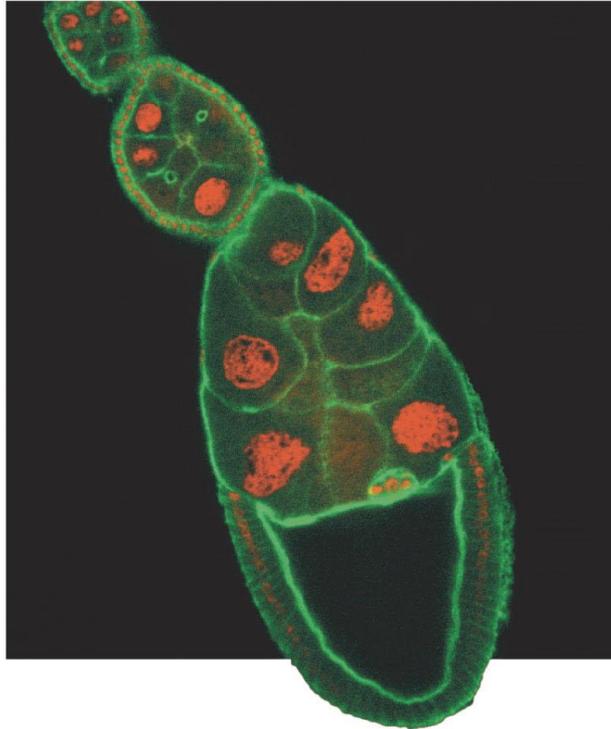
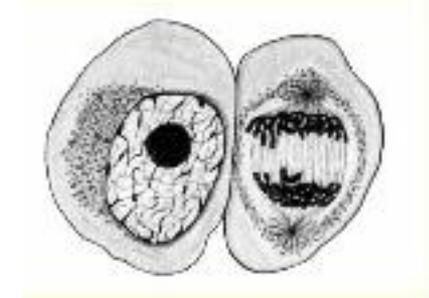


1. Completar os últimos dados comportamentais da regeneração das planárias e preencher as perguntas do guia. Entregar.
2. Discussão dos projetos de regeneração
2. Palestra curta sobre linhagem germinativa (discutir perguntas da leitura).
3. Discutir resultados do espermograma.
4. Palestra de determinação do sexo.





DEVELOPMENTAL BIOLOGY, Eighth Edition, Chapter 19, Opener © 2006 Sinauer Associates, Inc.



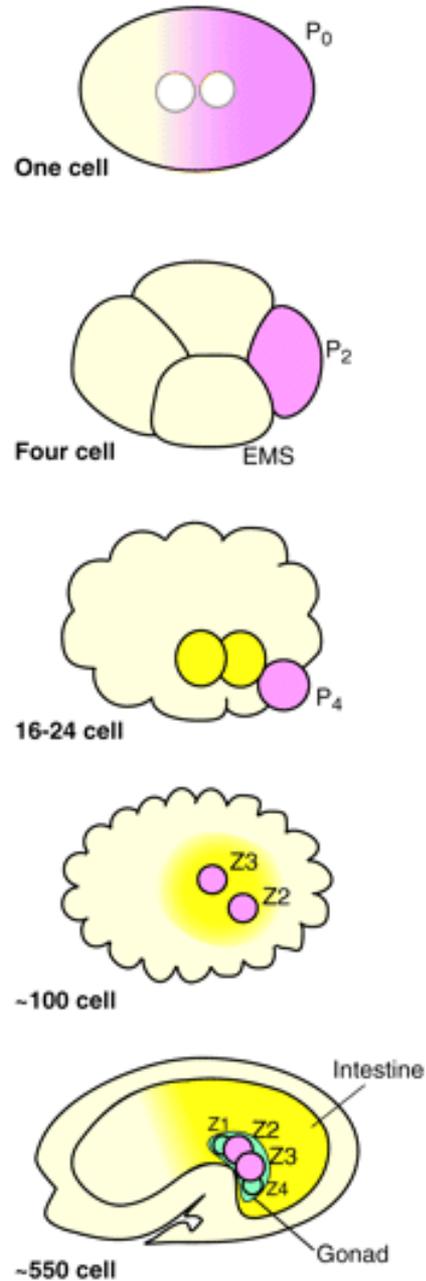
PGCs da crista gonadal
da tartaruga

Sternoterus odoratus

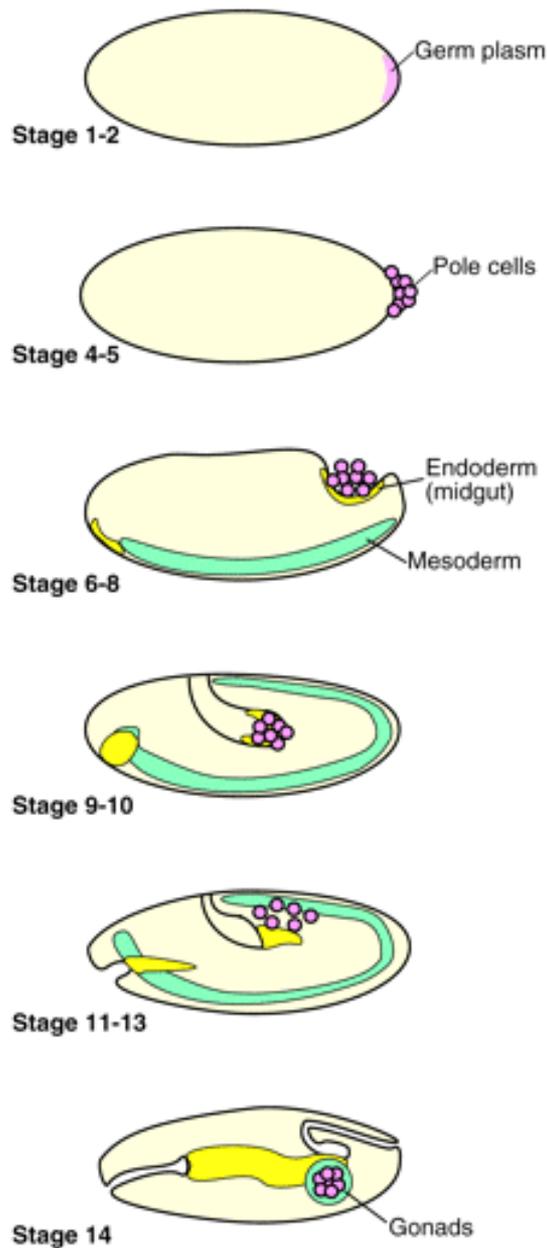
(Extavour, 2003)

Formas de determinação das células germinativas em sistemas de animais modelo

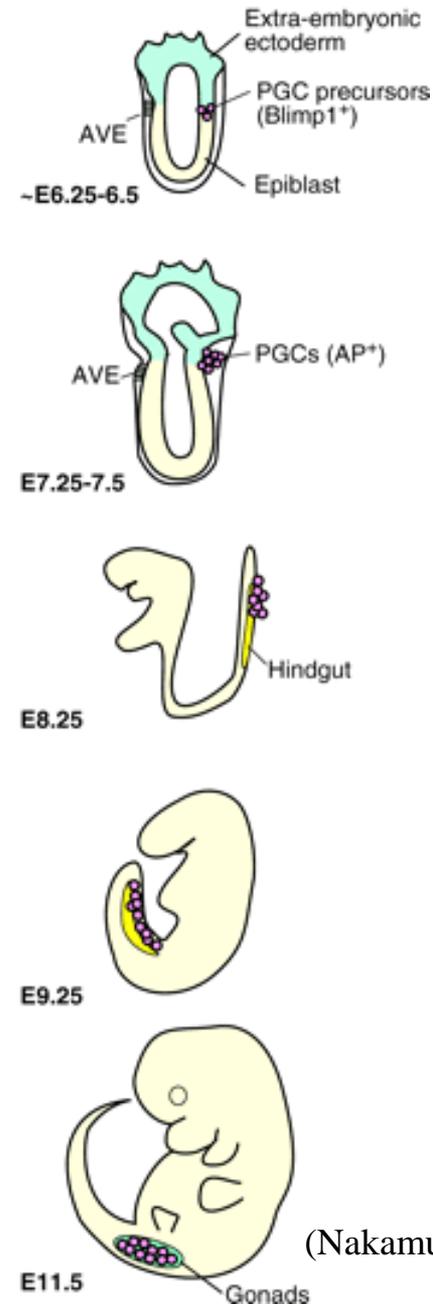
A *C. elegans*



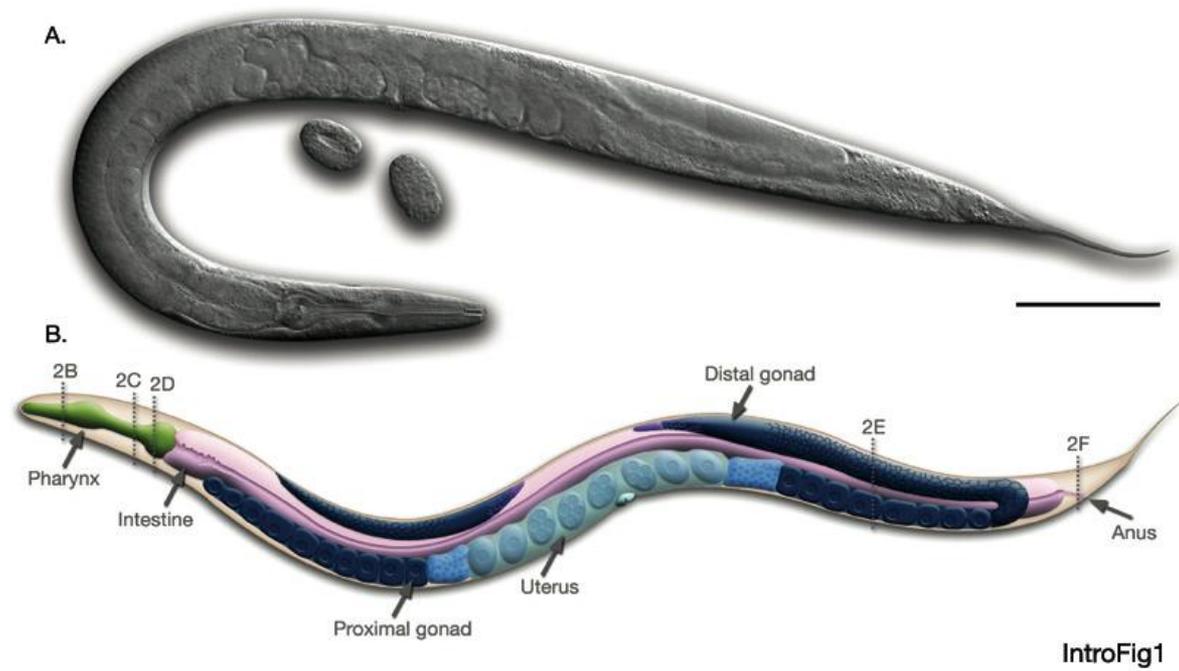
B *Drosophila*

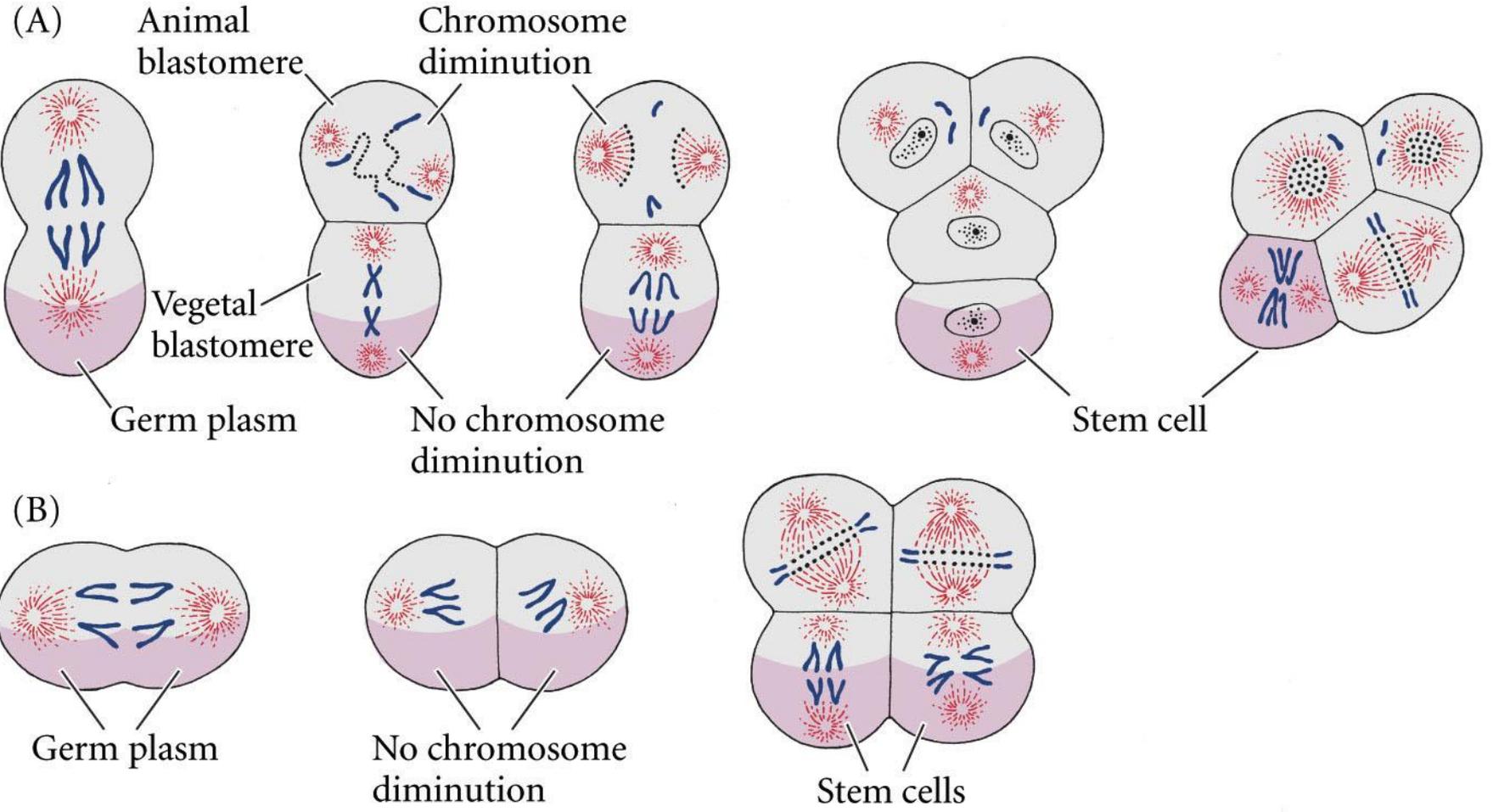


C Mouse

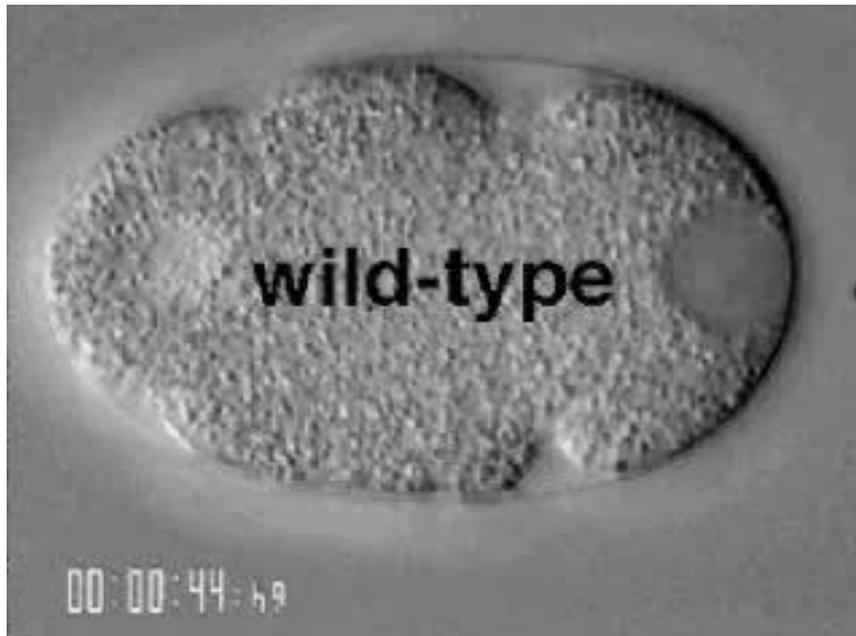


(Nakamura & Seydoux, 2008)

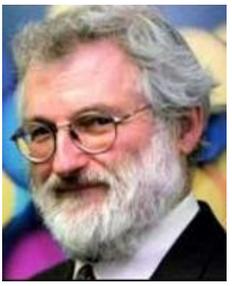
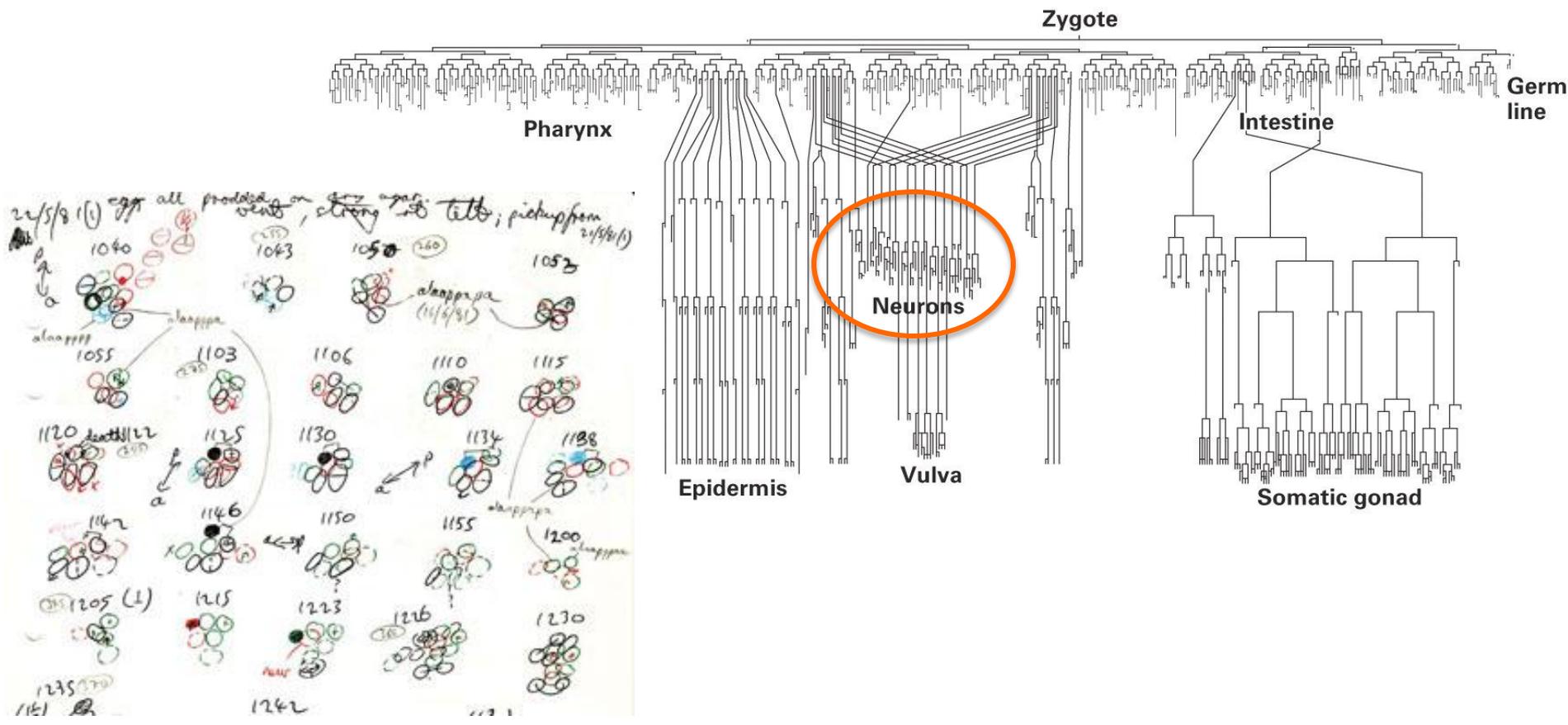




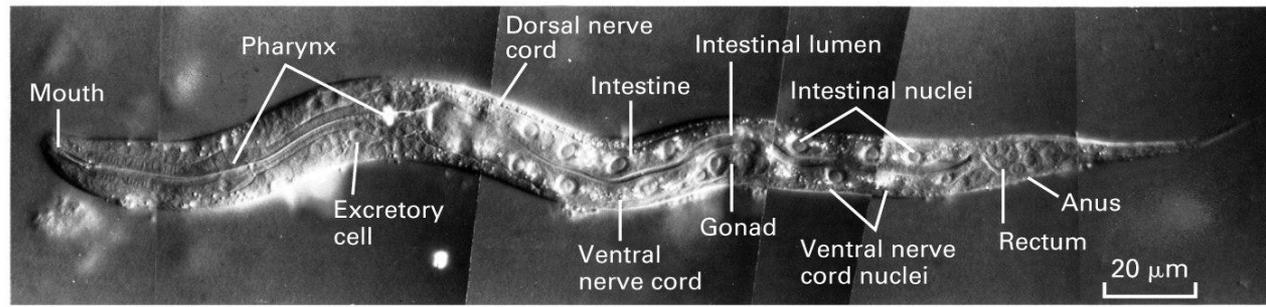
Nem todos os nematóides sofrem redução cromossômica!



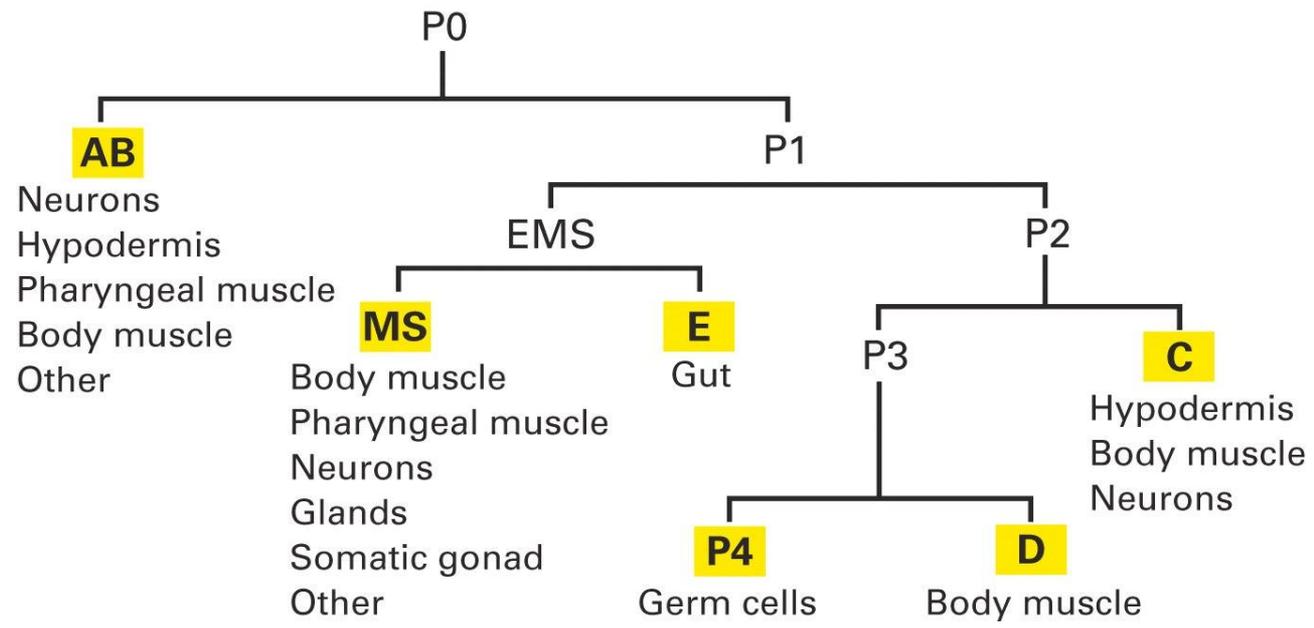
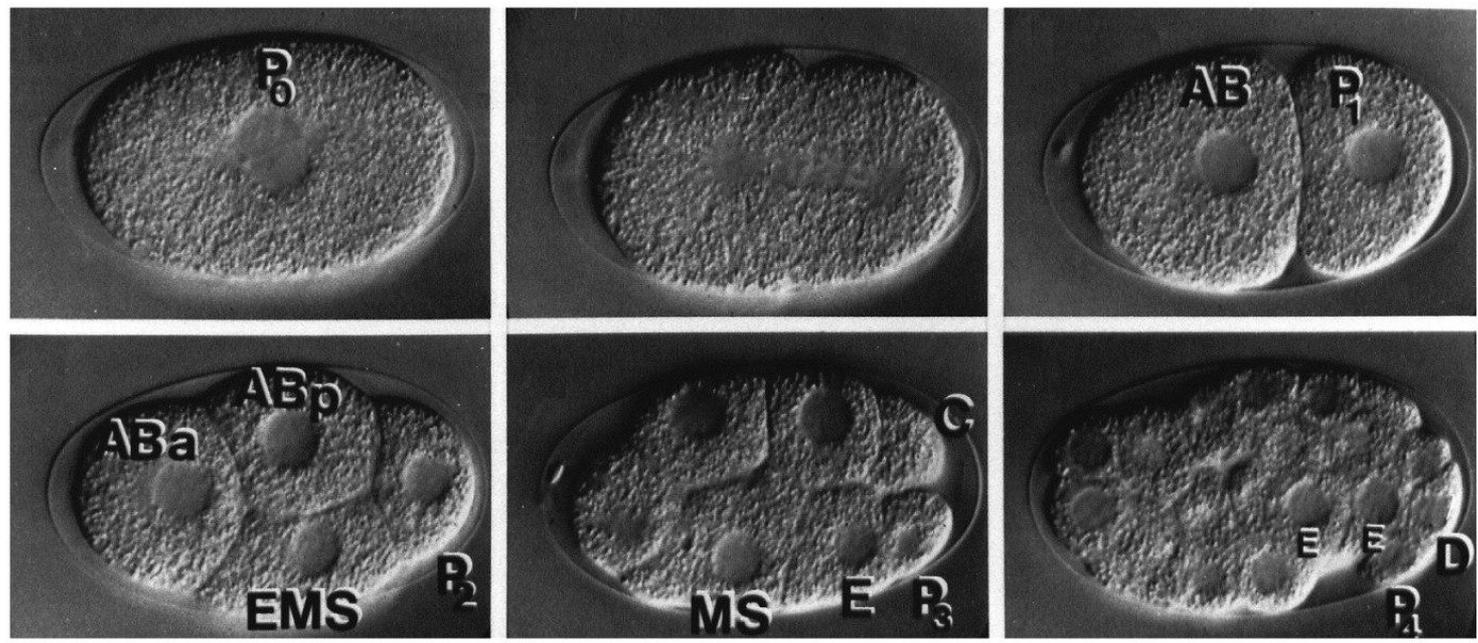
A linhagem germinativa é determinada muito cedo no desenvolvimento de *C. elegans*

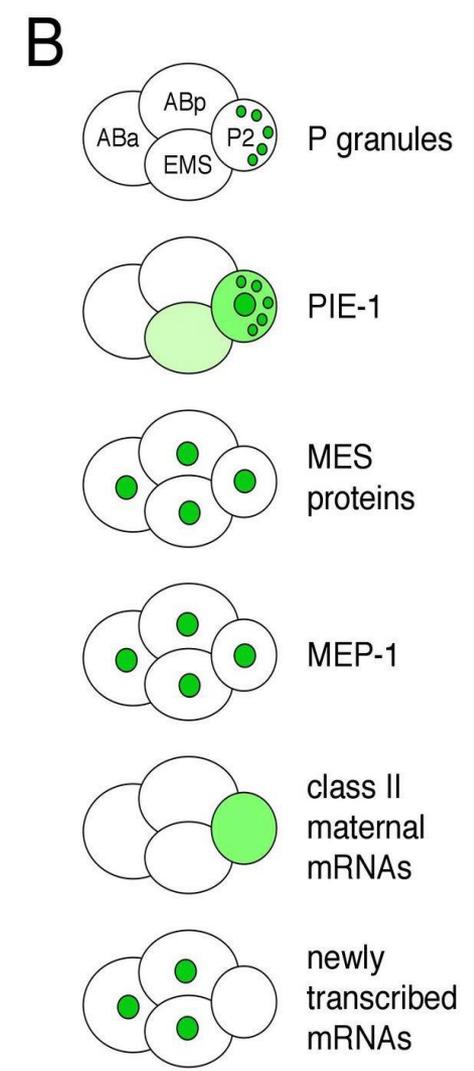
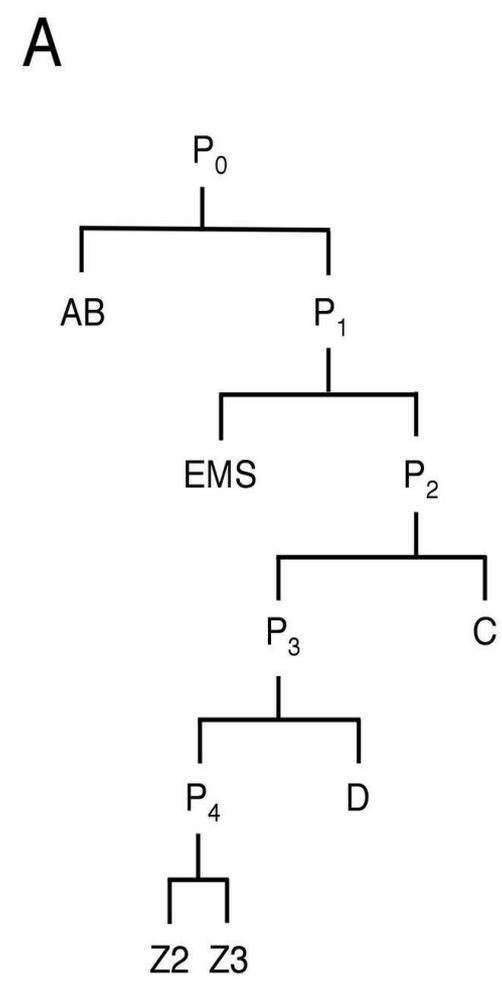
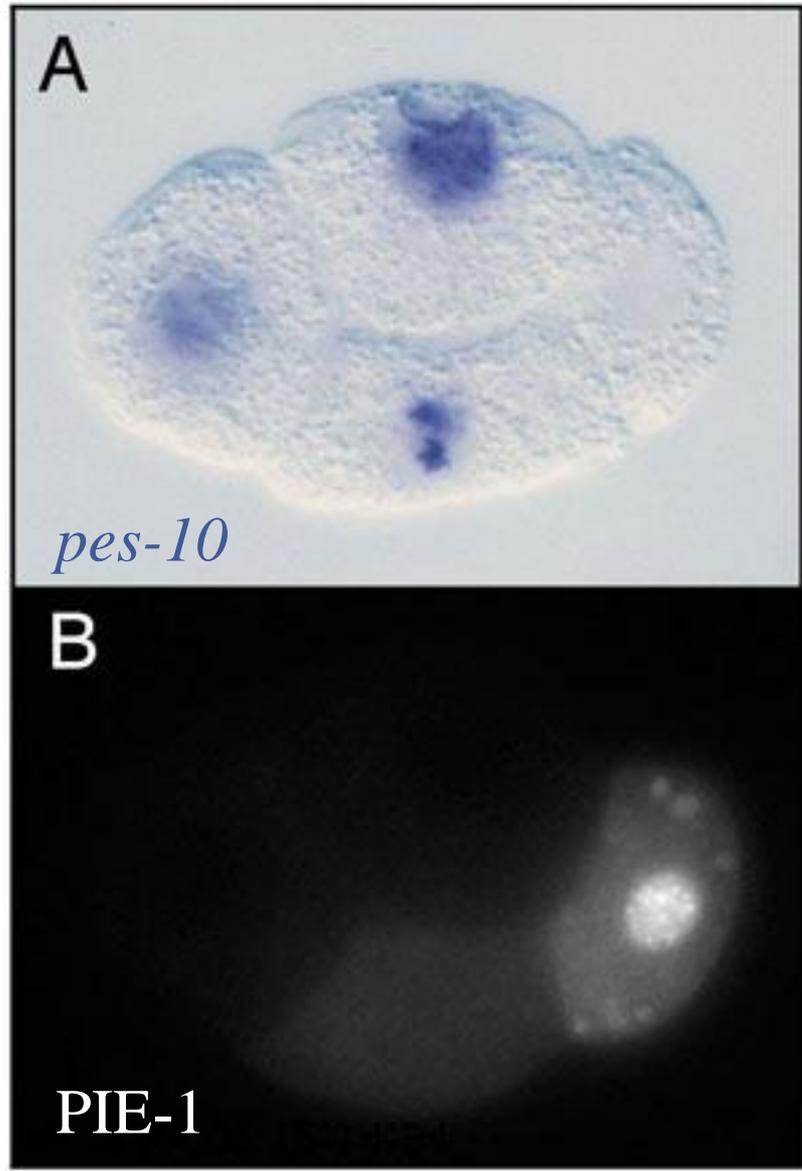


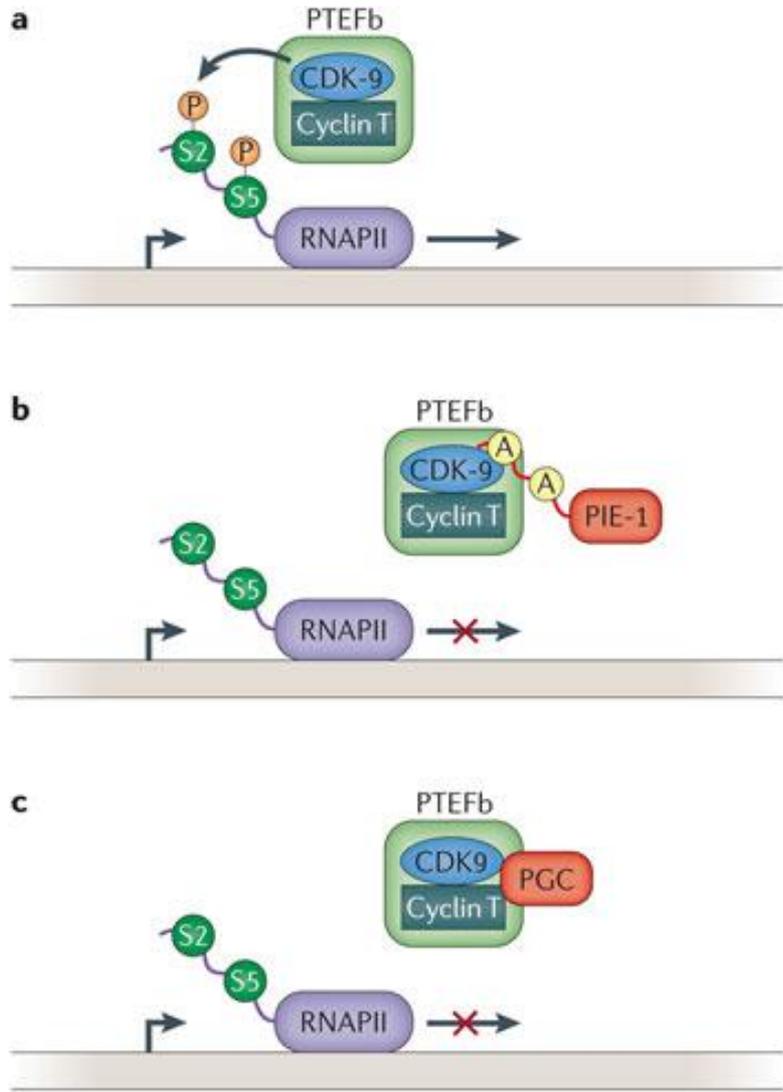
John Sulston

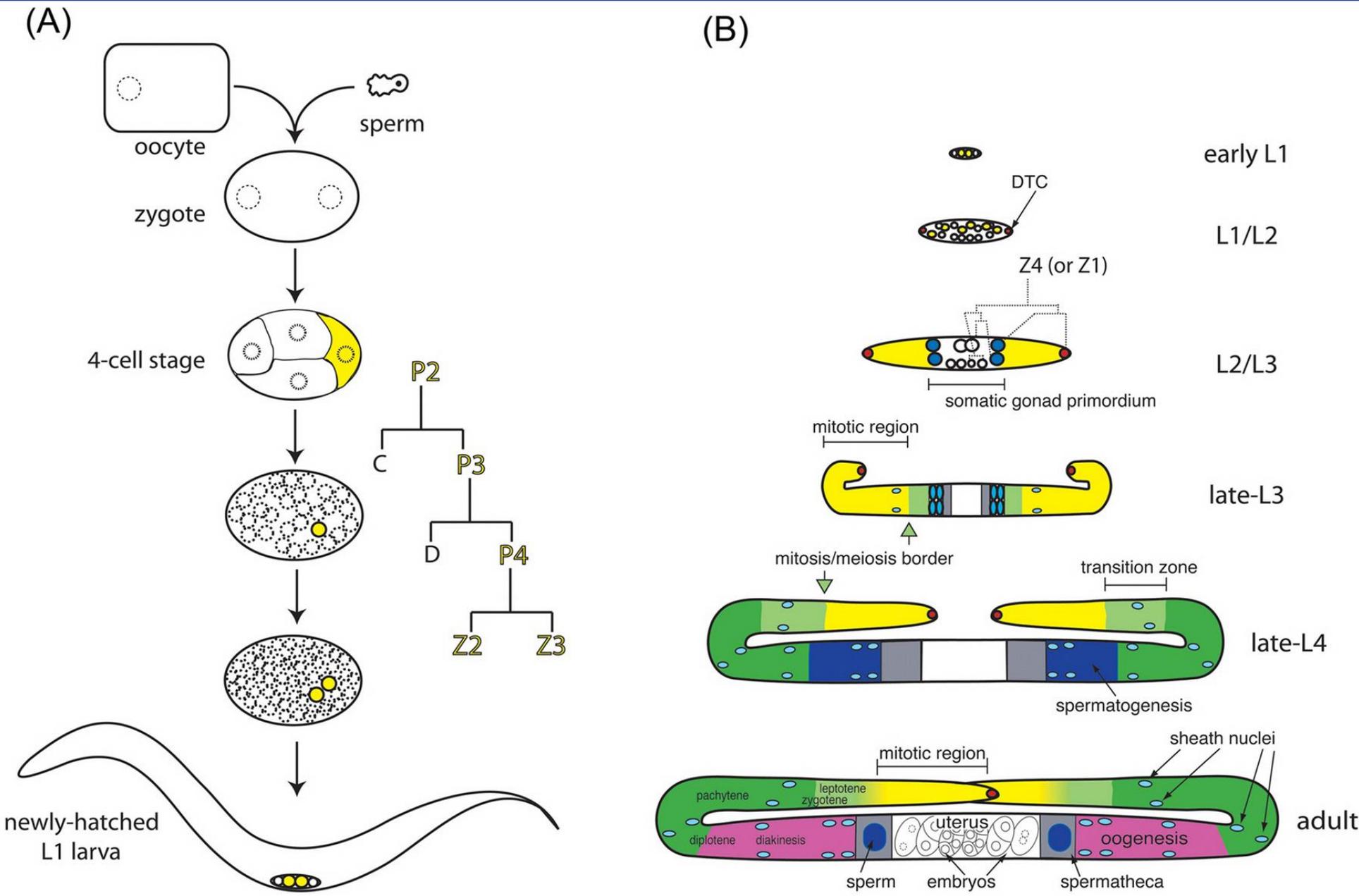


P4 dá origem as células germinativas primordiais (PGCs)



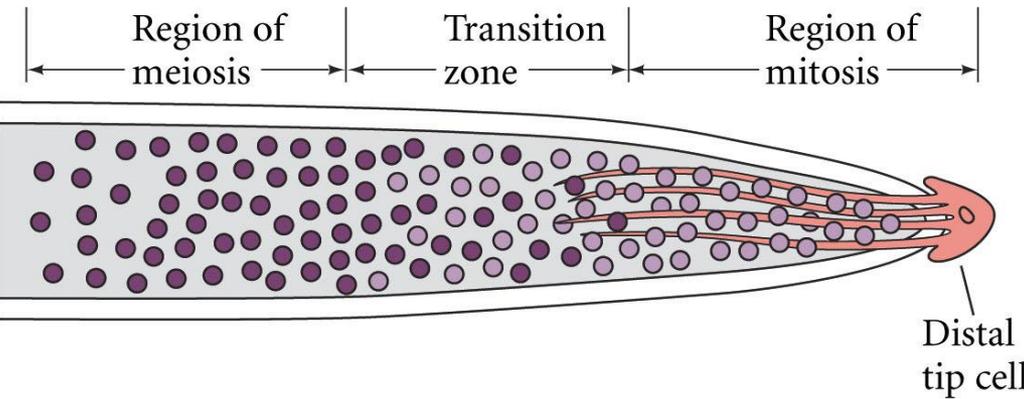




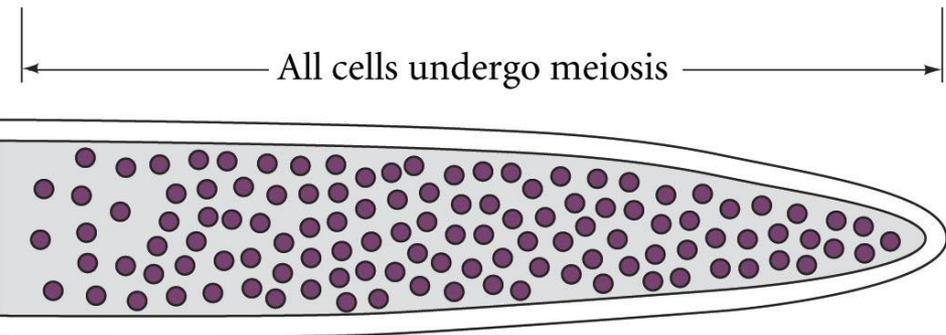


Regulação da decisão de mitose-meiose pela ponta distal em *C. elegans*, ovotestis celular (Parte I)

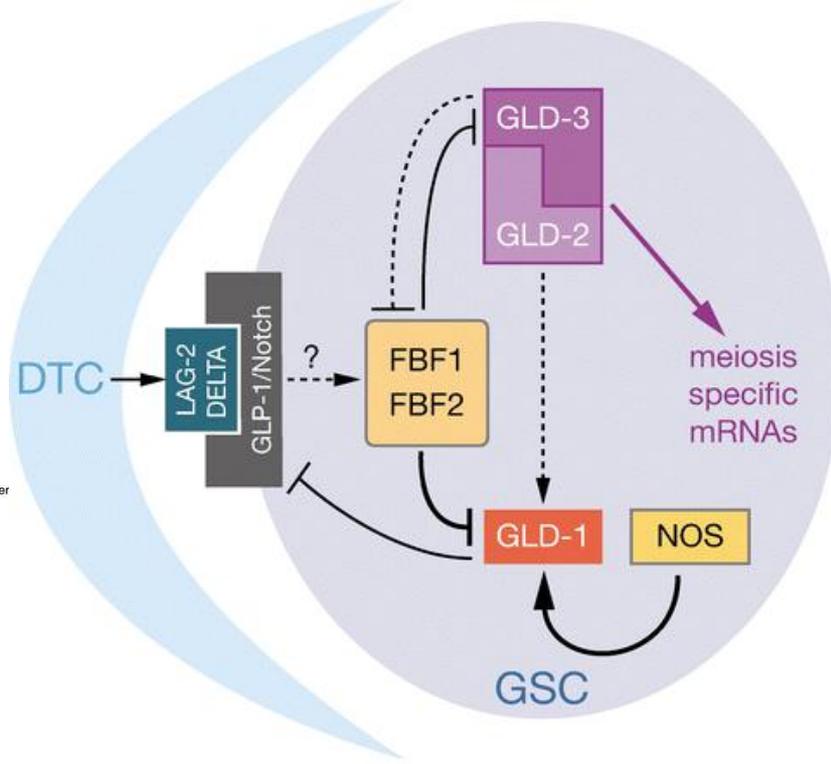
(A) Intact gonad



(B) Distal tip cell removed or *glp-1* mutation

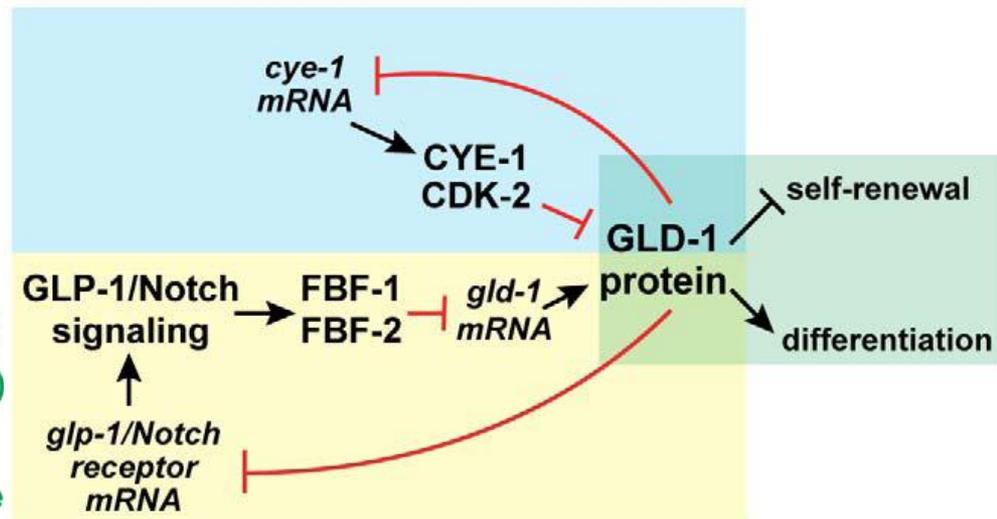
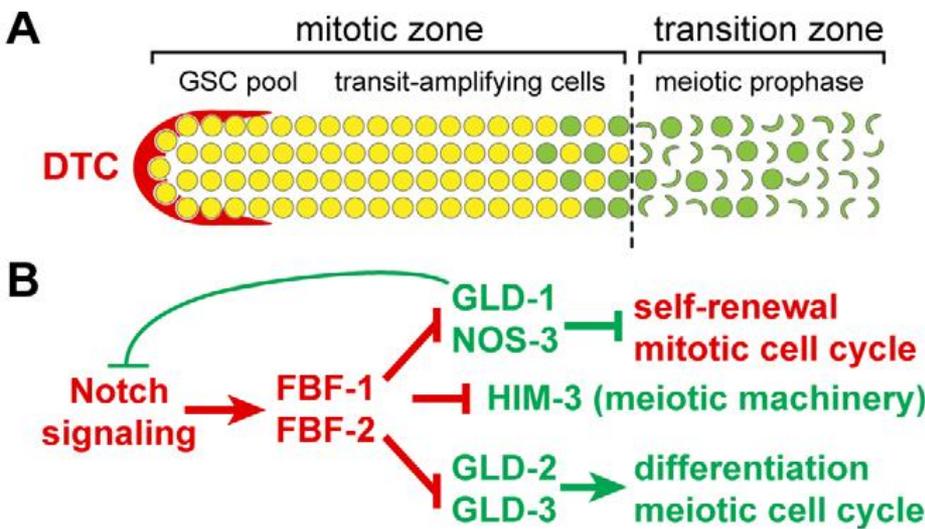
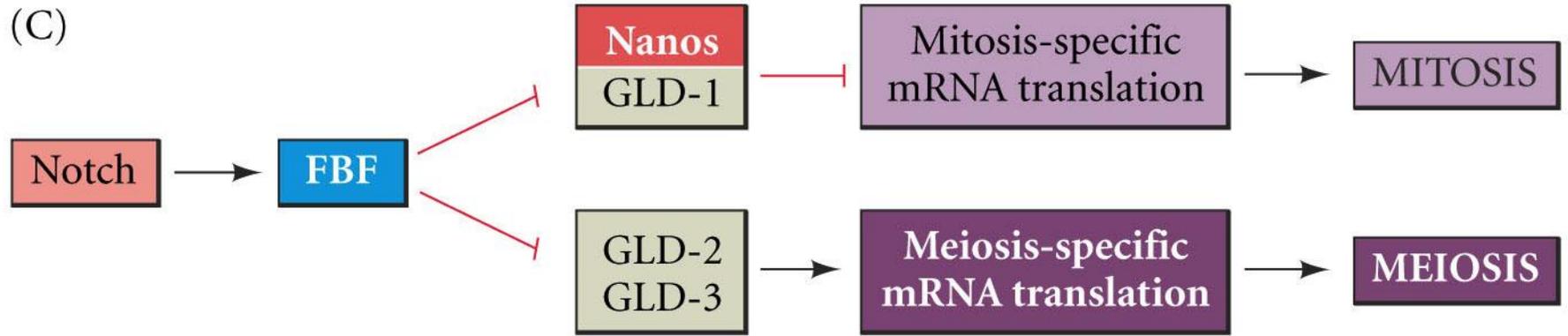


DEVELOPMENTAL BIOLOGY, Eighth Edition, Figure 19.19 (Part 1) © 2006 Sinauer



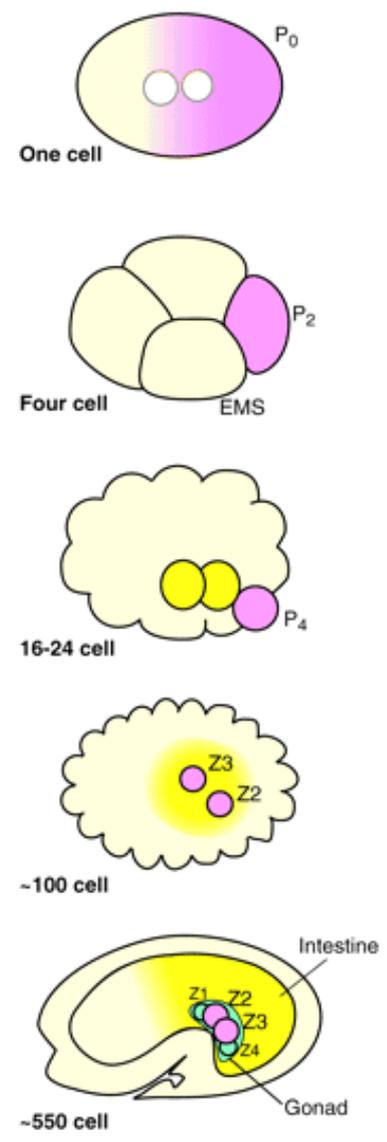
Wong MD, et al. 2005. Annu. Rev. Genet. 39:173-95

Regulação da decisão de mitose-meiose pela ponta distal em *C. elegans*, ovotestis celular (Parte II)

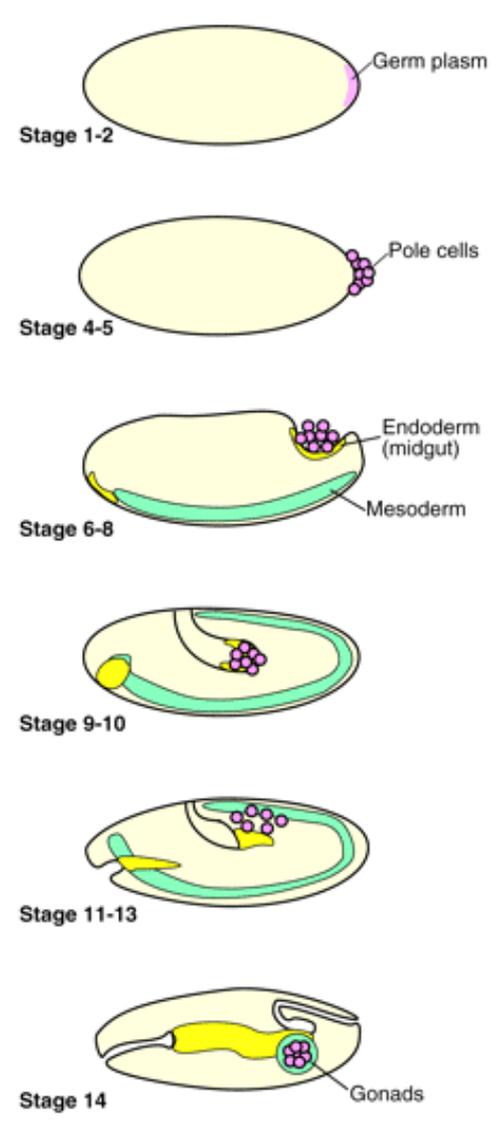


Formas de determinação das células germinativas em sistemas de animais modelo

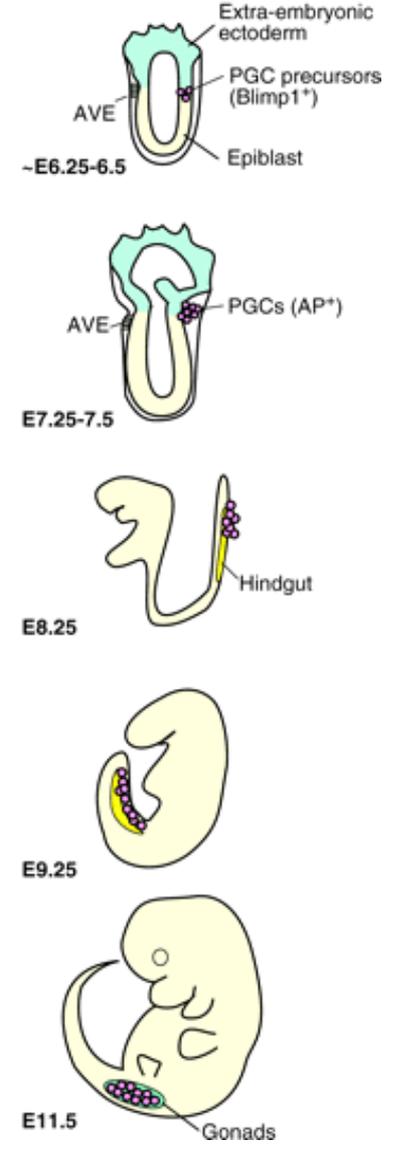
A *C. elegans*



B *Drosophila*

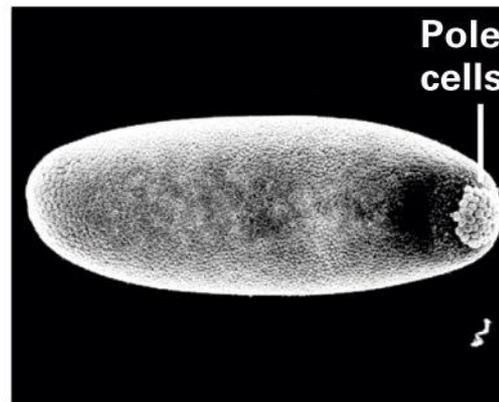
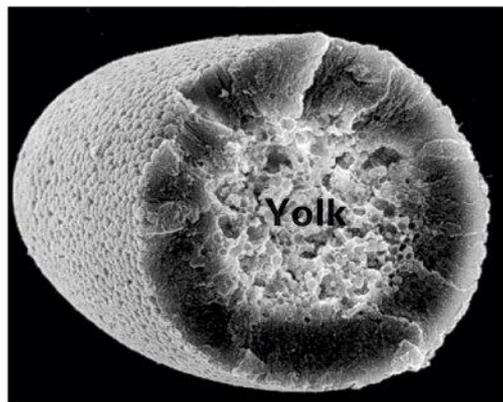
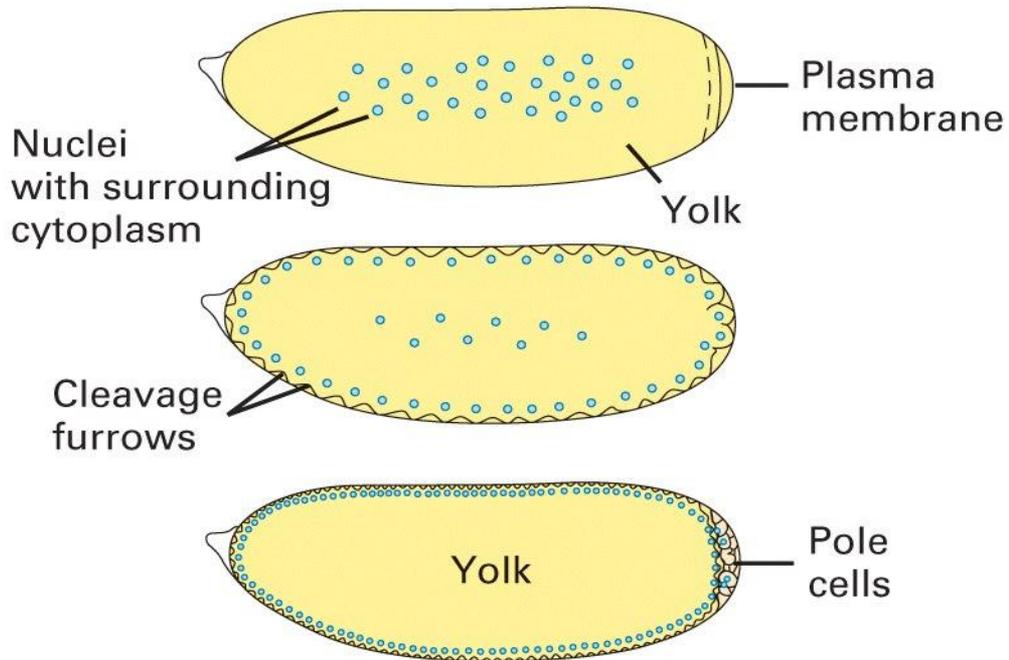


C Mouse



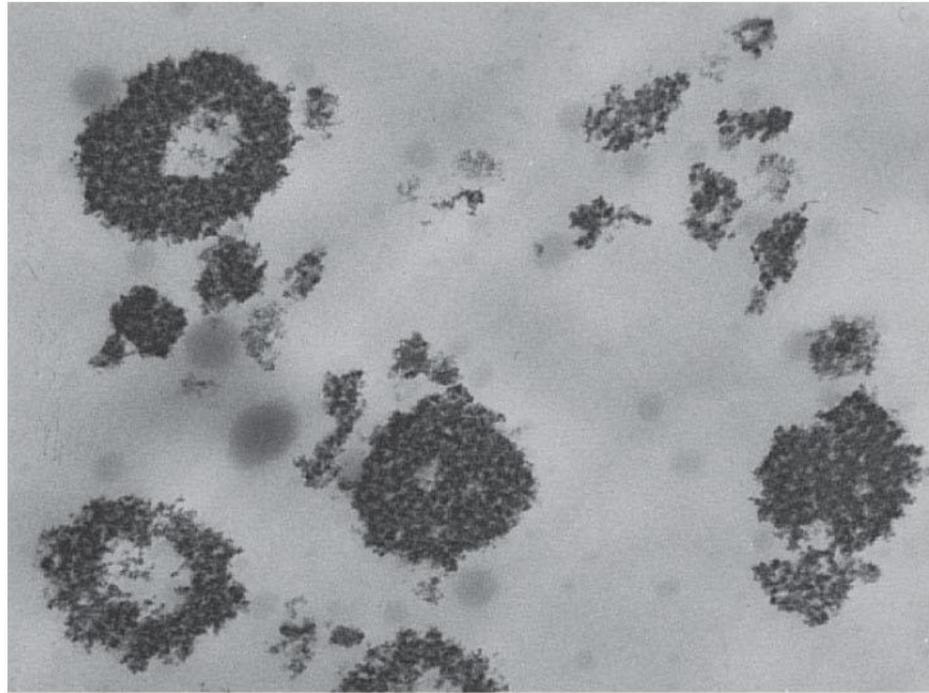
(Nakamura & Seydoux, 2008)

(a) NUCLEAR DIVISION AND MIGRATION

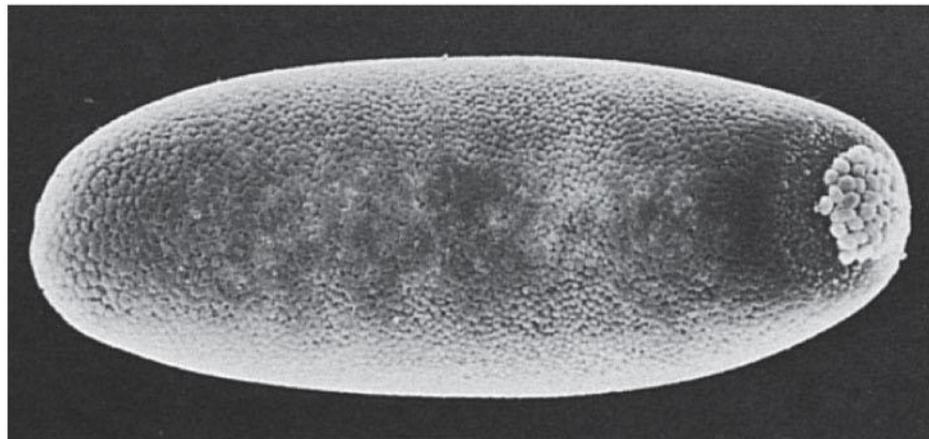


Syncytial blastoderm

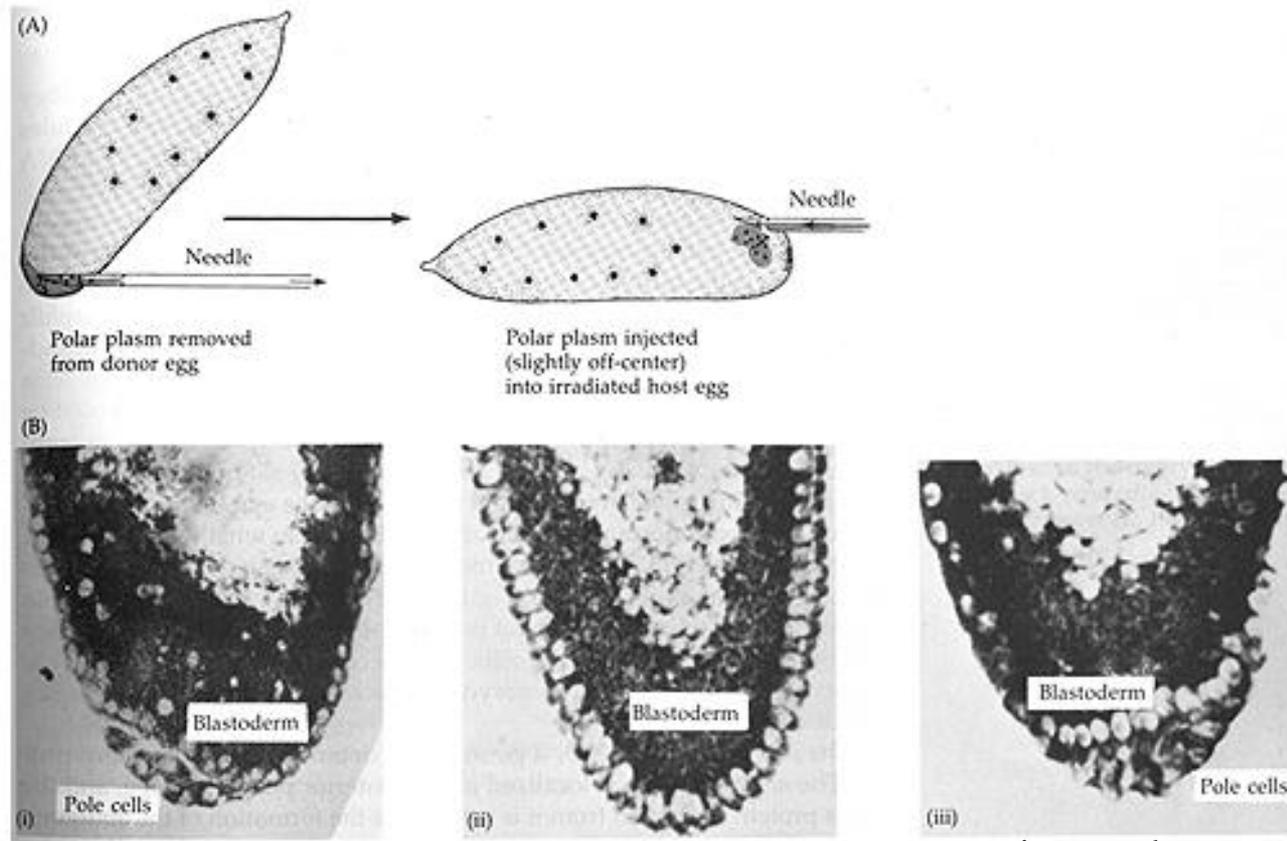
(A)



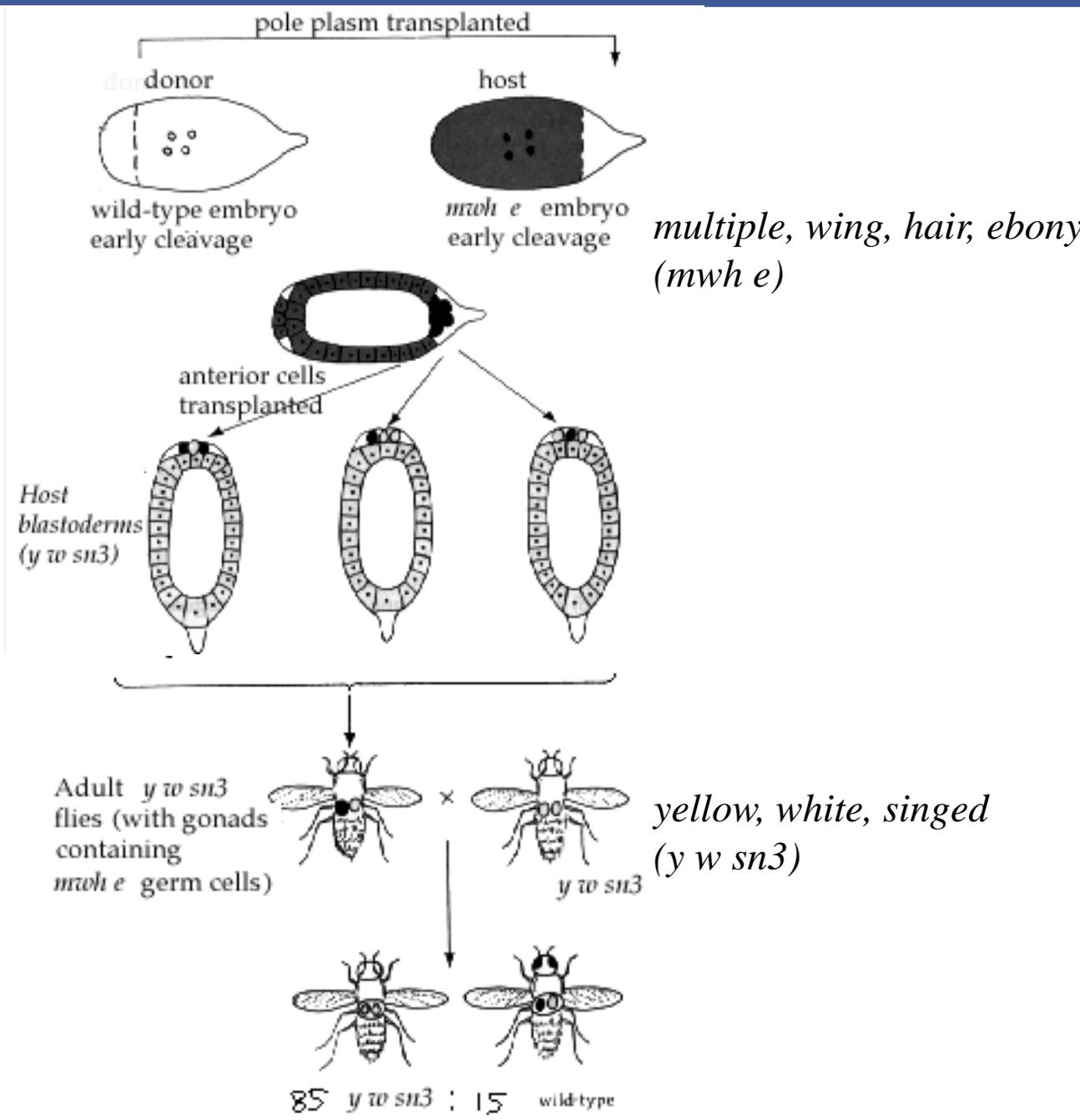
(B)



Como você pode testar a importância do germoplasma (plasma polar) para a formação de células germinativas?



experimento de resgate



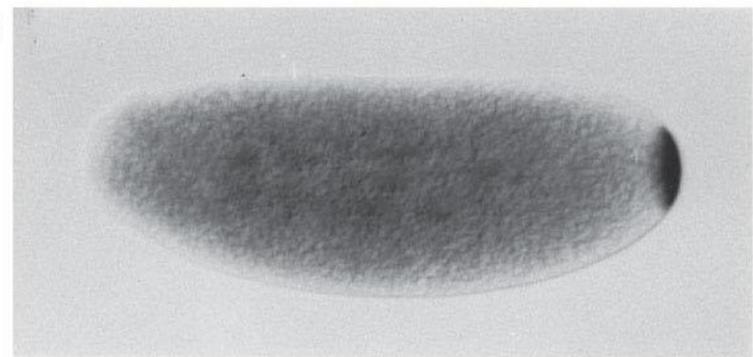
Wild-type

Mutant

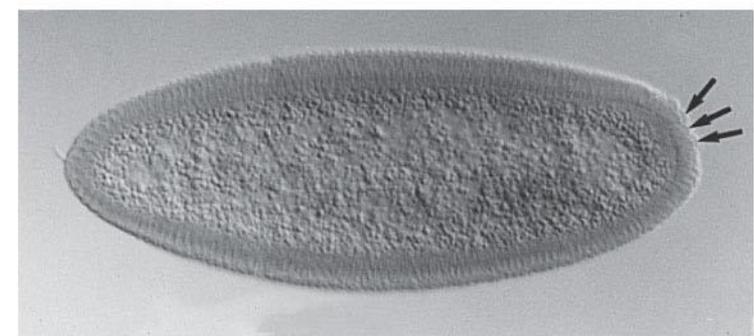
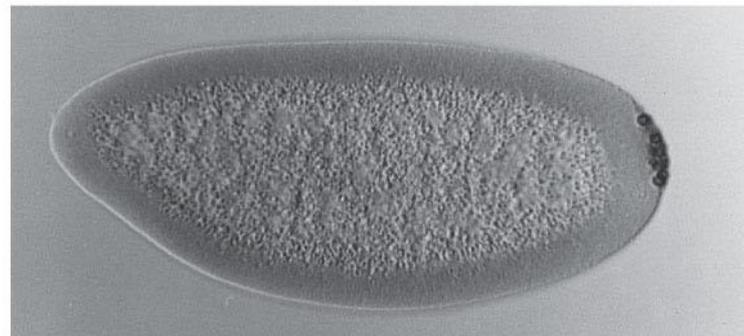
(A)

(B)

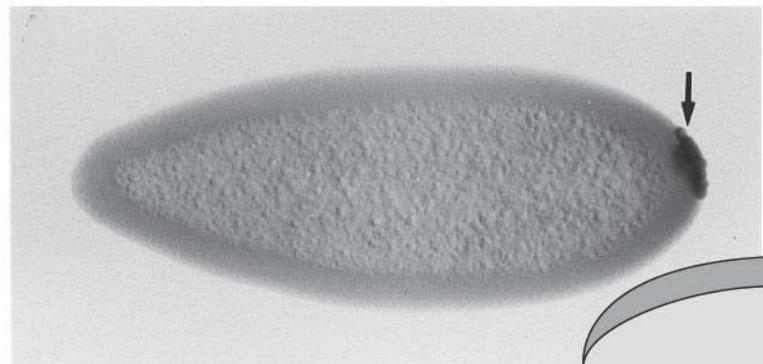
gcl
mRNA



Gcl
protein

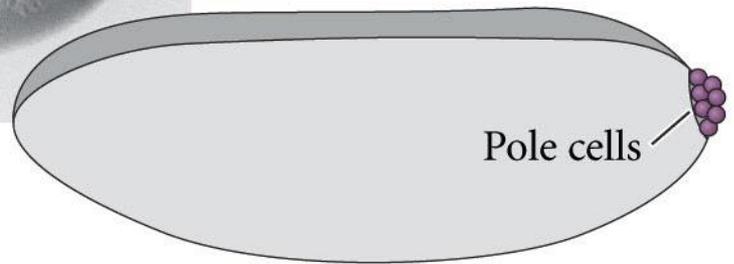


Migração das células germinativas no embrião de *Drosophila* (Parte I)

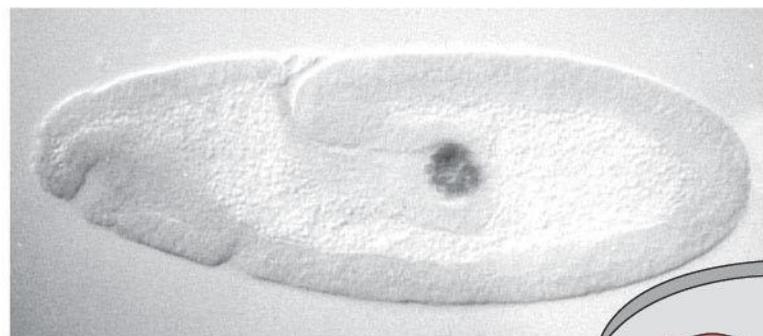


(A) *Vasa* probe labeling the pole plasm

Cell movements of germ cells

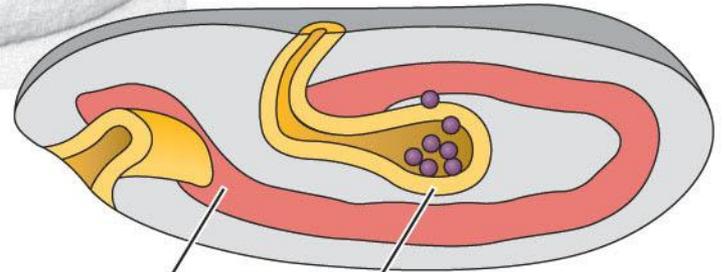


Pole cells



(B)

Attachment to endoderm and migration through midgut



Mesoderm

Posterior midgut

30 ou 40 PGCs

Attachment to mesoderm

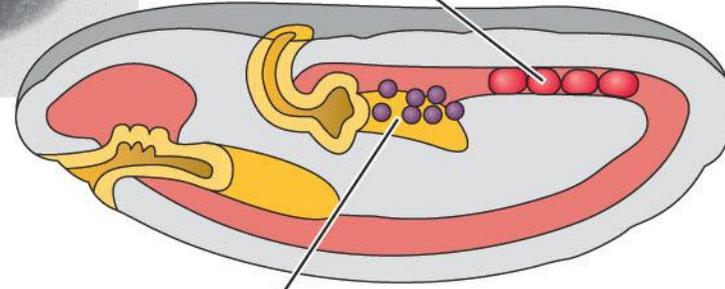
wunen expressado na endoderme posterior repele PGCs da endoderme

Migração das células germinativas no embrião de *Drosophila* (Parte II)



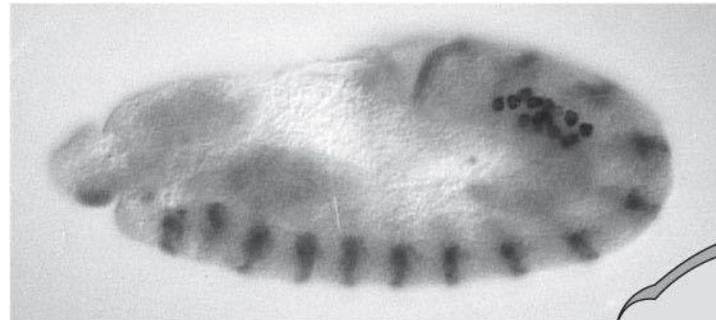
Gonad precursor cells

(C)

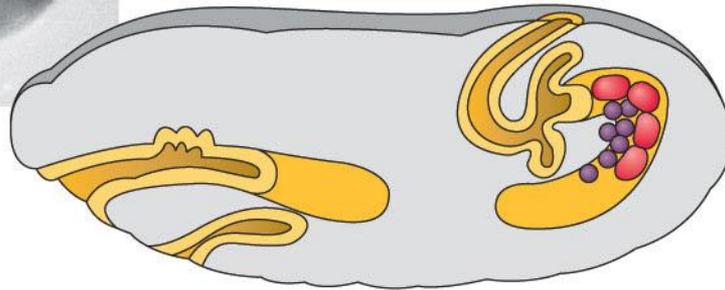


Primordial germ cells

Alignment with gonadal mesoderm



(D)



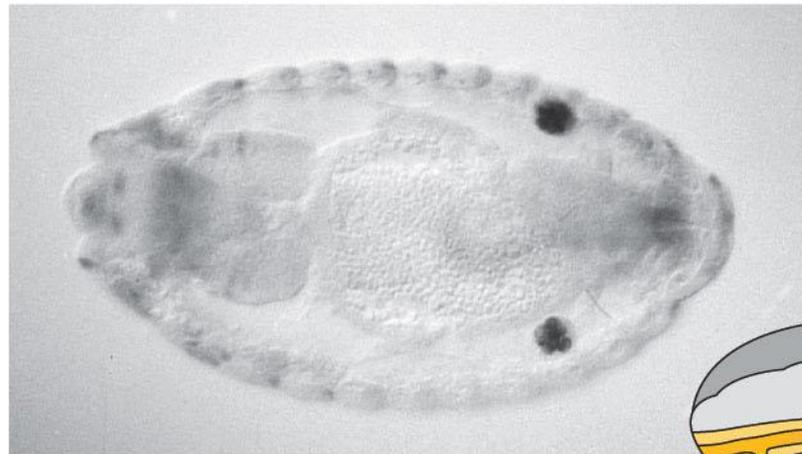
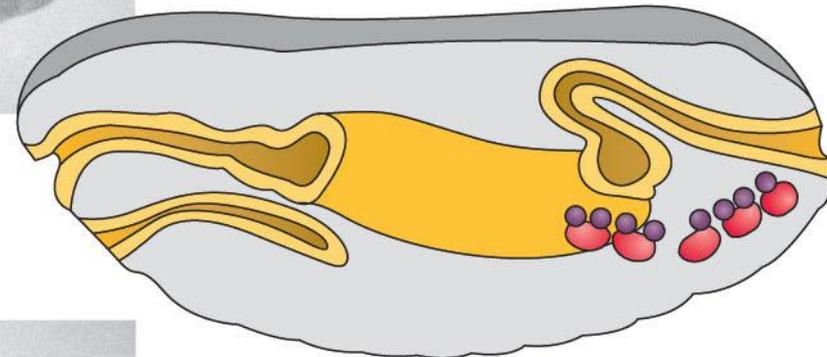
Two streams of migrating cells

Hedgehog e *columbus* (expressados nas gônadas) atraem as PGC até as gônadas



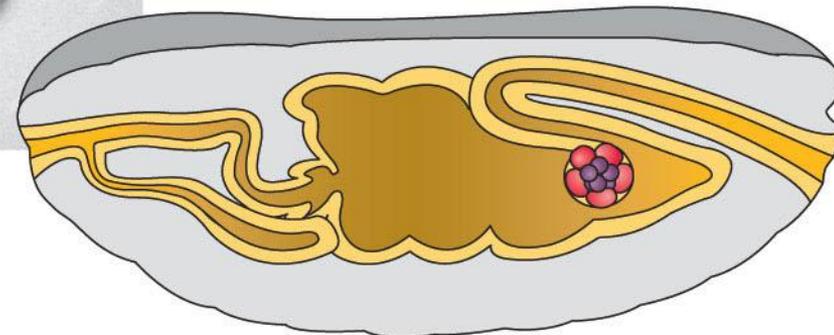
(E)

tin



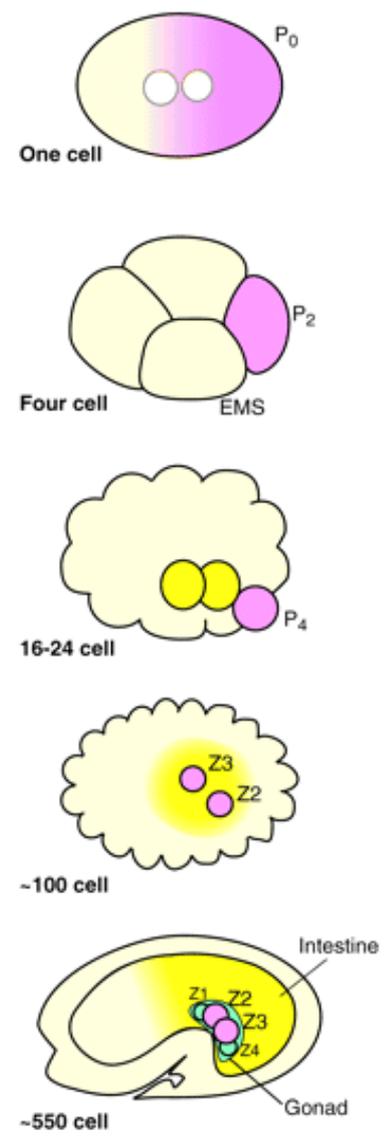
(F)

Gonad
coalescence

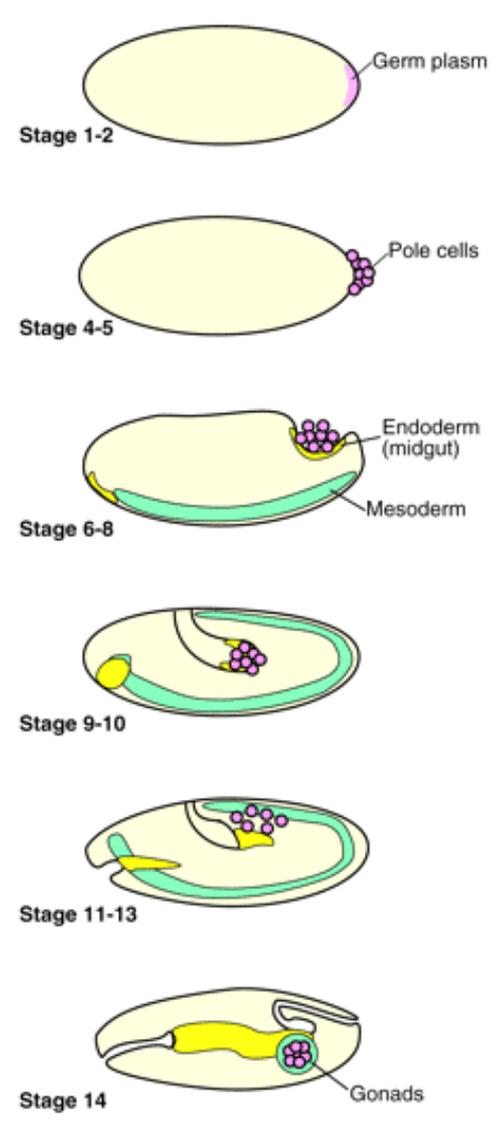


Formas de determinação das células germinativas em sistemas de animais modelo

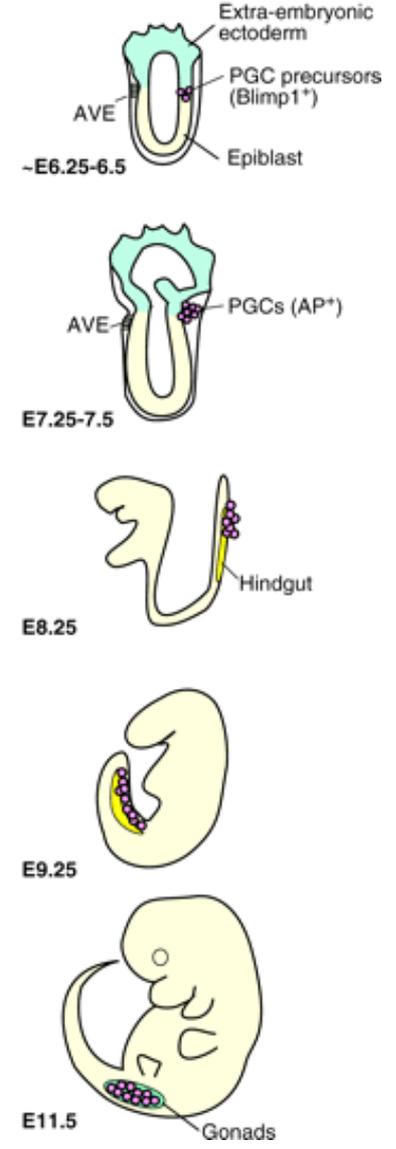
A *C. elegans*



B *Drosophila*

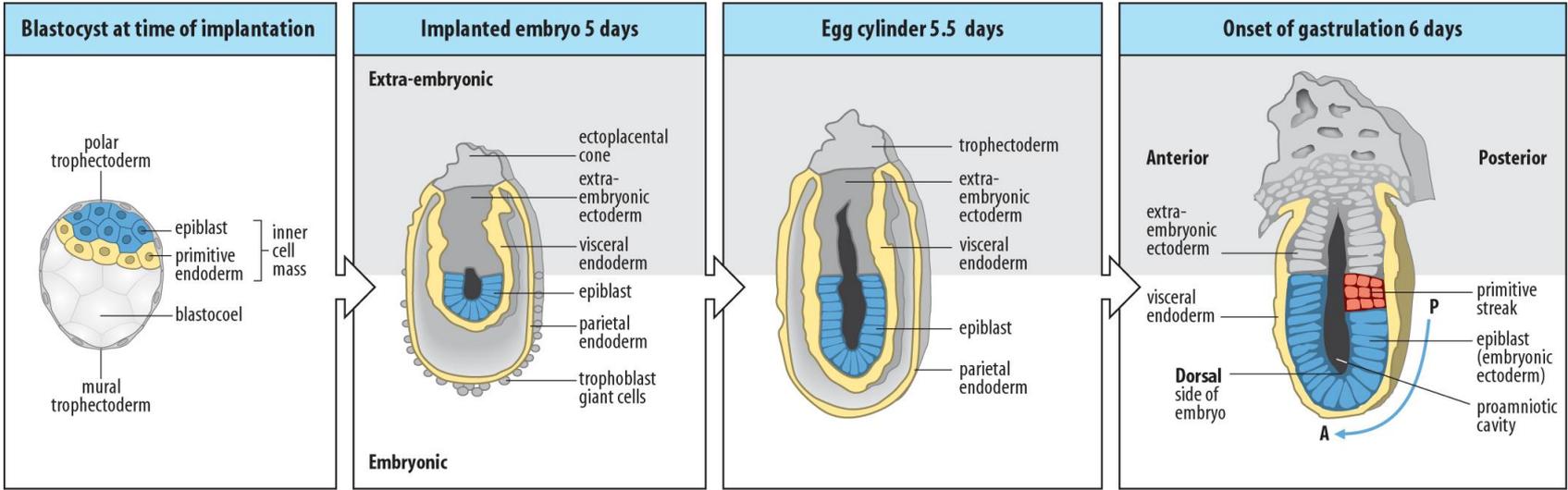


C Mouse

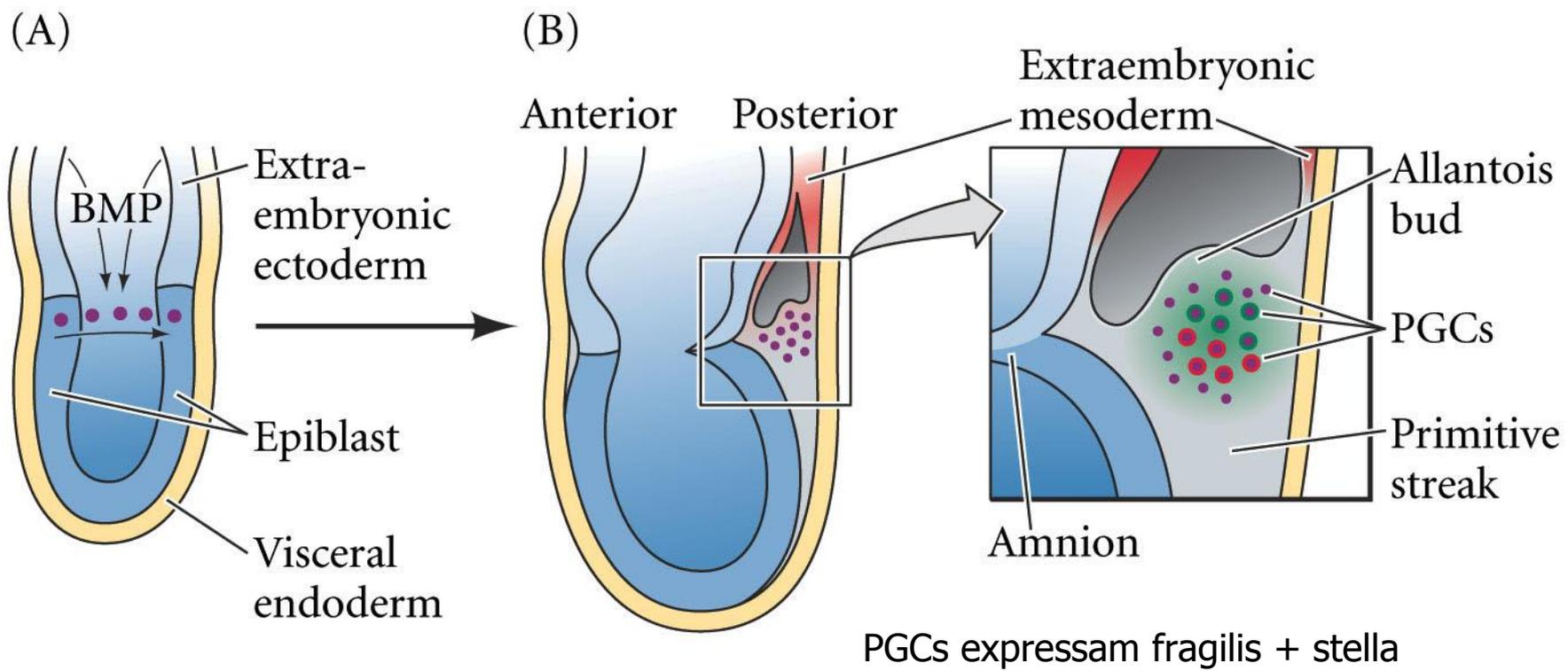


(Nakamura & Seydoux, 2008)

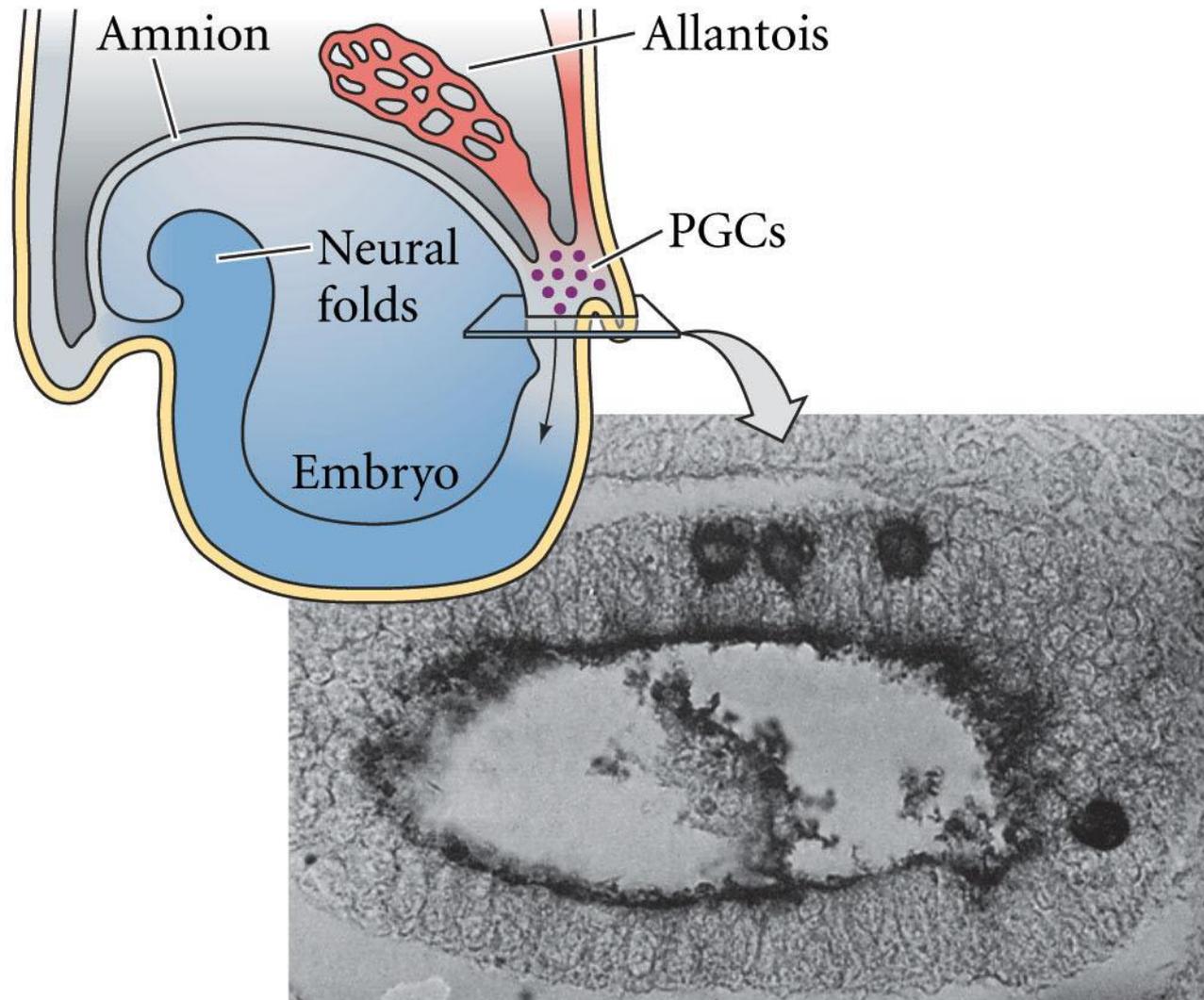
Desenvolvimento do camundongo



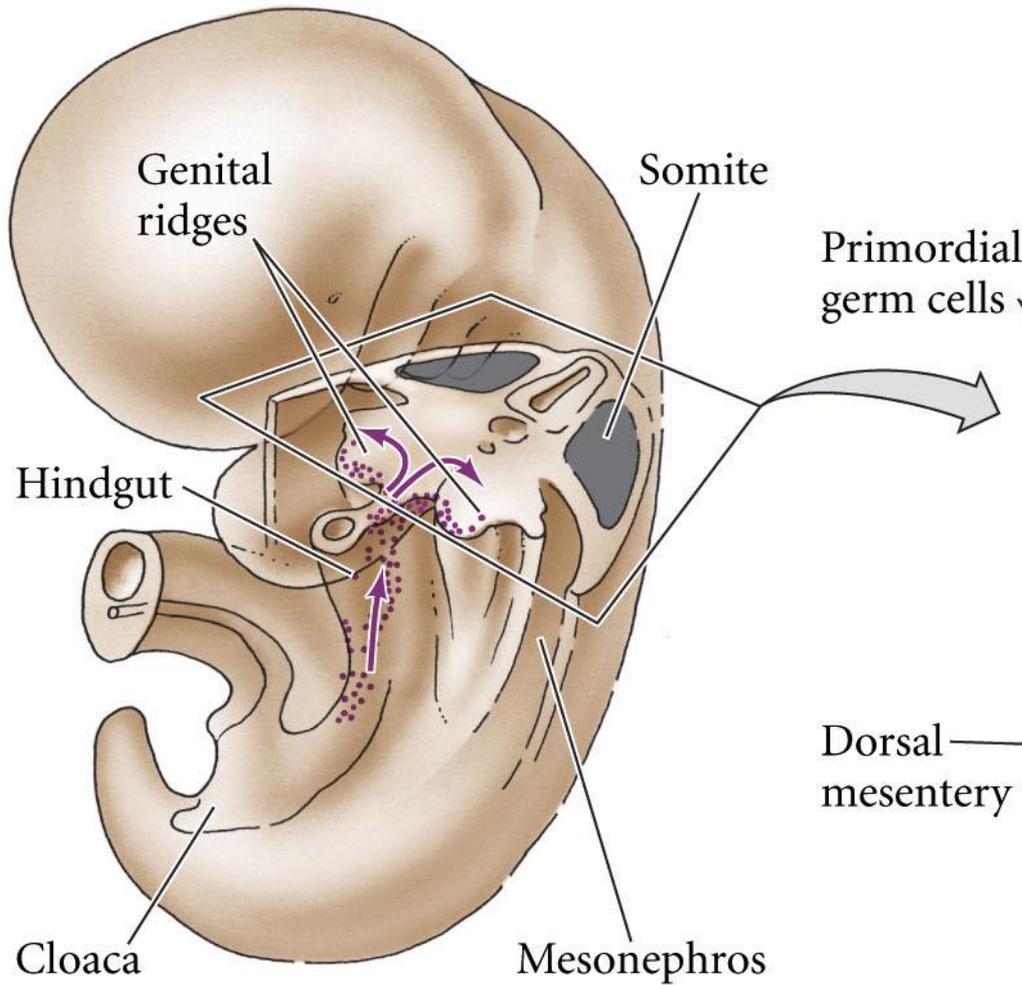
Especificação e migração das células germinativas primordiais em camundongo



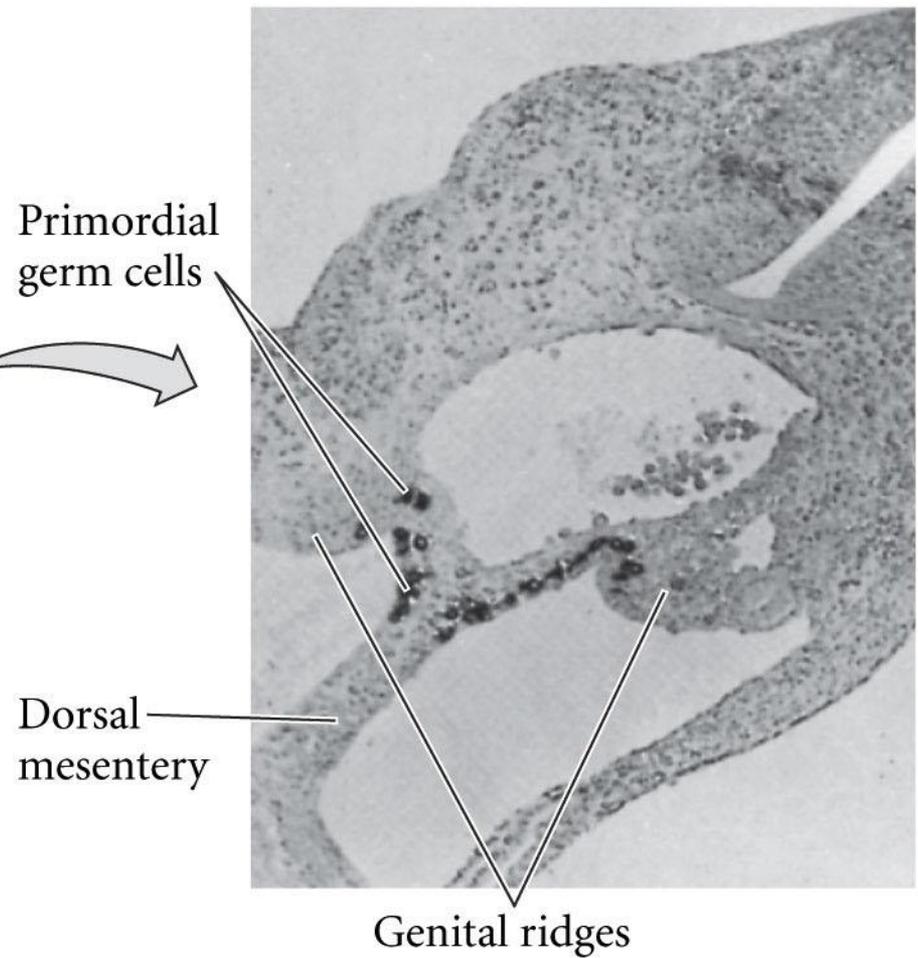
(A) Migration of PGCs to endoderm

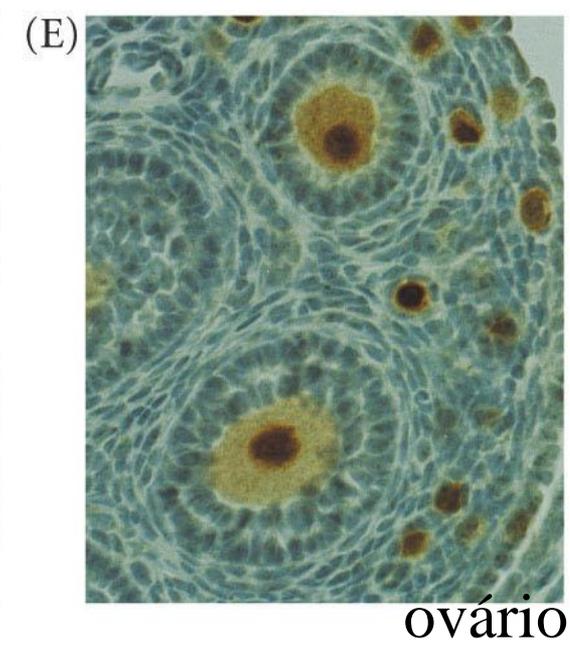
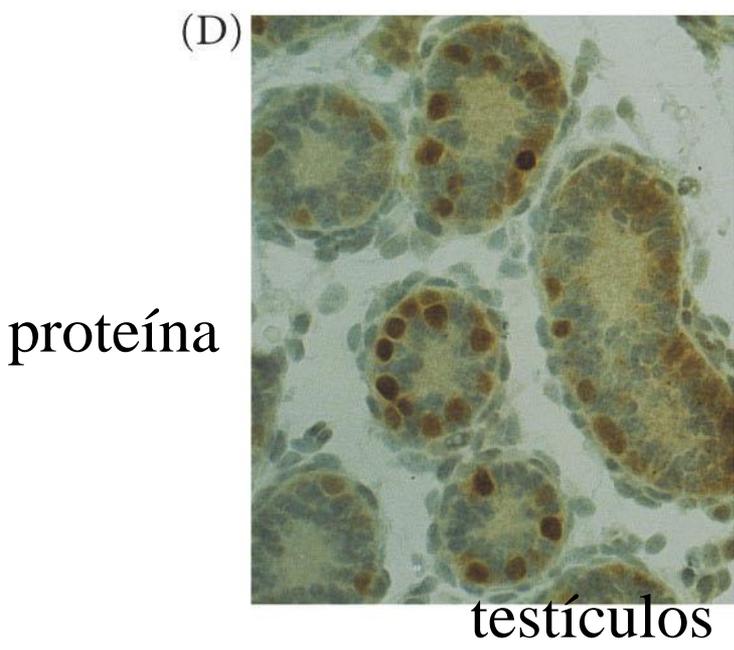
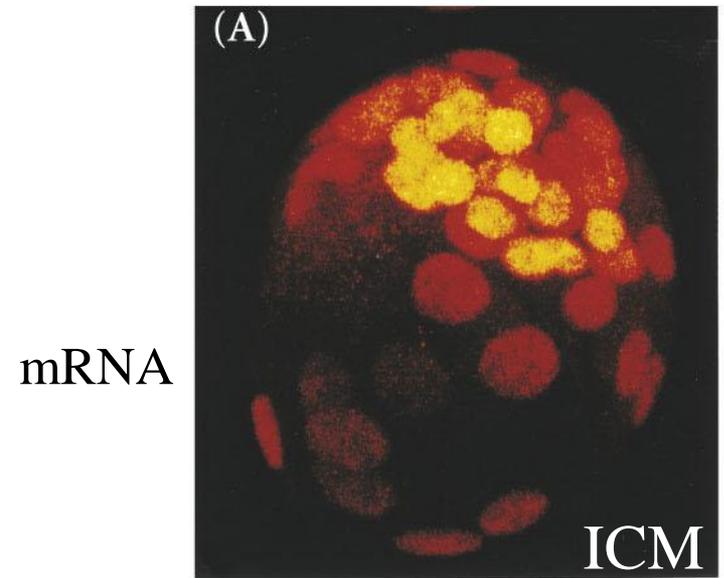


(B) Migration of PGCs into gonad



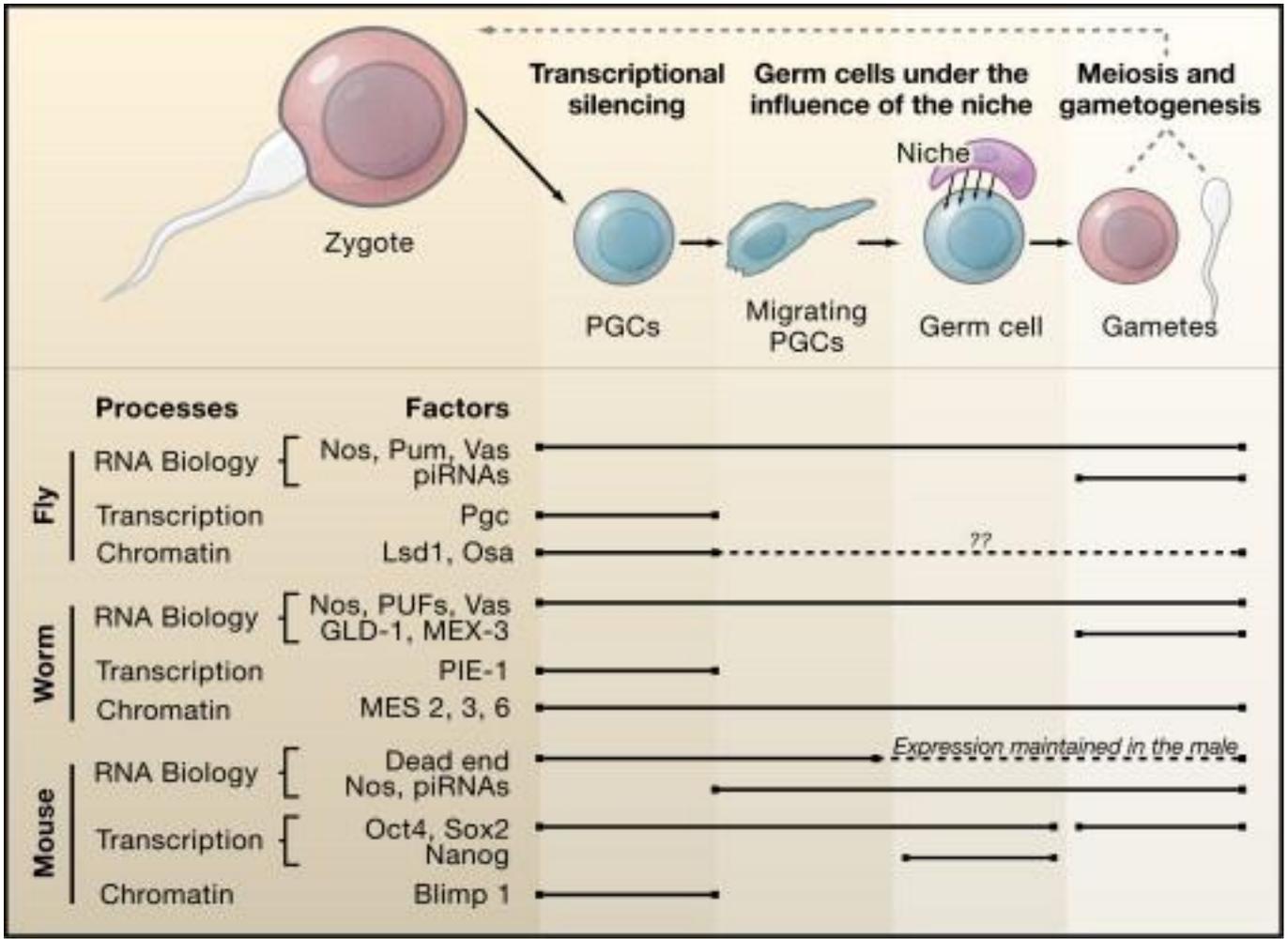
(C)



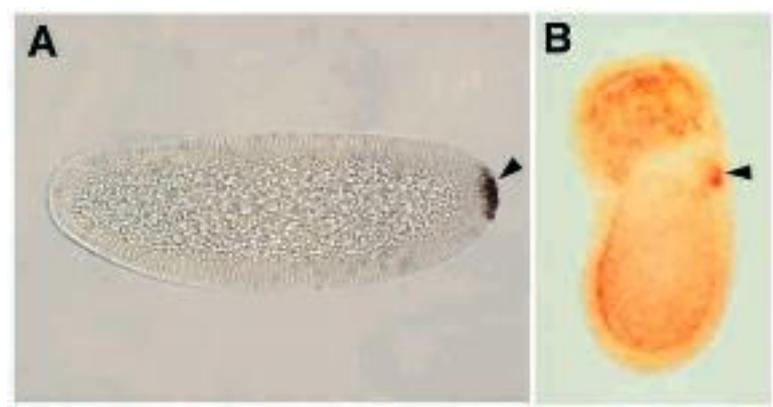
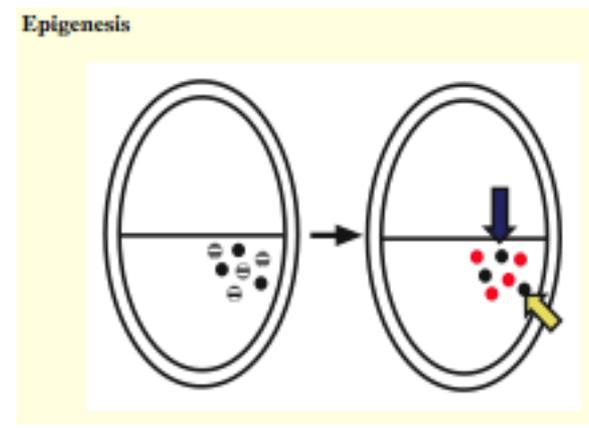
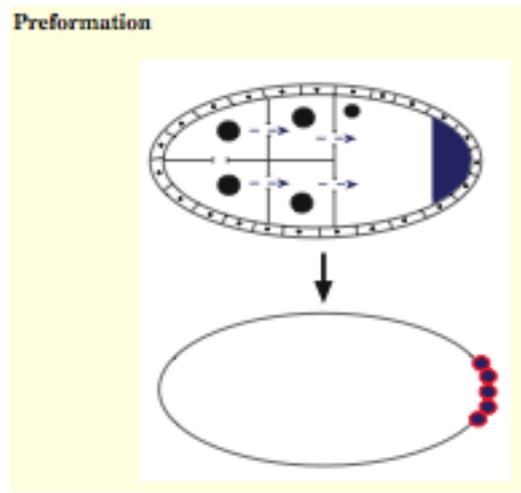


Totipotência mantida por Oct4; mais tarde no desenvolvimento, migração ativa através de gradientes de atração produzidos pelas cristas genitais (migração e proliferação de PGCs reguladas por Stem Cell Factor SCF e c-kit).

RESUMO: Generalidades das células germinativas nos diferentes modelos animais.

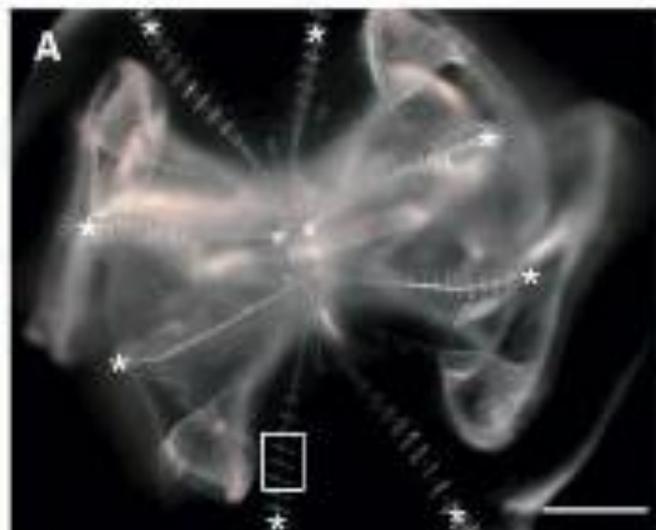


Duas formas extremas que formam as células germinativas em sistemas de animais modelo



(Extavour, 2003)

O que dizer das espécies que não são modelos animais?

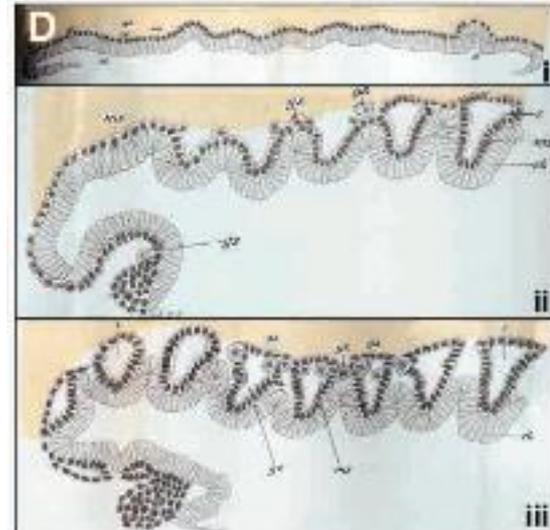


Ctenóforo *Mnemiopsis leidyi*



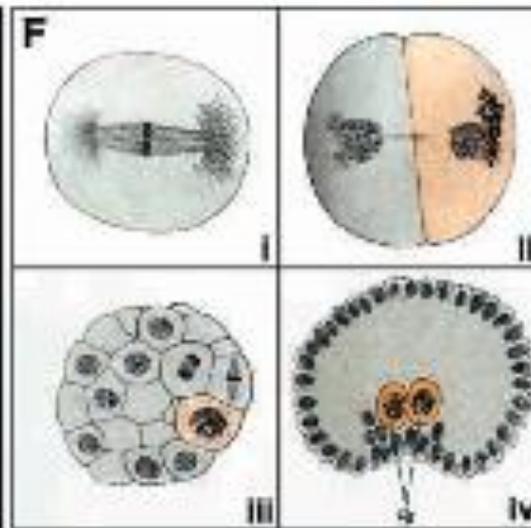
Extensión de la banda germinal:

Barata *Blatta germanica*

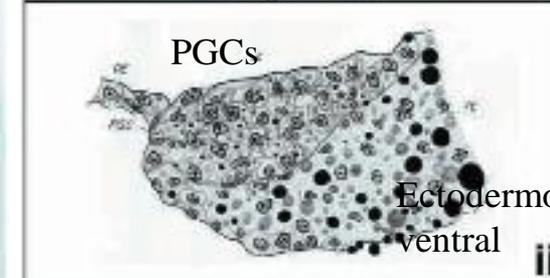


Copépodo *Cyclops fuscusi*

Tartaruga *Sternoterus odoratus*



H Estadio de tres somitas:

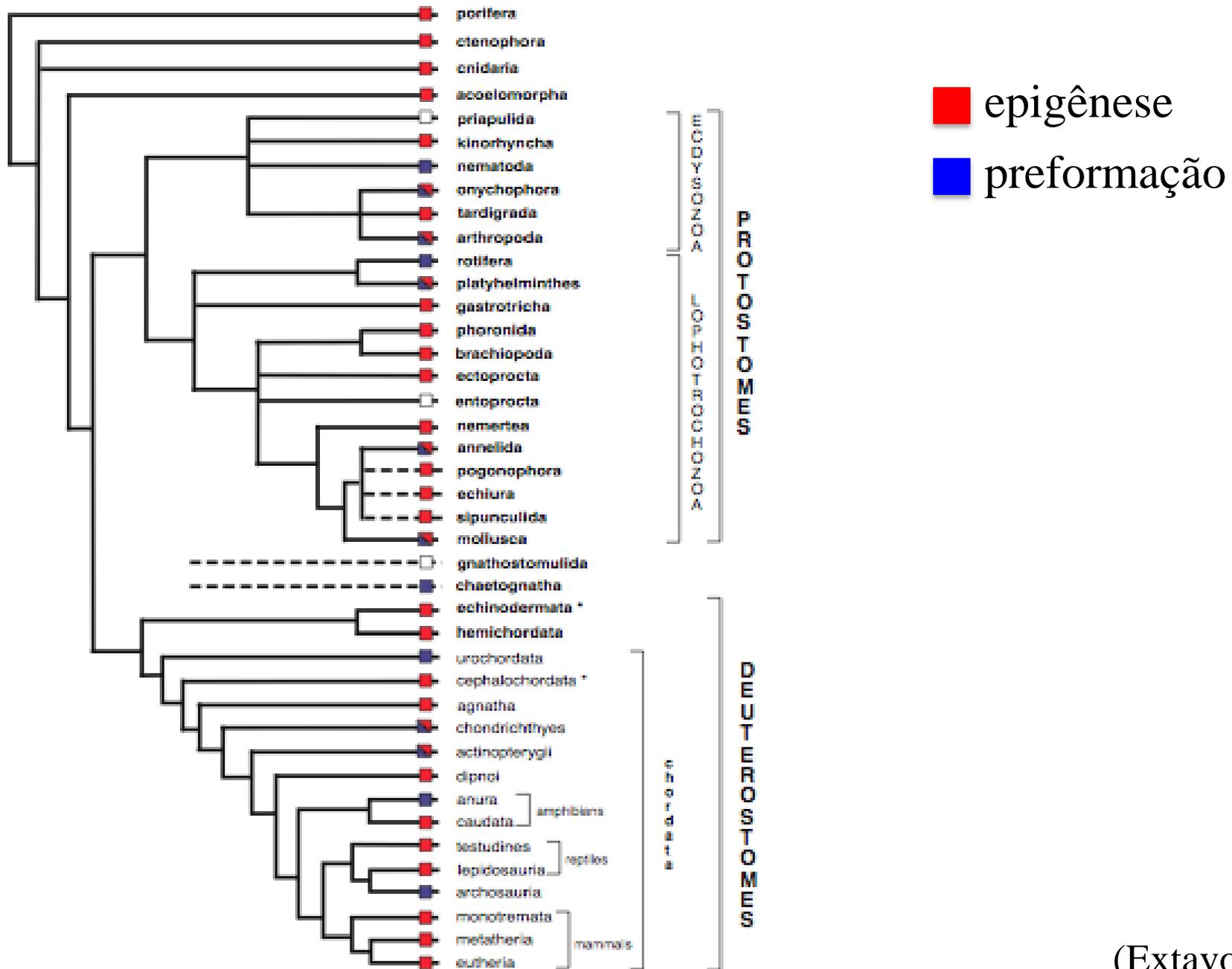


PGCs

Ectodermo ventral

(Extavour, 2003)

O que dizer das espécies que não são modelos animais?



(Extavour, 2003)