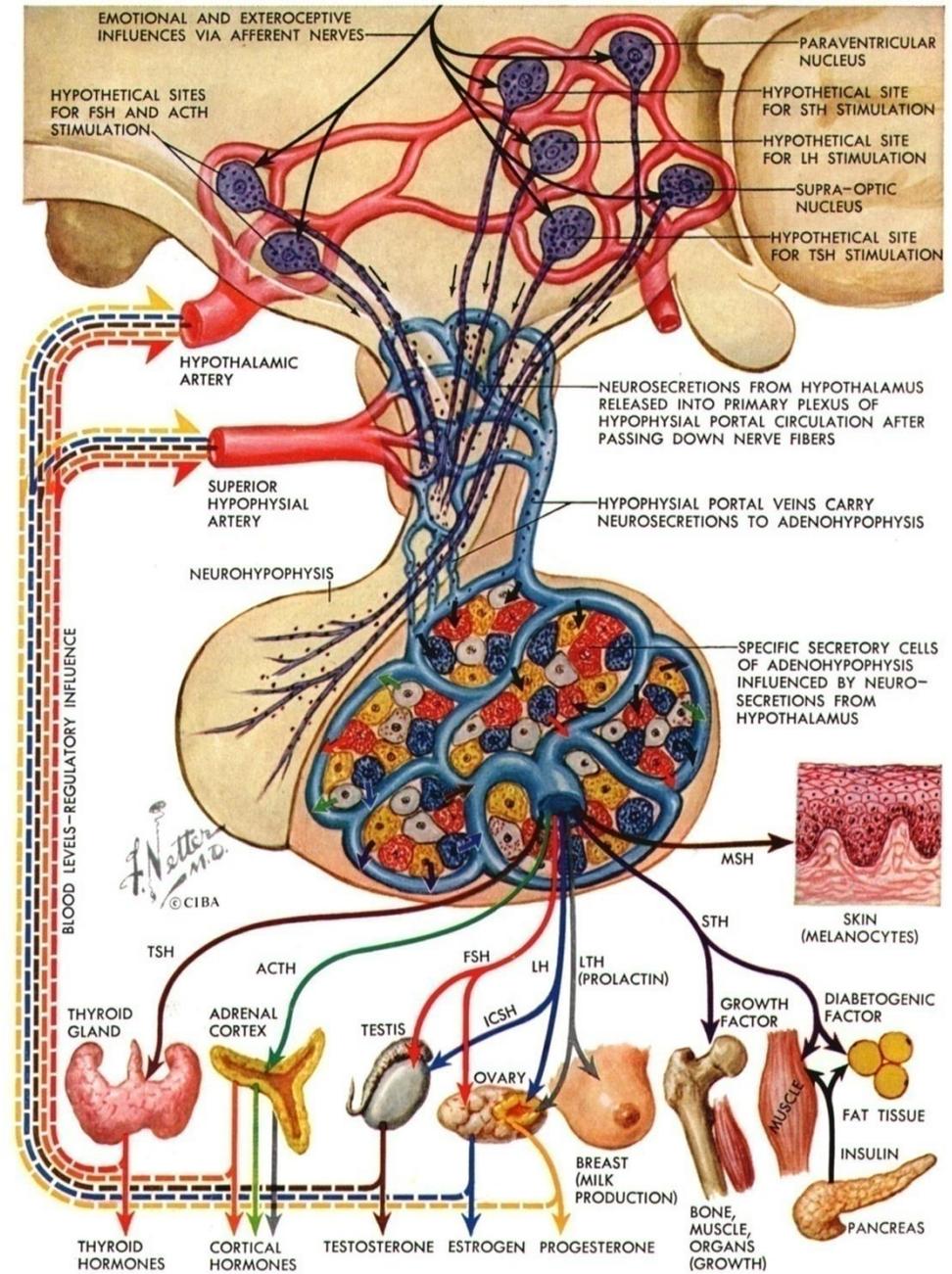


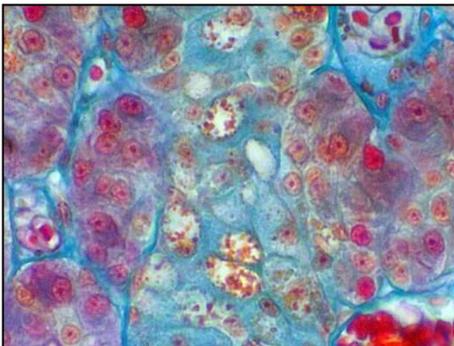
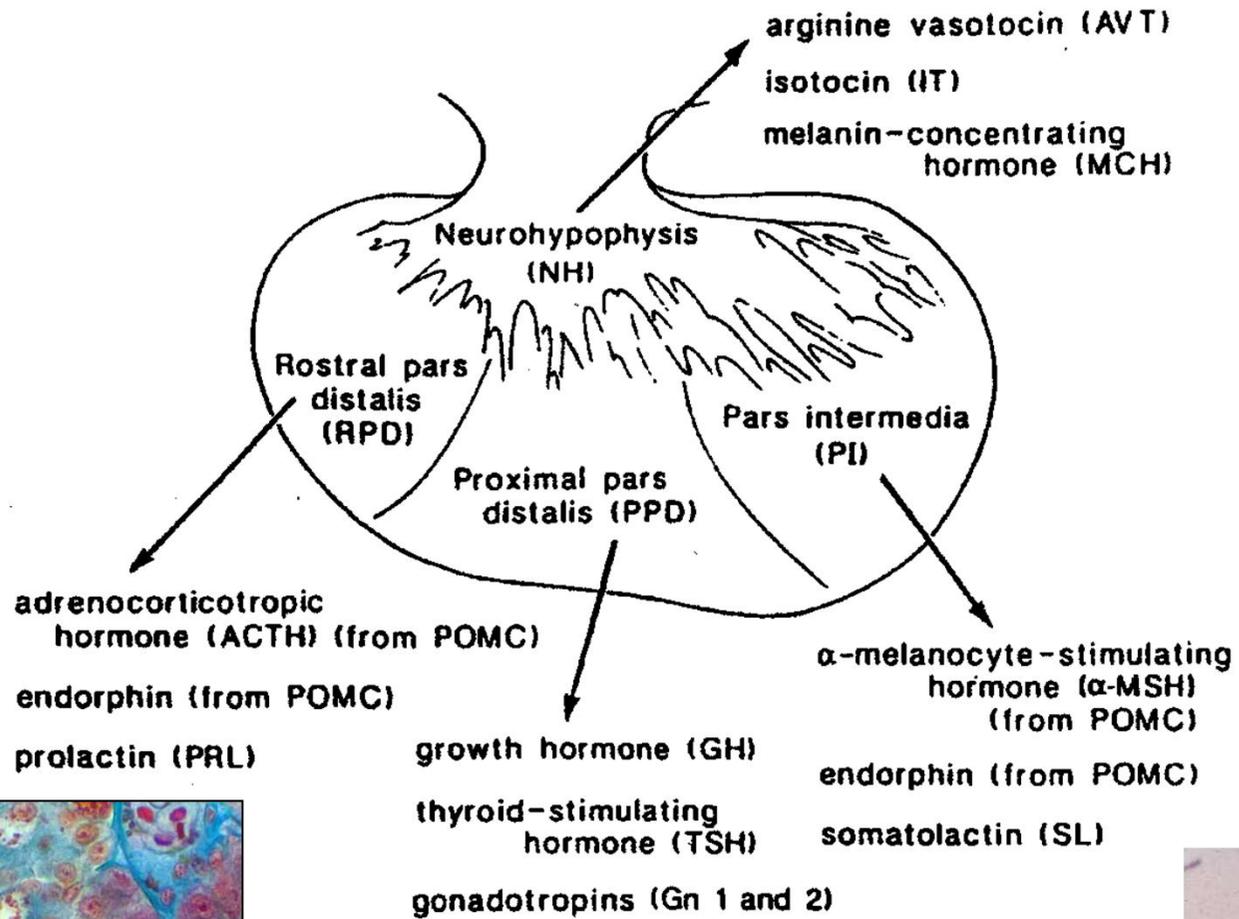
CONTROLE NEUROENDÓCRINO DA REPRODUÇÃO

- **HIPÓFISE**

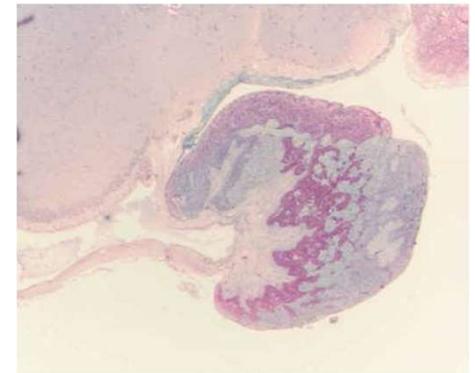
HIPÓFISE DE MAMÍFEROS

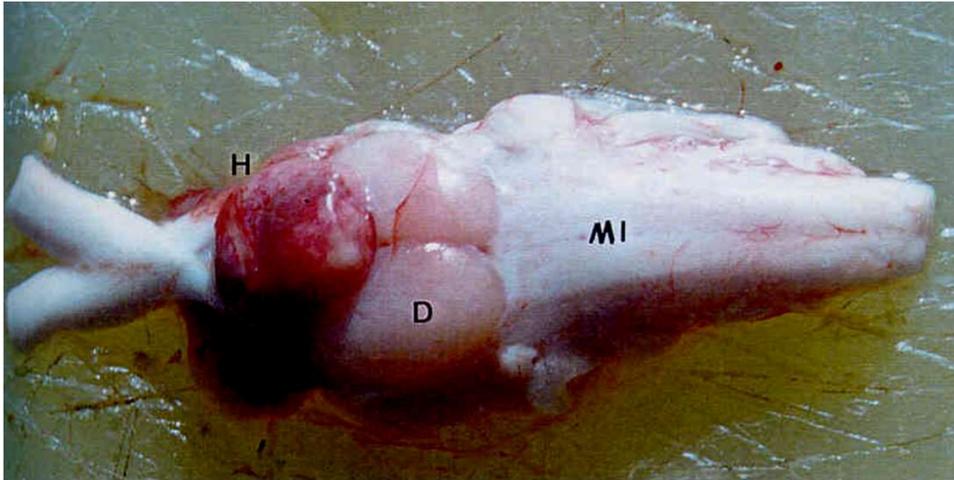


Hipófise dos teleósteos



Células gonadotrópicas



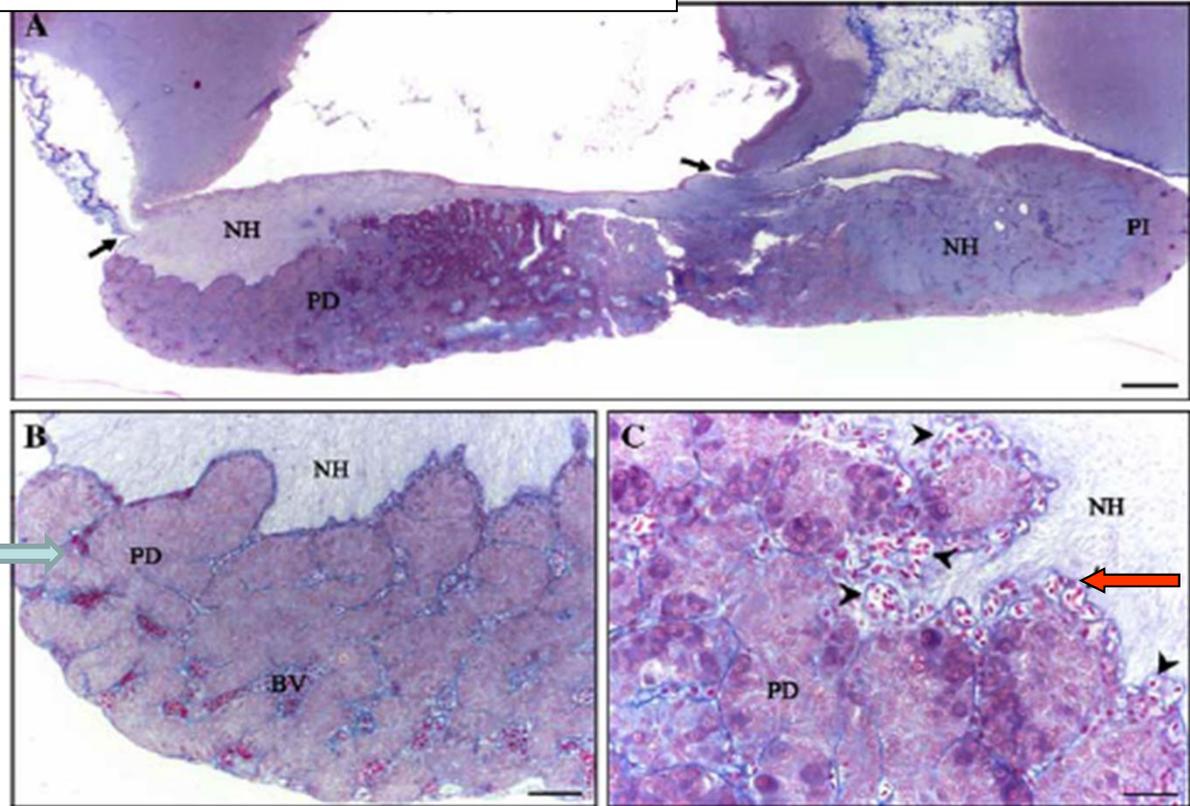


Neurohipófise

Ramos da NH

Immunocytochemical identification of adenohypophyseal cells in the pirarucu (*Arapaima gigas*), an Amazonian basal teleost

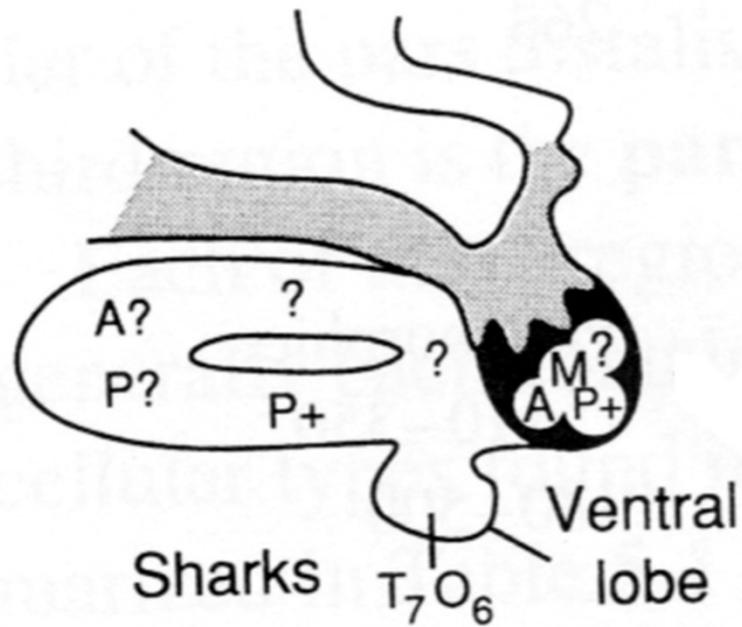
M. I. Borella · R. Venturieri · J. M. Mancera



NH não invade a hipófise

Hipófise de pirarucu – Eminência média? Sistema Porta?

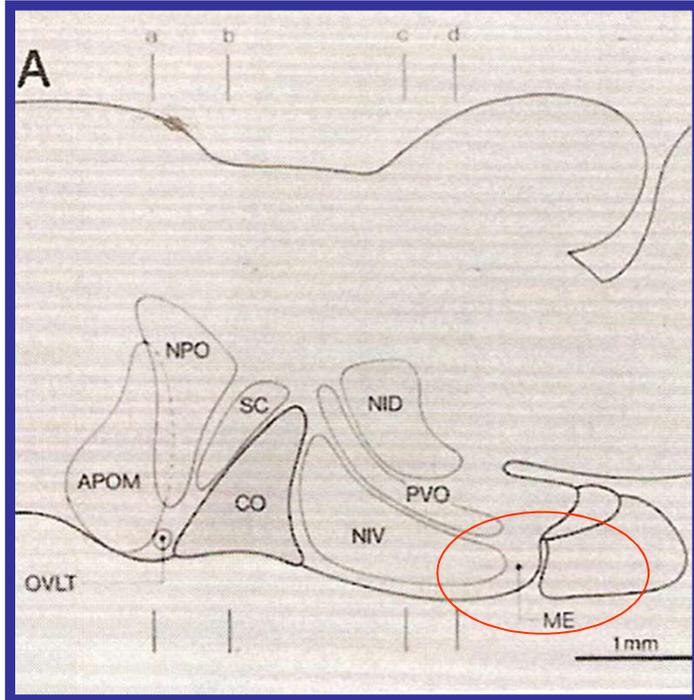
HIPÓFISE - ELASMOBRÂNQUIOS



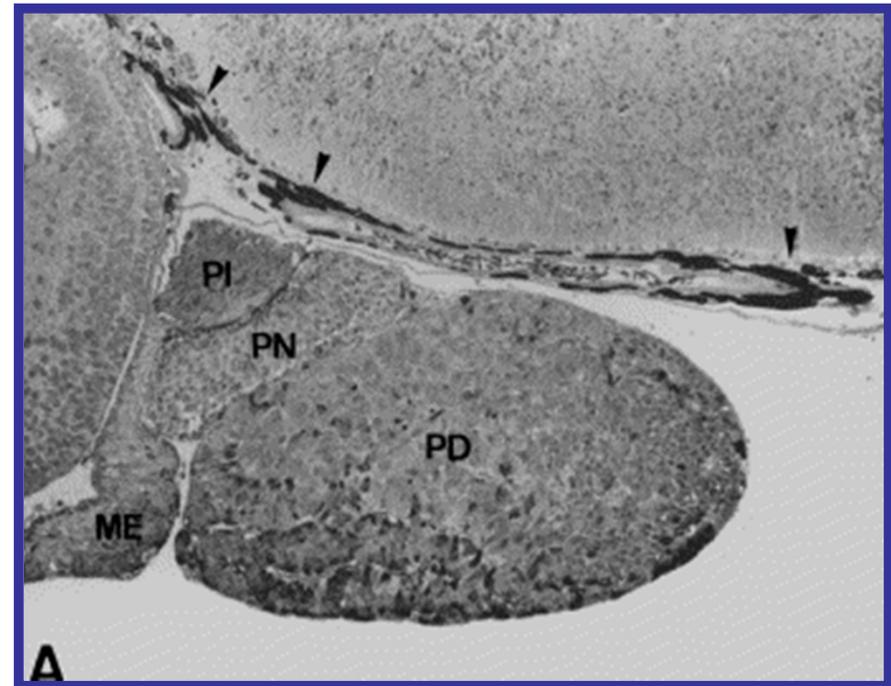
Grande desenvolvimento da **EMINÊNCIA MÉDIA**

Presença do Lobo Ventral

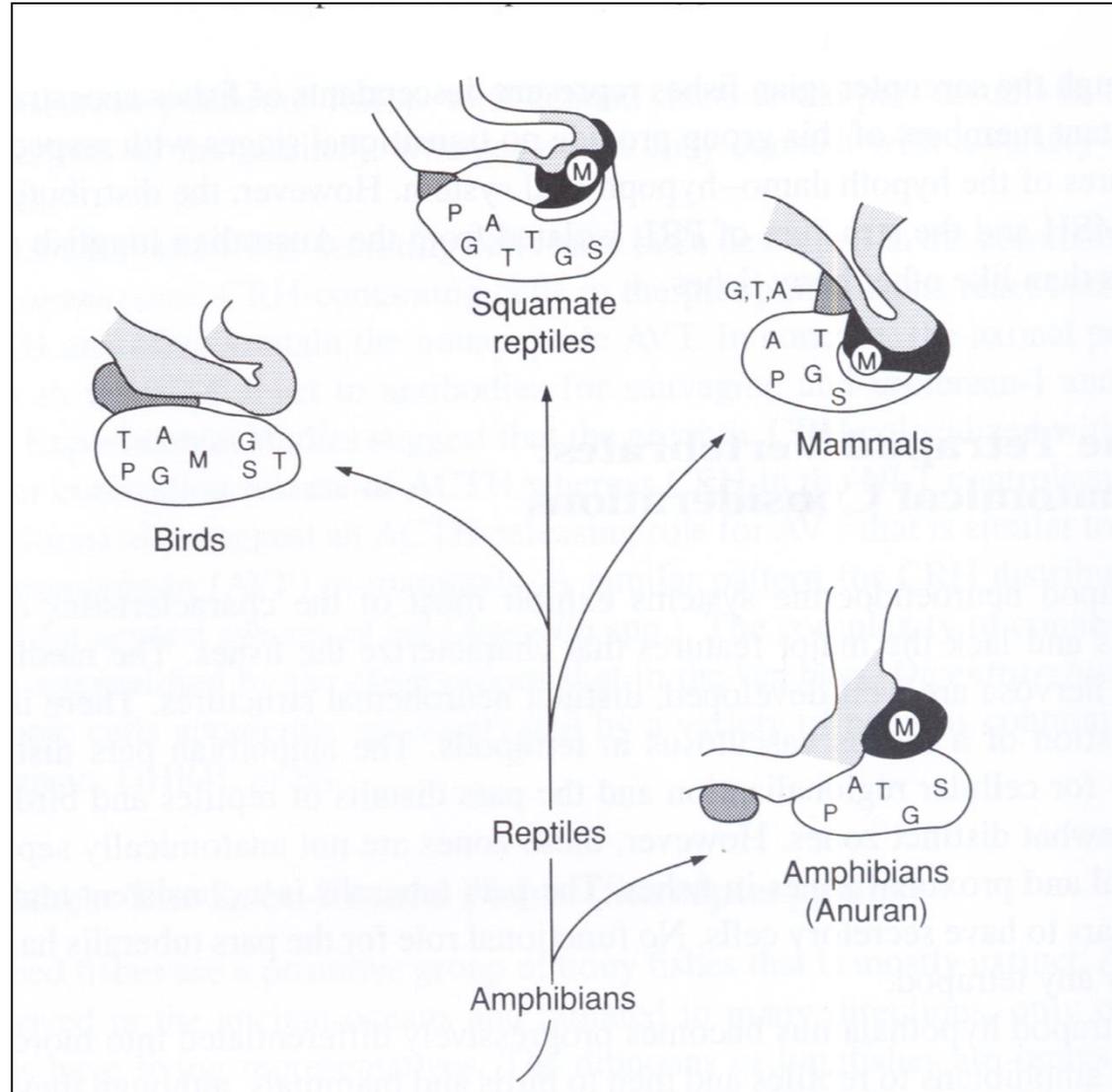
Hipófise de anfíbios



Eminência média: sistema porta desenvolvido

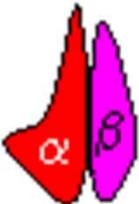


Hipófise de Tetrápoda



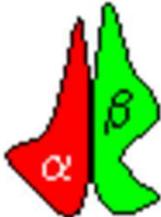
Gonadotropinas: glicoproteínas

LH

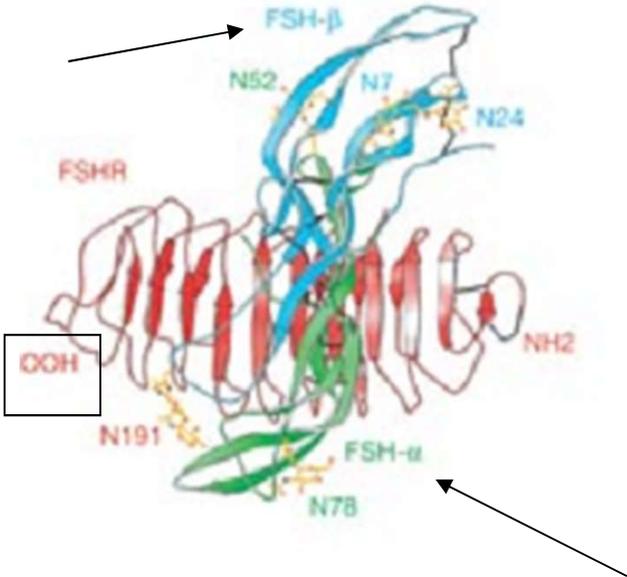


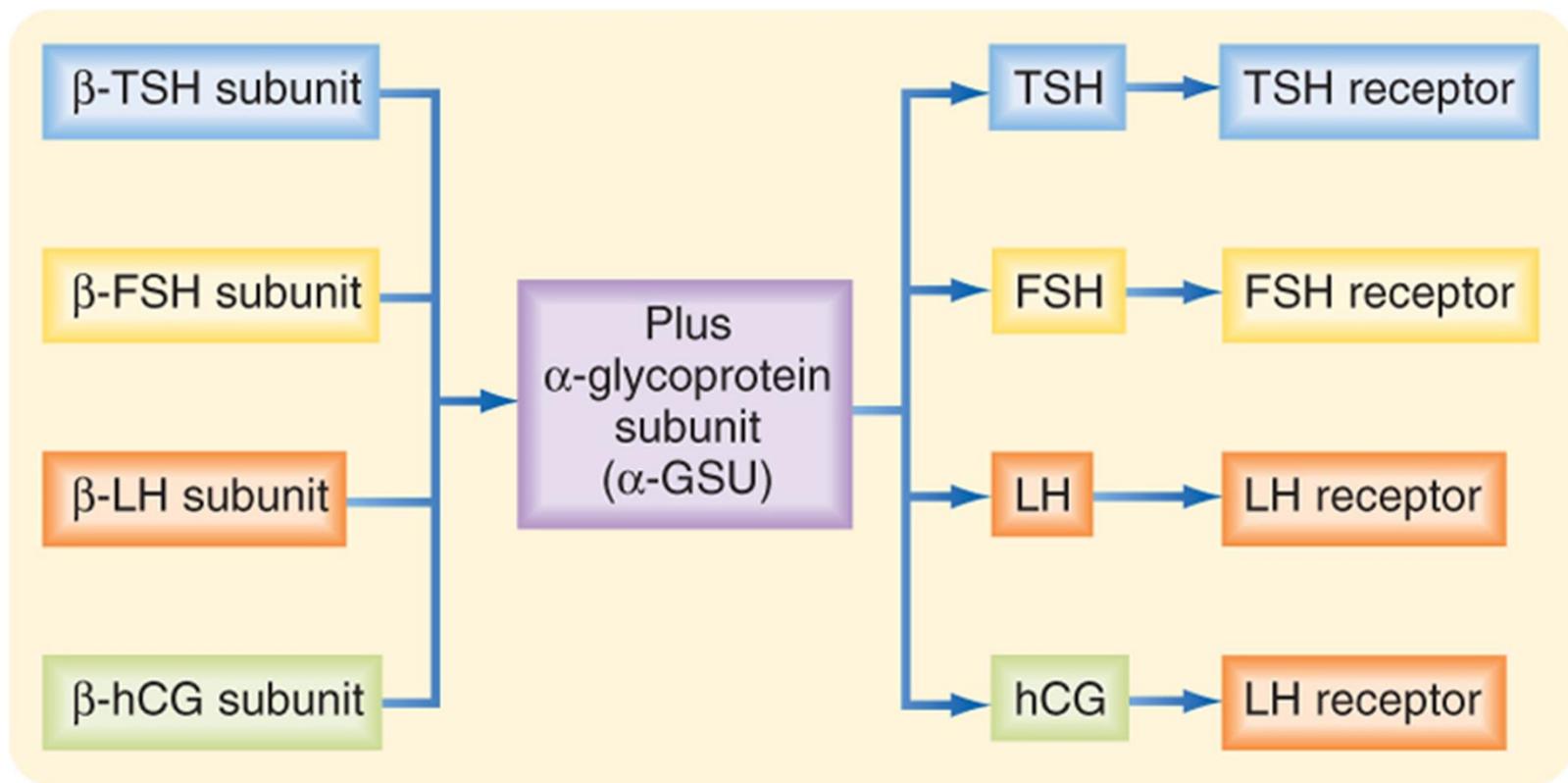
Luteinizing hormone

FSH



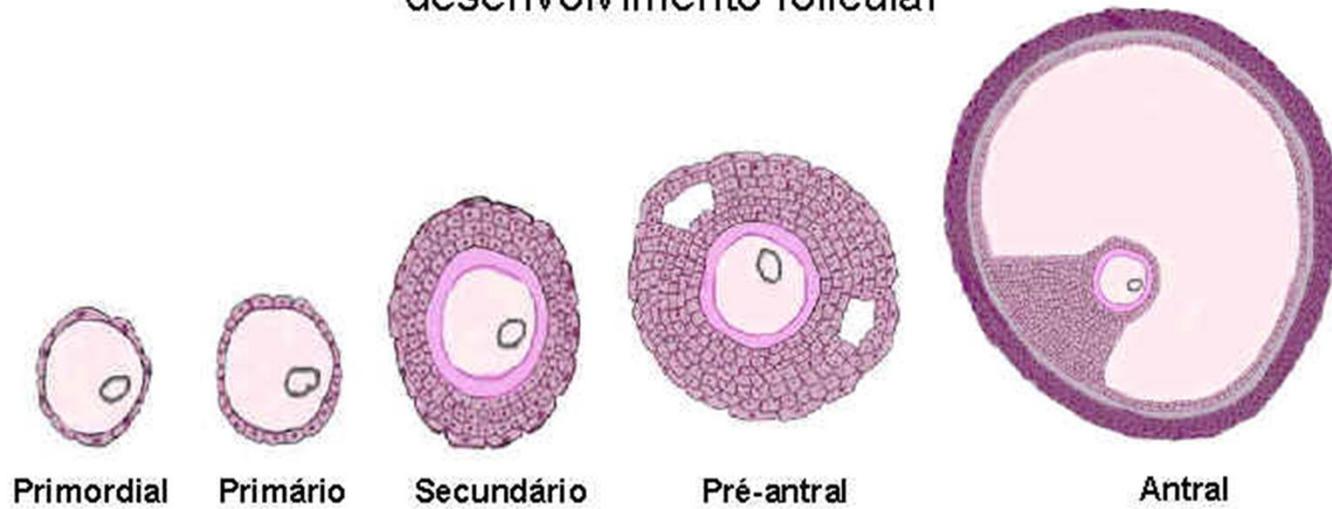
Follicle-stimulating hormone



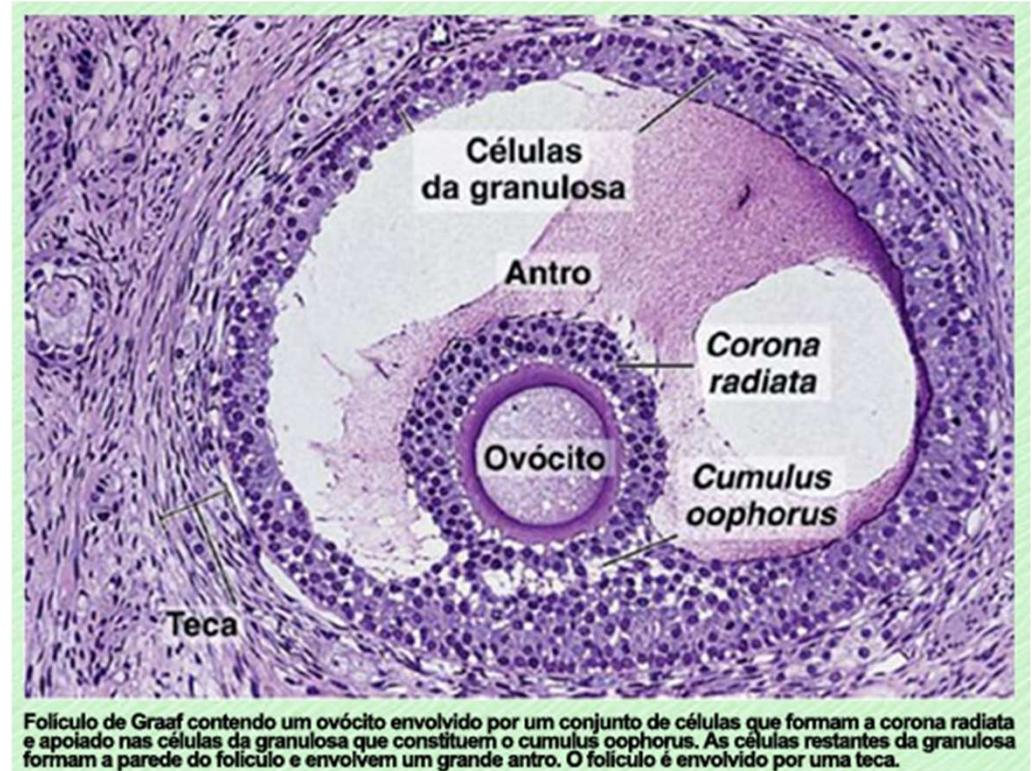


Koeppen & Stanton: Berne and Levy Physiology, 6th Edition.
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Estágios do desenvolvimento folicular



Folículo maduro
("Graaf")

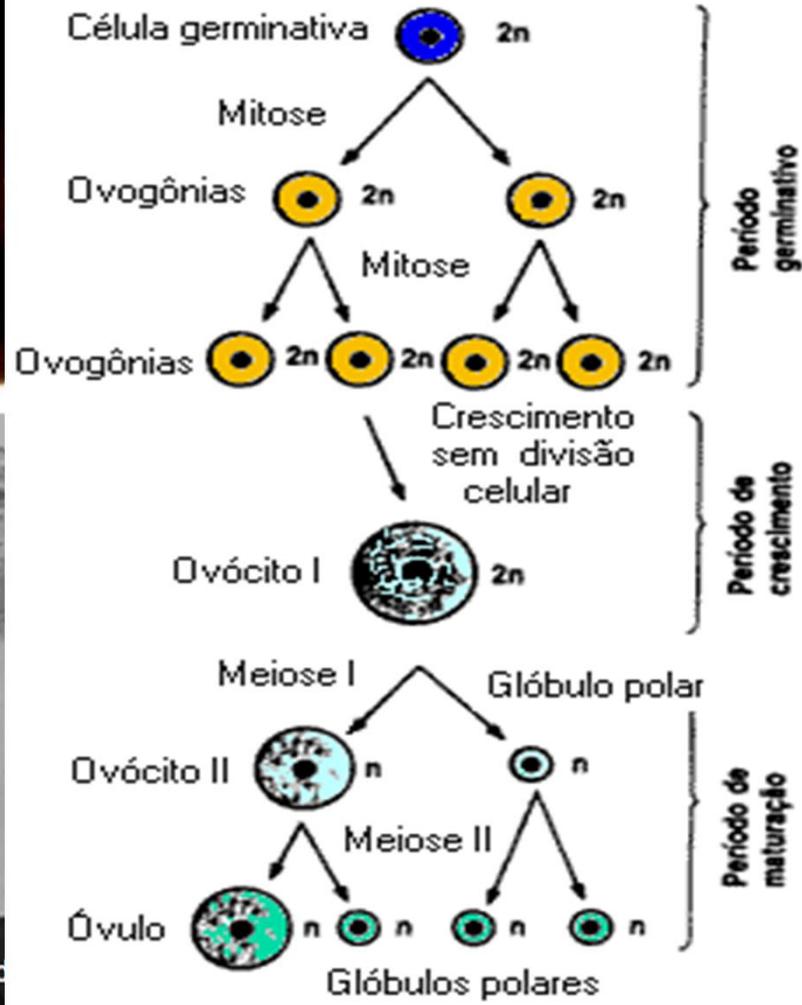
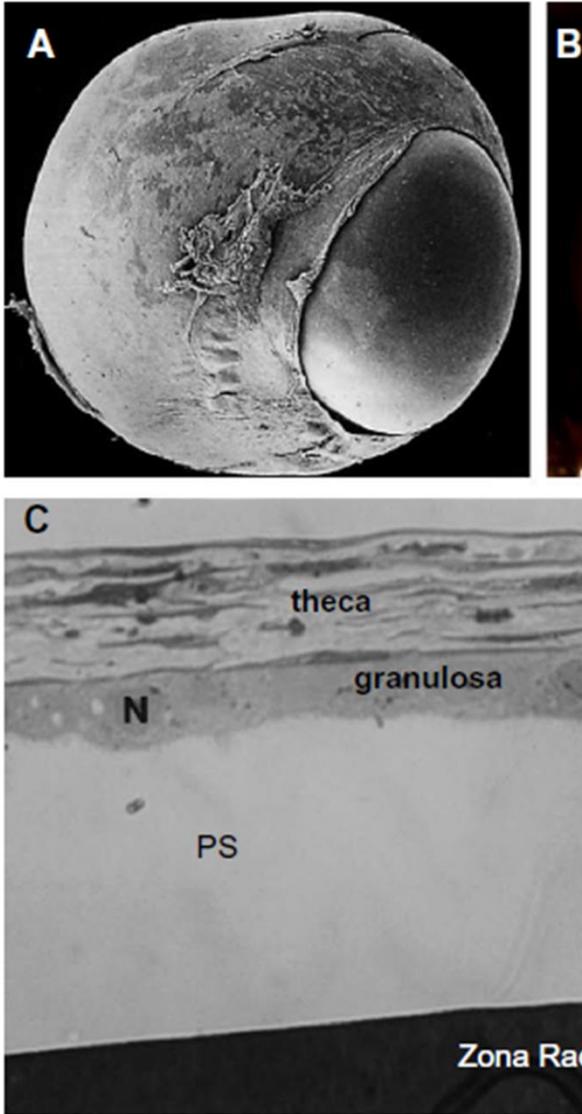


Folículo de Graaf contendo um ovócito envolvido por um conjunto de células que formam a corona radiata e apoiado nas células da granulosa que constituem o cumulus oophorus. As células restantes da granulosa formam a parede do folículo e envolvem um grande antro. O folículo é envolvido por uma teca.

Ovulação

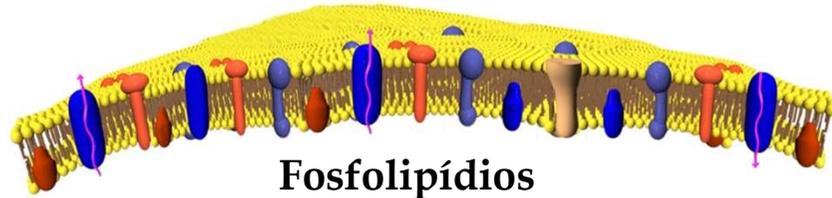
Ovogênese

a Meiose



Controle da Ovulação

- Prostaglandinas;
- Proteases;
- Moléculas de adesão;
- Progestágenos



Fosfolipídios

FLA / FLC

AA

EPA

COX I

PGG2

PGG3

COX II

PGH2

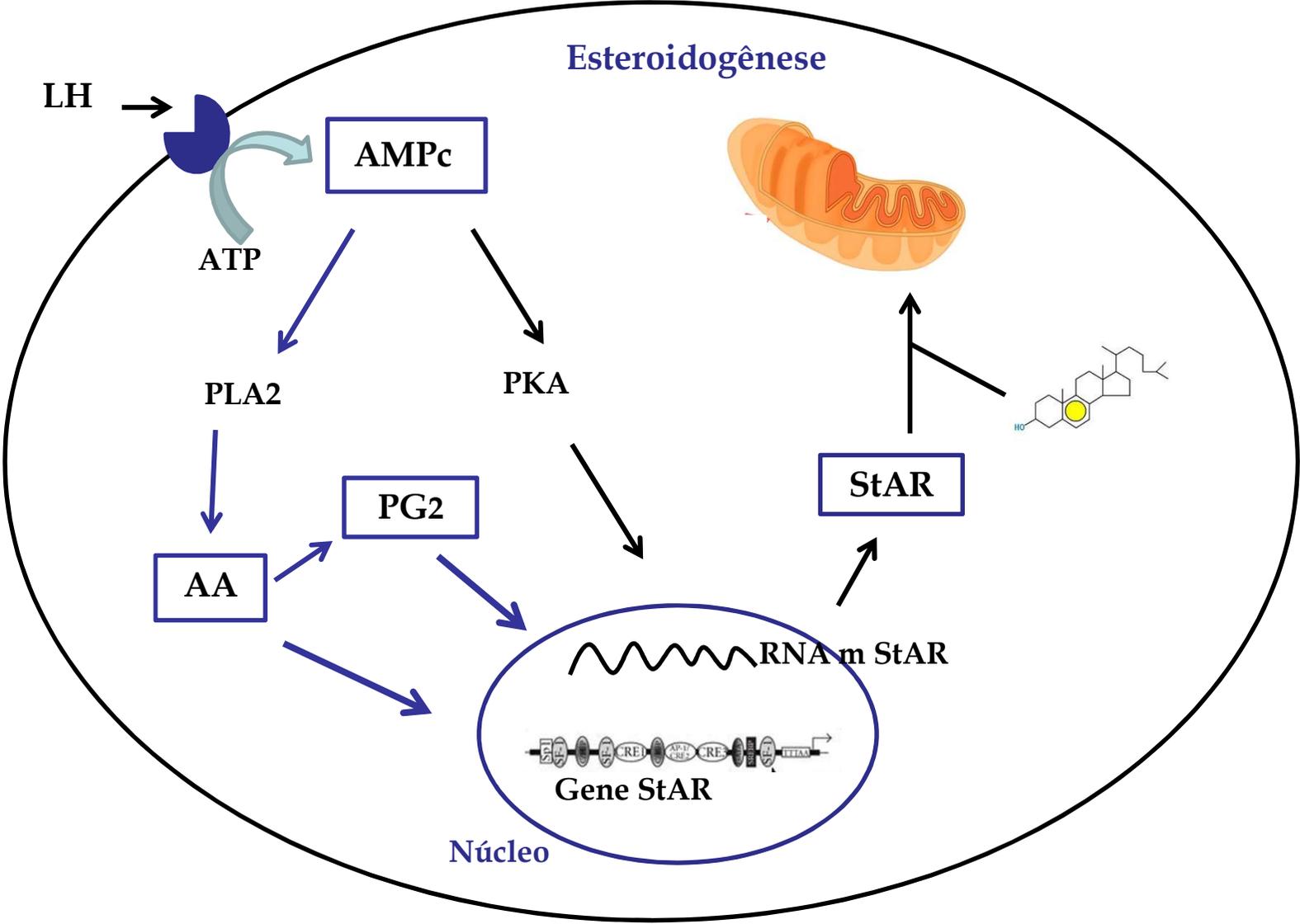
PGH3

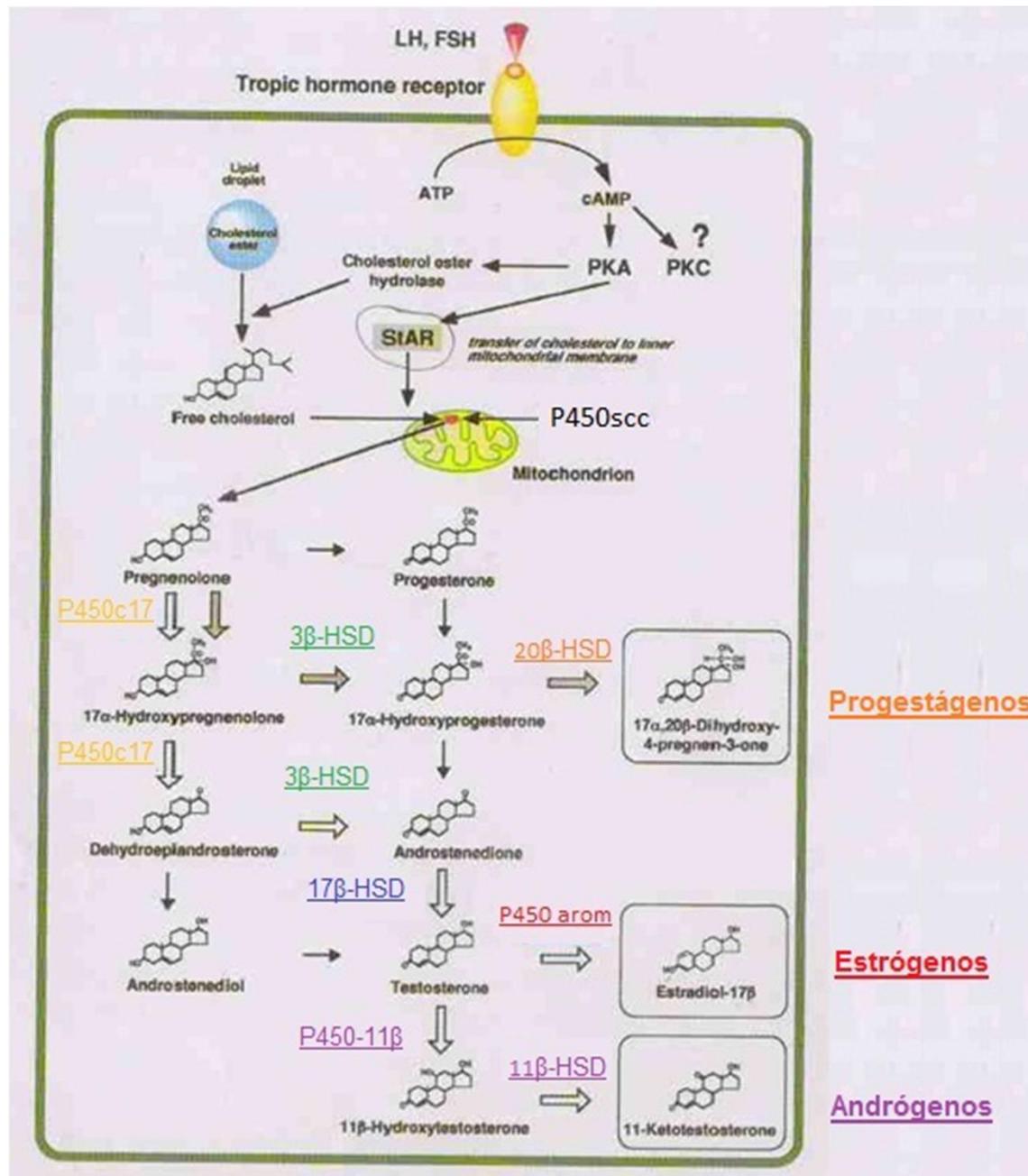
PG
sintase

PG2

PG3

Esteroidogênese

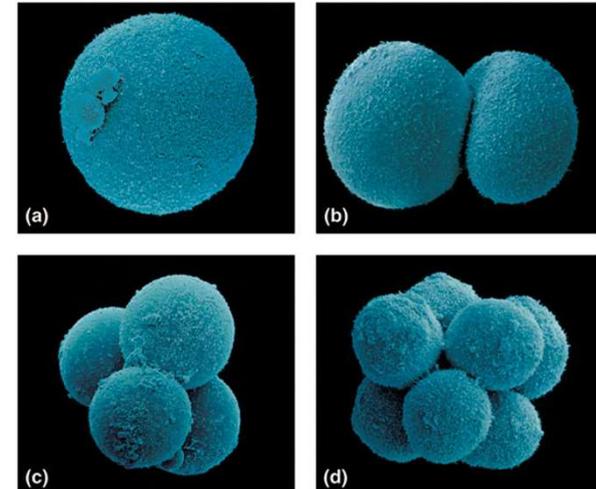




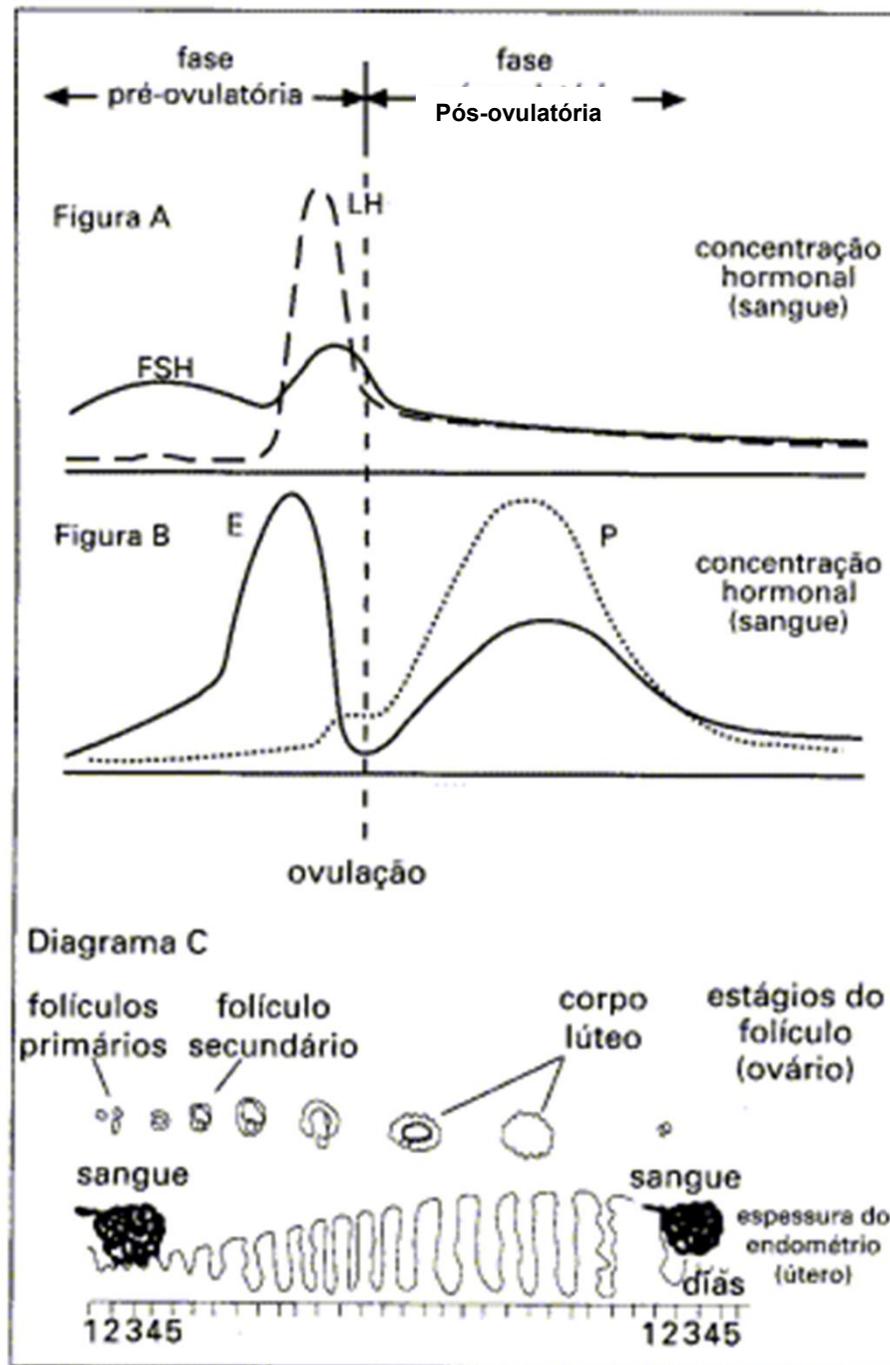
Fertilização e Gravidez



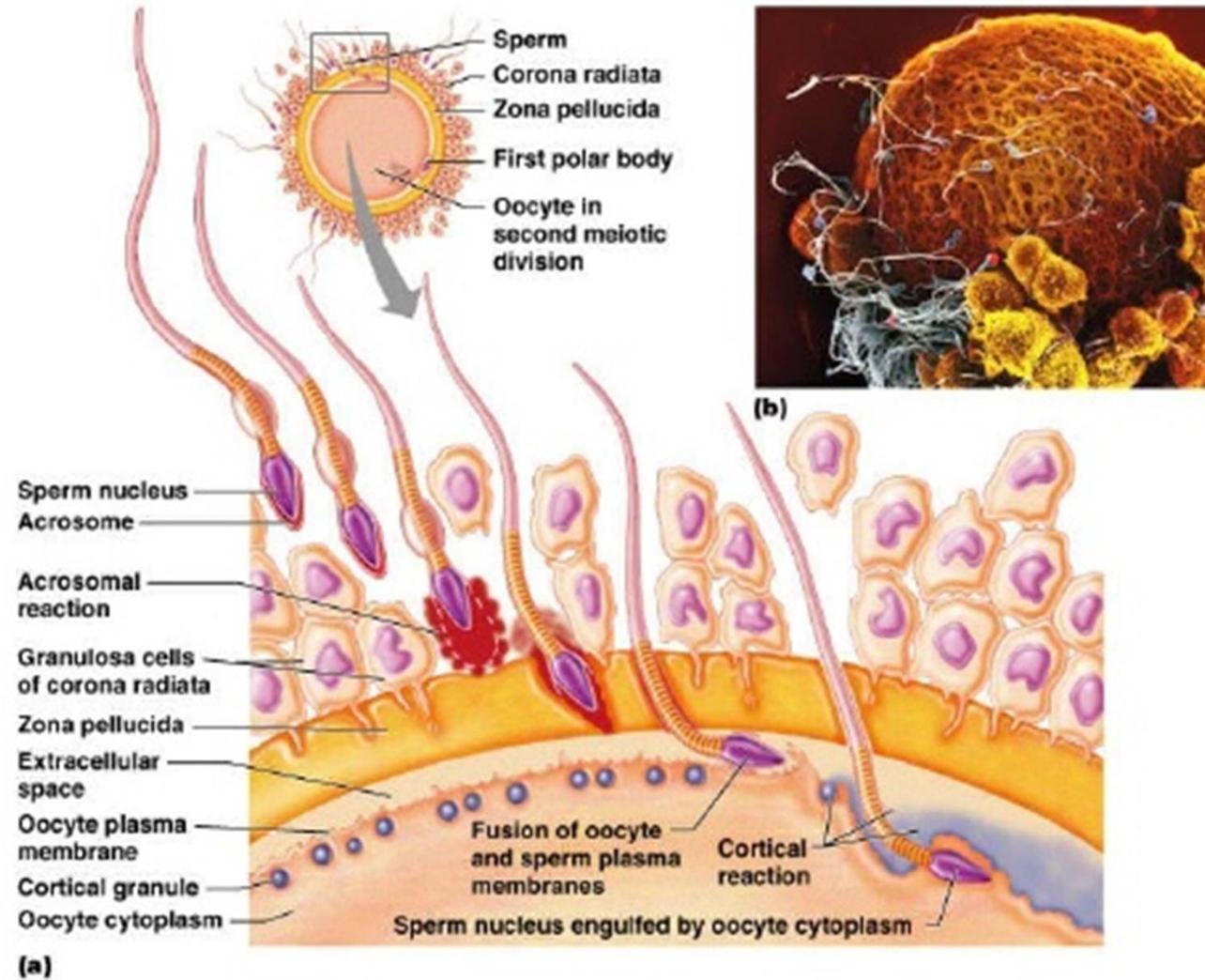
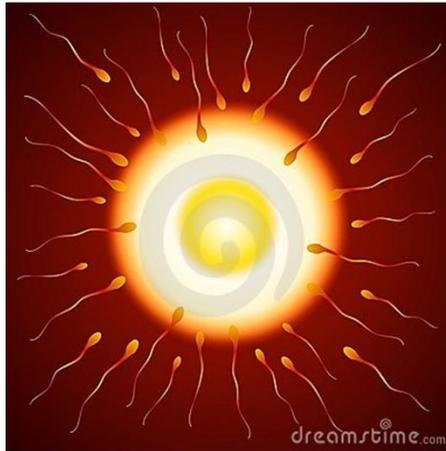
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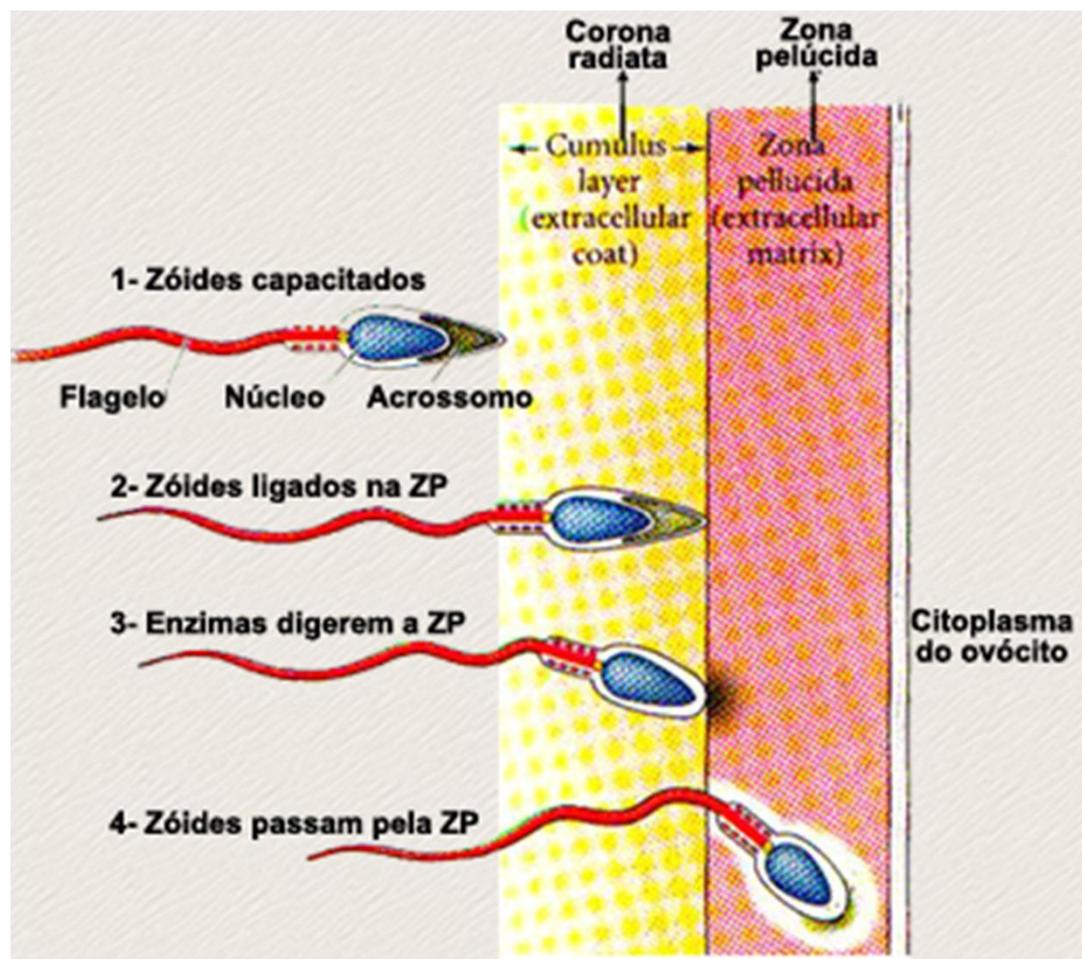


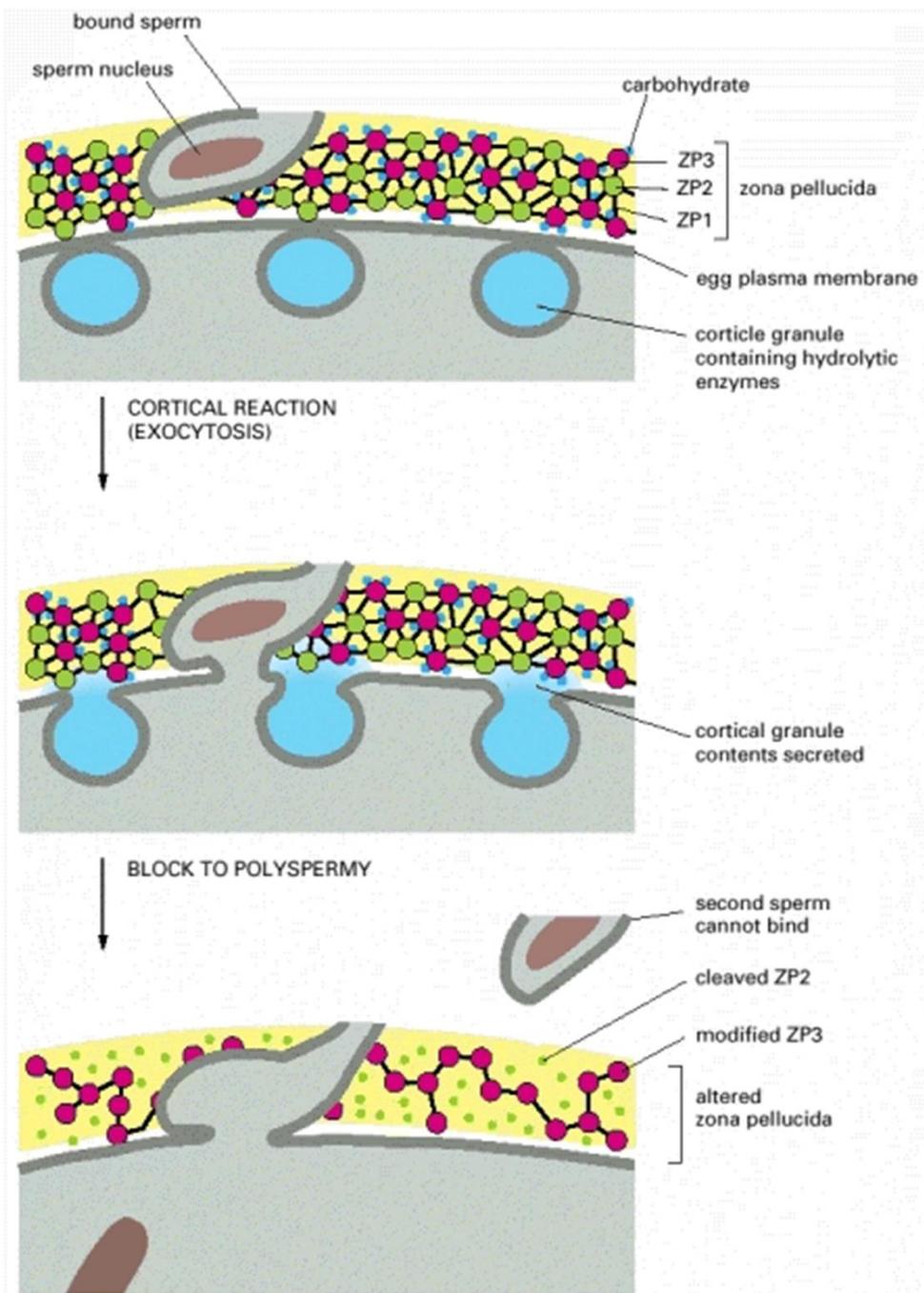
Um folículo começa a crescer mais que os outros (7 dias)

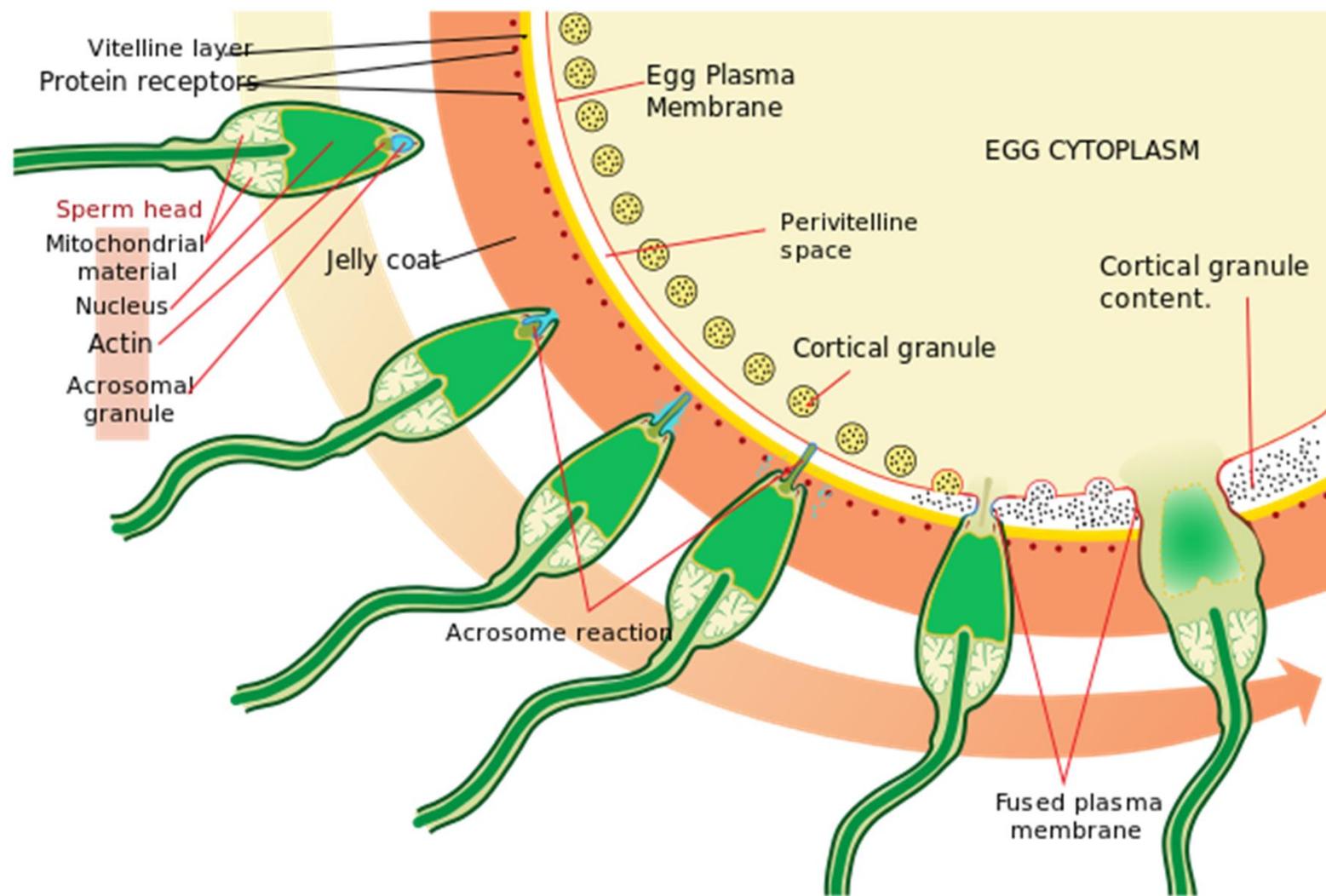


EVENTOS DA FERTILIZAÇÃO

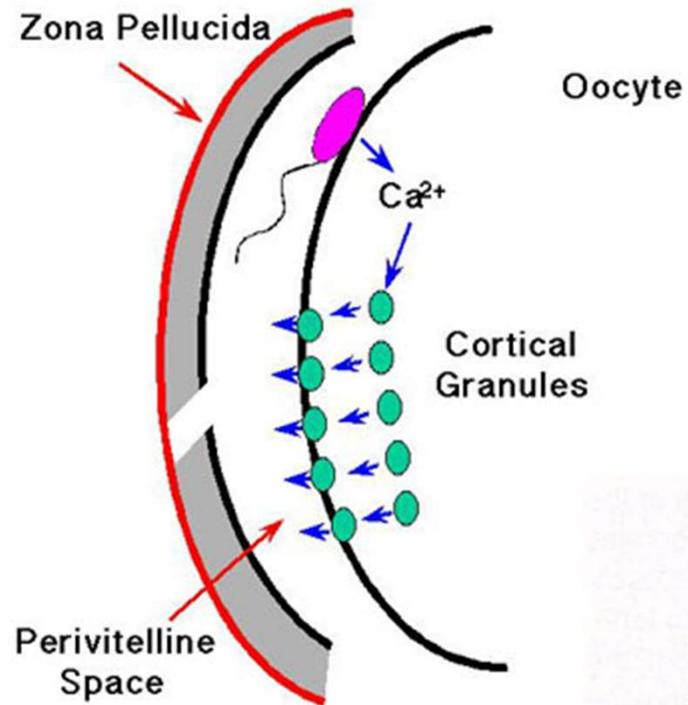






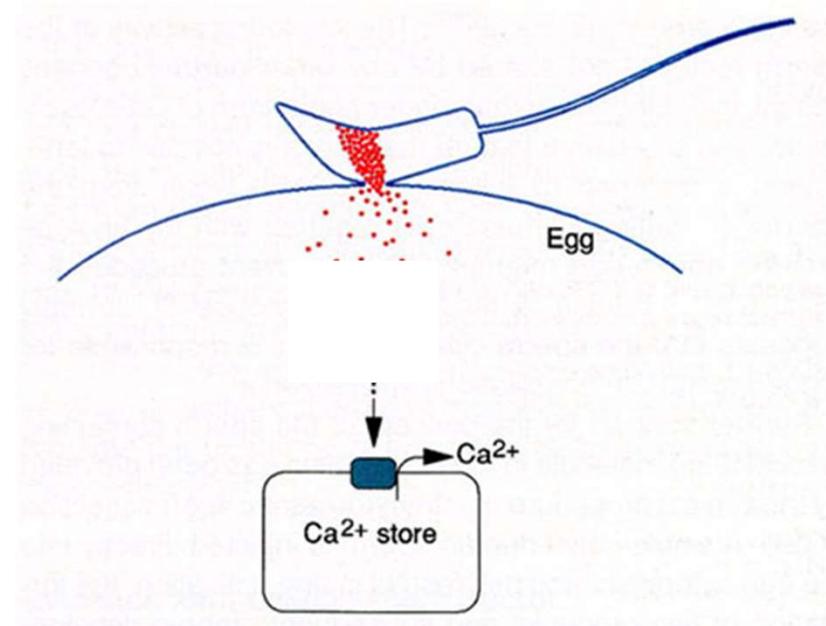


REAÇÃO CORTICAL – PREVINE A POLIPLÓIDIA



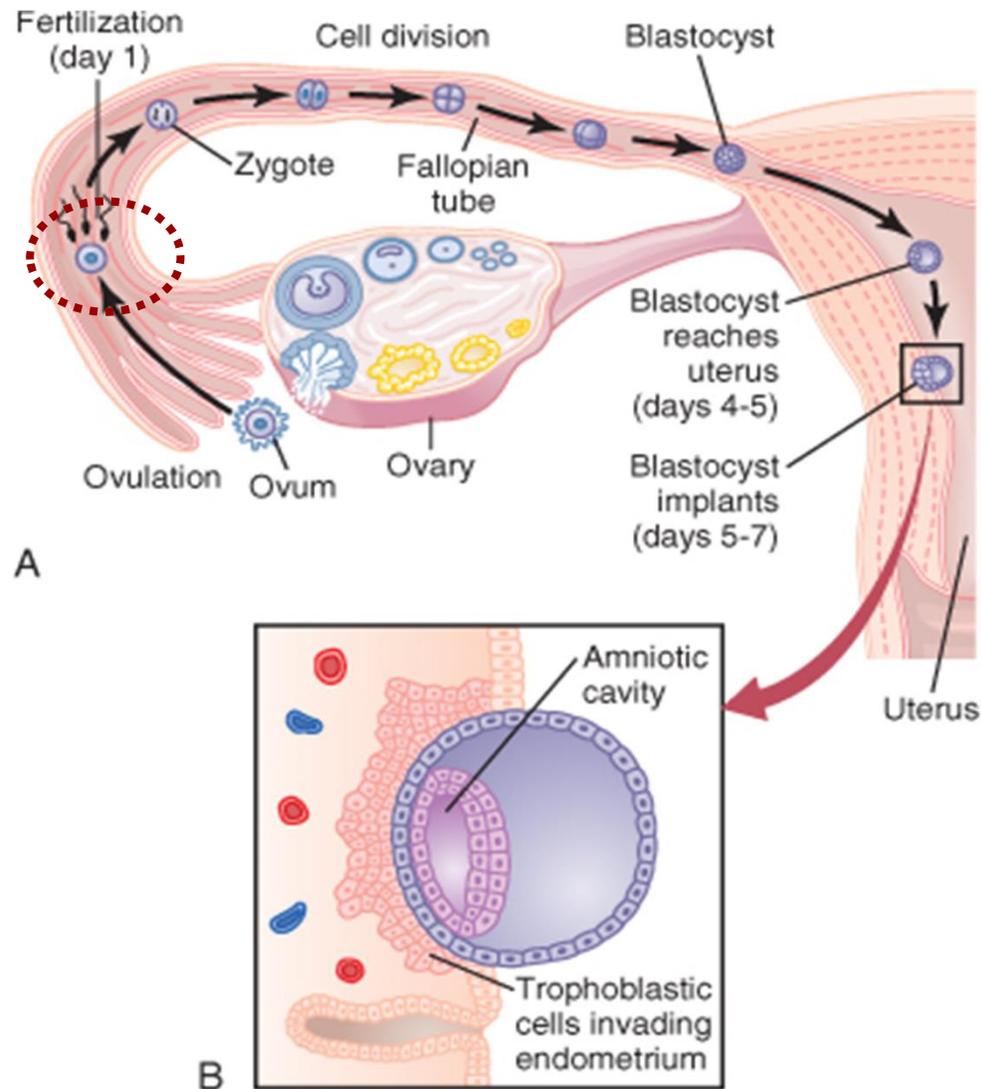
**Bloqueia a
polispermia**

Aumenta a concentração de cálcio;
Alteração da membrana

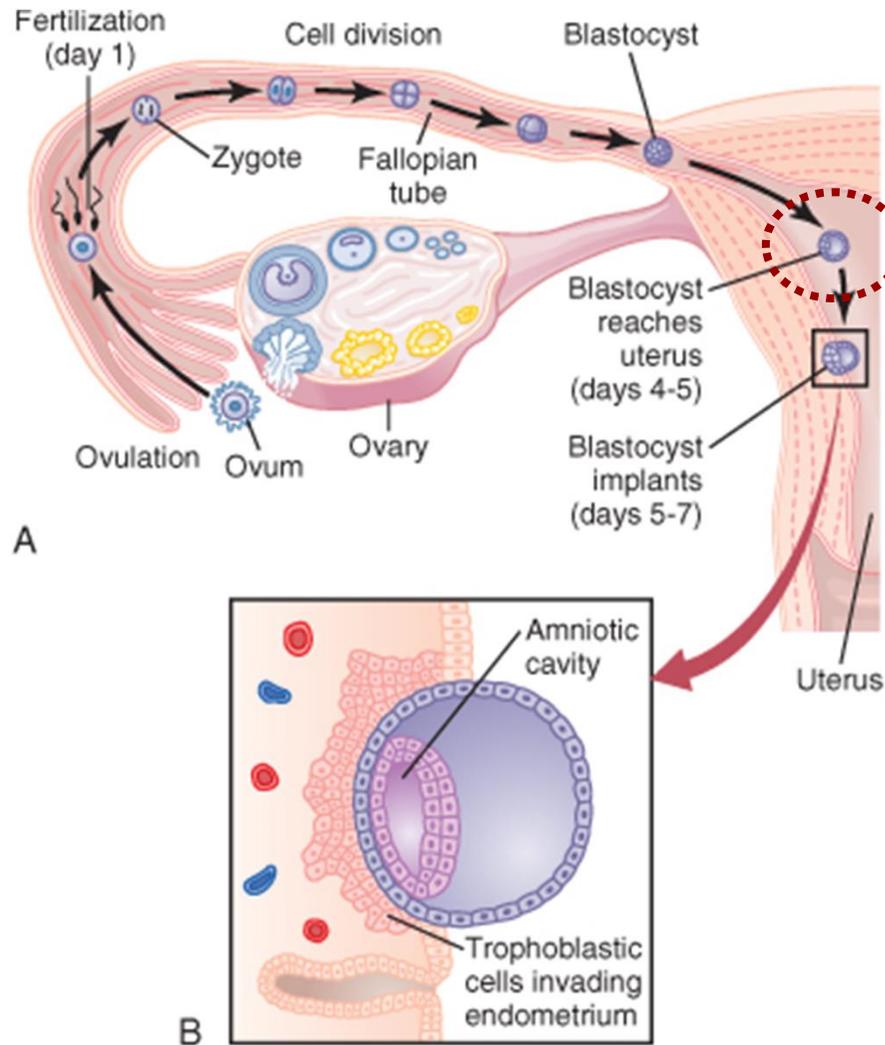


Fertilização

Fertilização ocorre normalmente nas trompas de Falópio

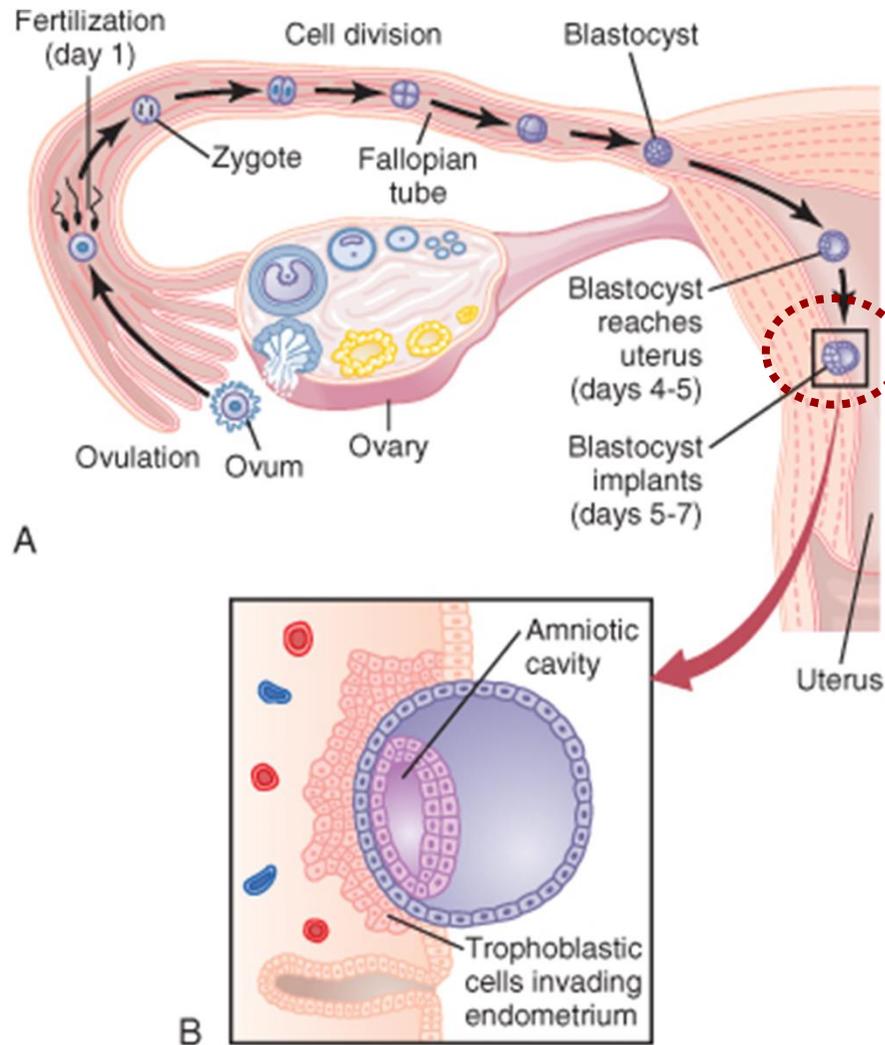


Fertilização

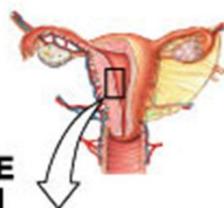


Transporte para o útero em cerca de 5 dias

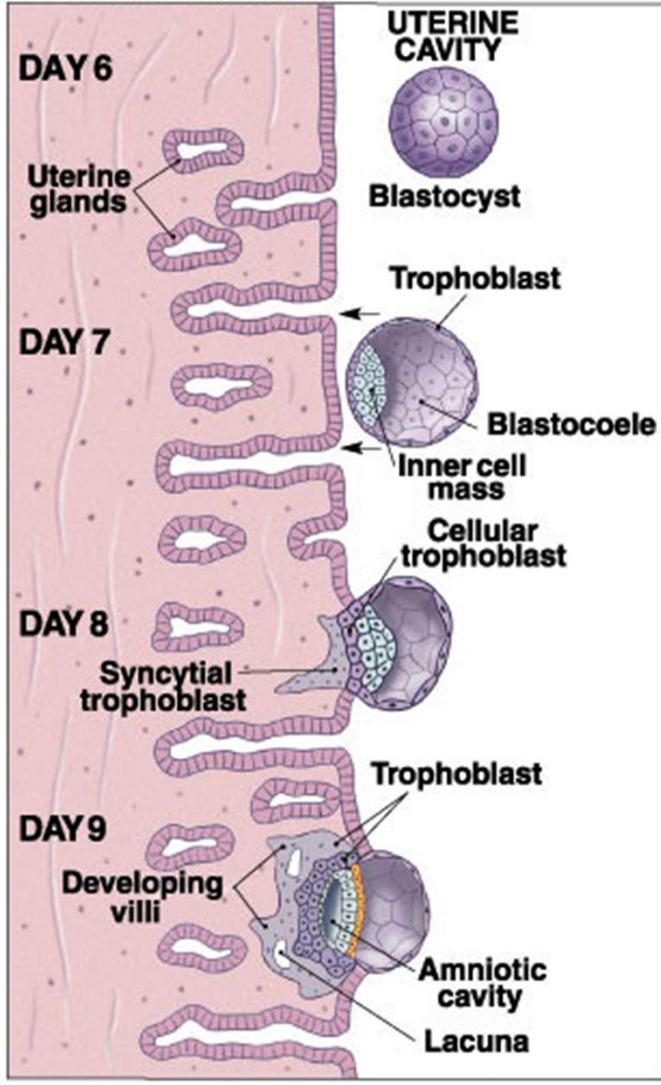
Fertilização



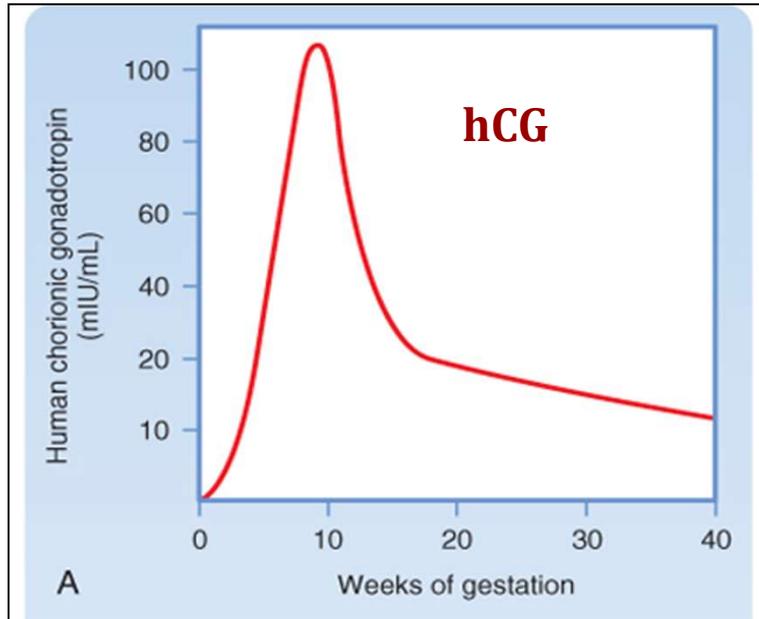
Implantação ocorre de 5-7 dias após a fertilização



FUNCTIONAL ZONE OF ENDOMETRIUM



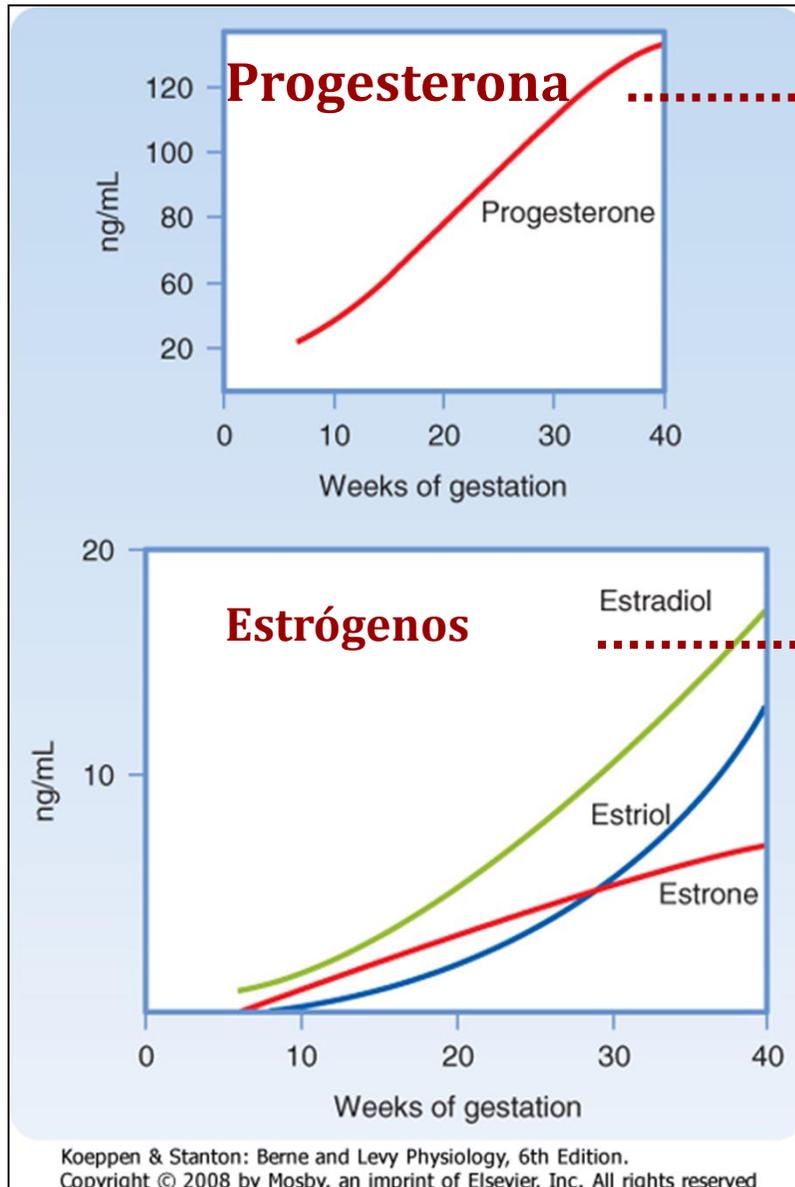
Principais alterações hormonais



Gonadotropina Coriônica Humana

- Produzida pelo trofoblasto
- glicoproteína; subunidades α e β
- impede a involução do corpo lúteo;
- Mantém a produção de progesterona e estrógeno (= LH)

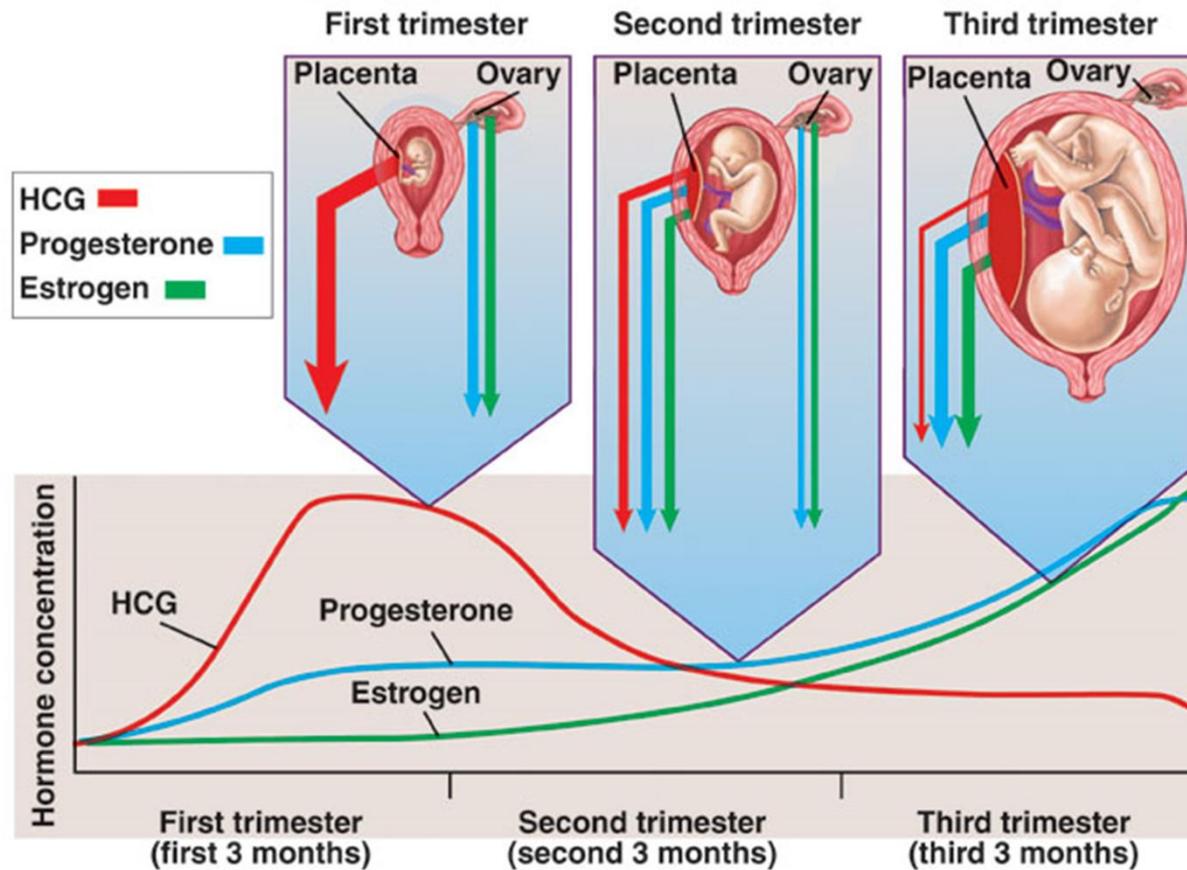
Principais alterações hormonais



- produzida pelo corpo lúteo e depois pela placenta
 - diminui a contração do útero – impede a expulsão prematura do feto (inibe prostaglandina);
 - começa a preparar as glândulas mamárias (desenvolvimento)
-
- crescimento do miométrio
 - crescimento do sistema de ductos das mamas
 - relaxamento e amolecimento dos ligamentos pélvicos da mãe e da sínfise pubiana – acomodar o útero

Resumo das alterações hormonais

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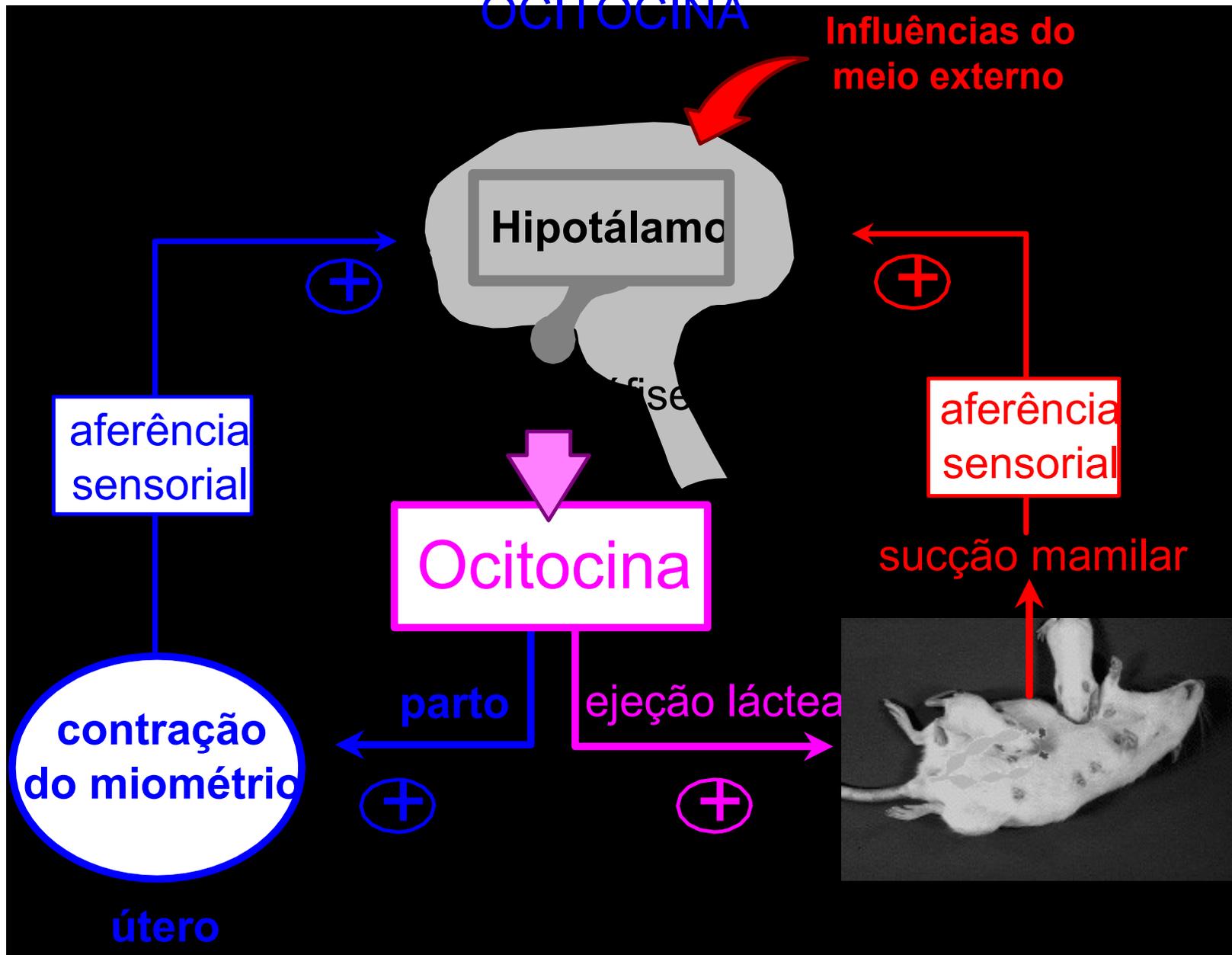
-Início da gravidez – alta produção de HCG; manutenção do corpo lúteo
↓
produção de estrógenos e progestágenos – inibe a menstruação



FISIOLOGIA DA LACTAÇÃO

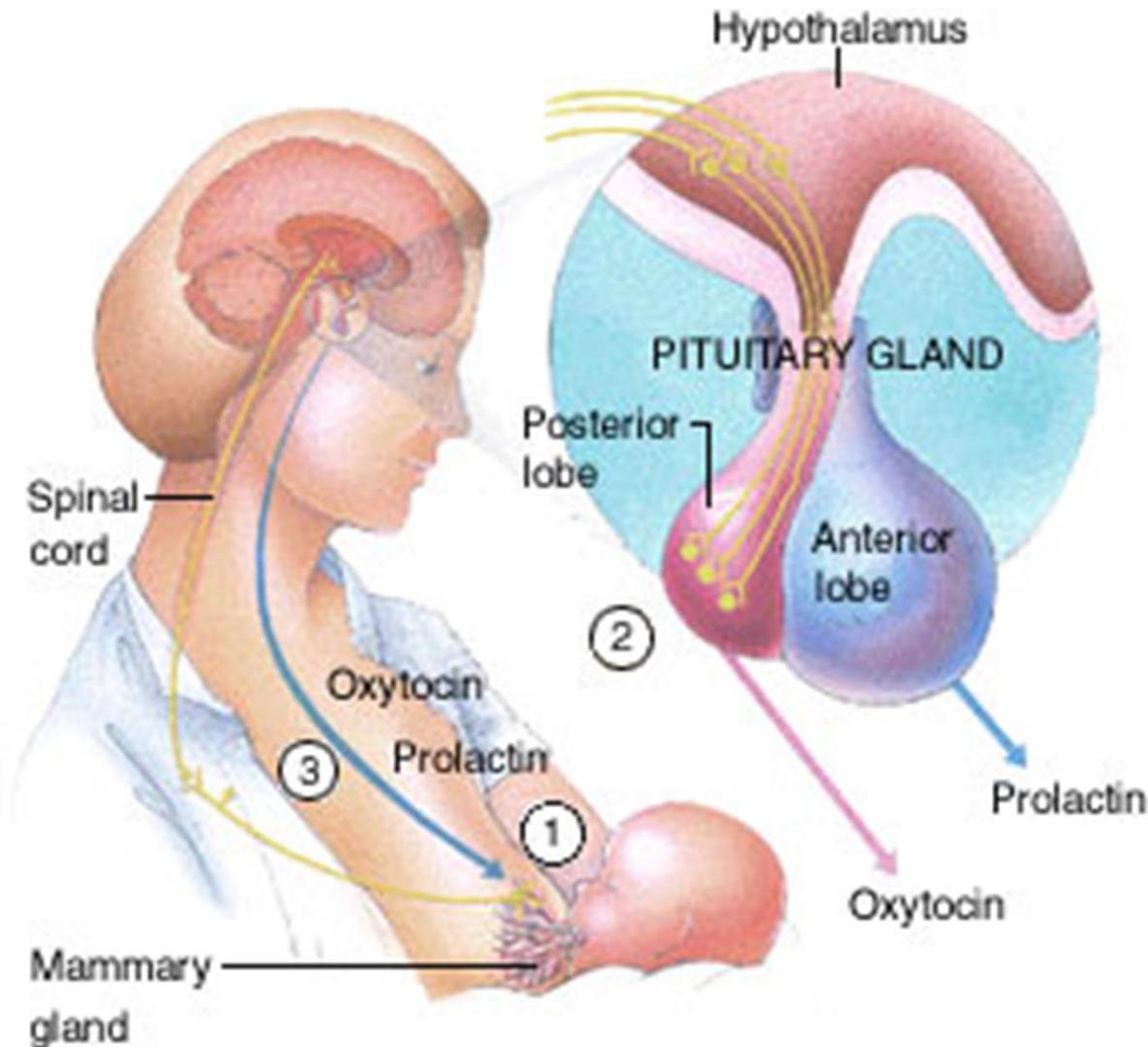
HORMÔNIOS DA NEUROHIPÓFISE

OCITOCINA



HORMÔNIOS DA NEUROHIPÓFISE

Mecanismo de secreção de OCITOCINA durante a lactação

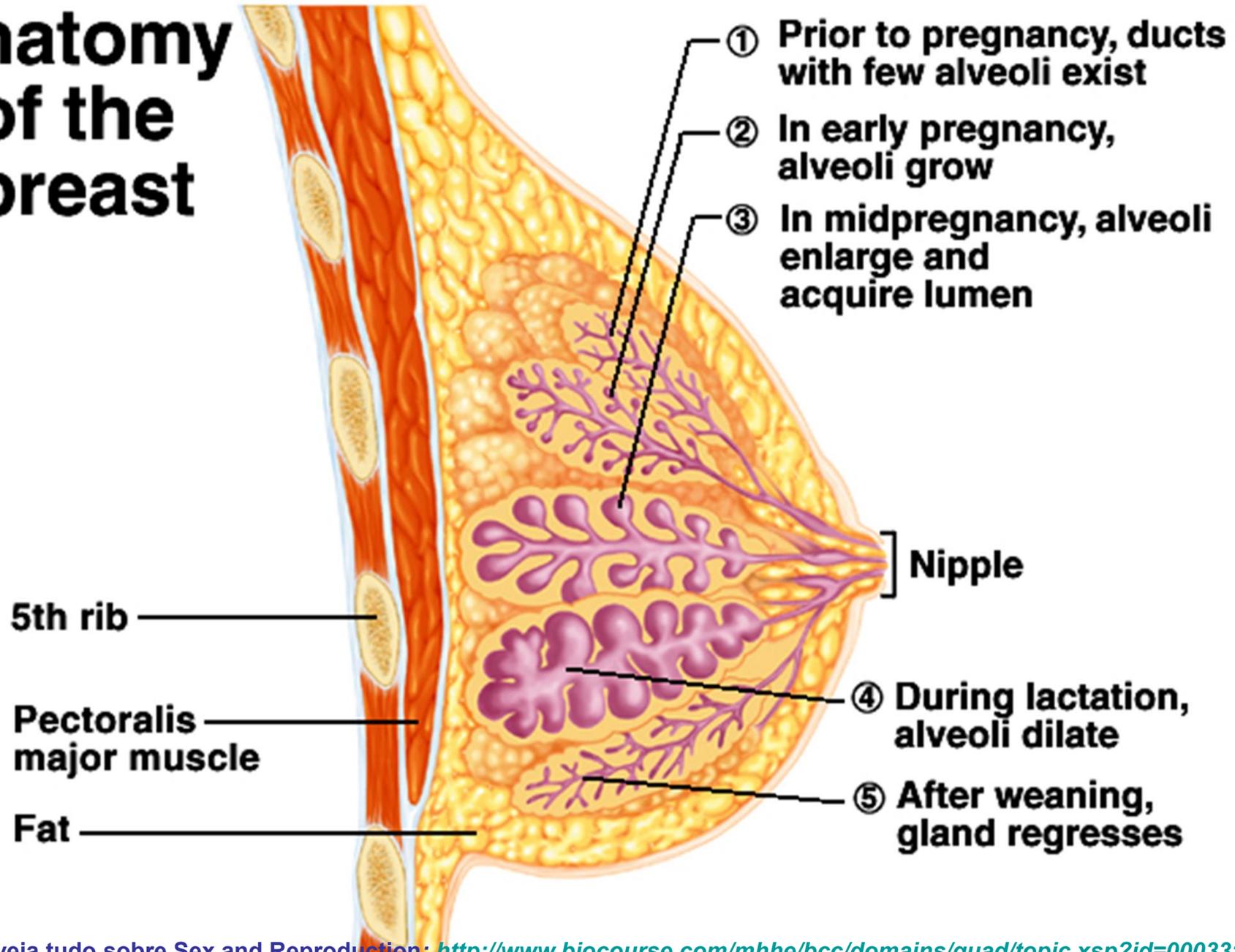


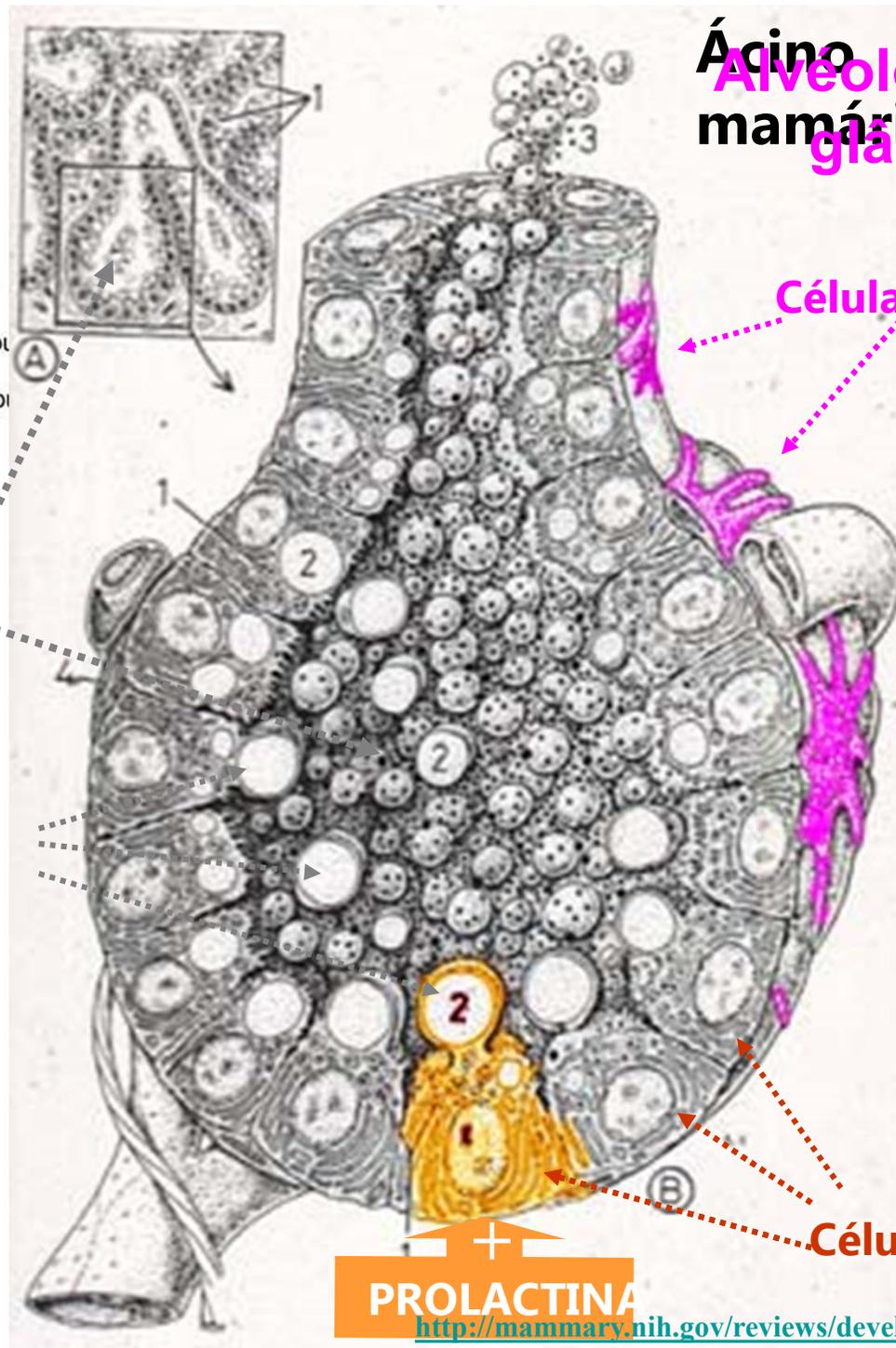
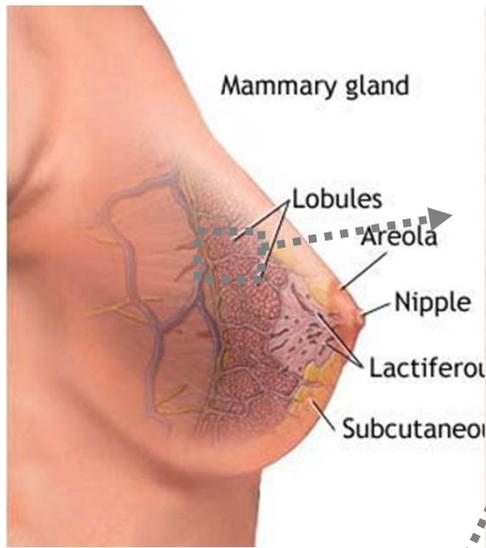
1. Stimulation of the nipple by the baby's suckling initiates action potentials in the afferent neurons that connect with the hypothalamus.
2. The hypothalamus stimulates the posterior pituitary to release oxytocin and the anterior pituitary to release prolactin.
3. Oxytocin stimulates milk release from the breast. Prolactin stimulates additional milk production.

As glândulas mamárias da mulher adulta

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Anatomy of the breast





Ácino
Alveolo (ou ácino) da
mamária
glândula mamária

Células mioepiteliais

OCITOCINA



Células acinares

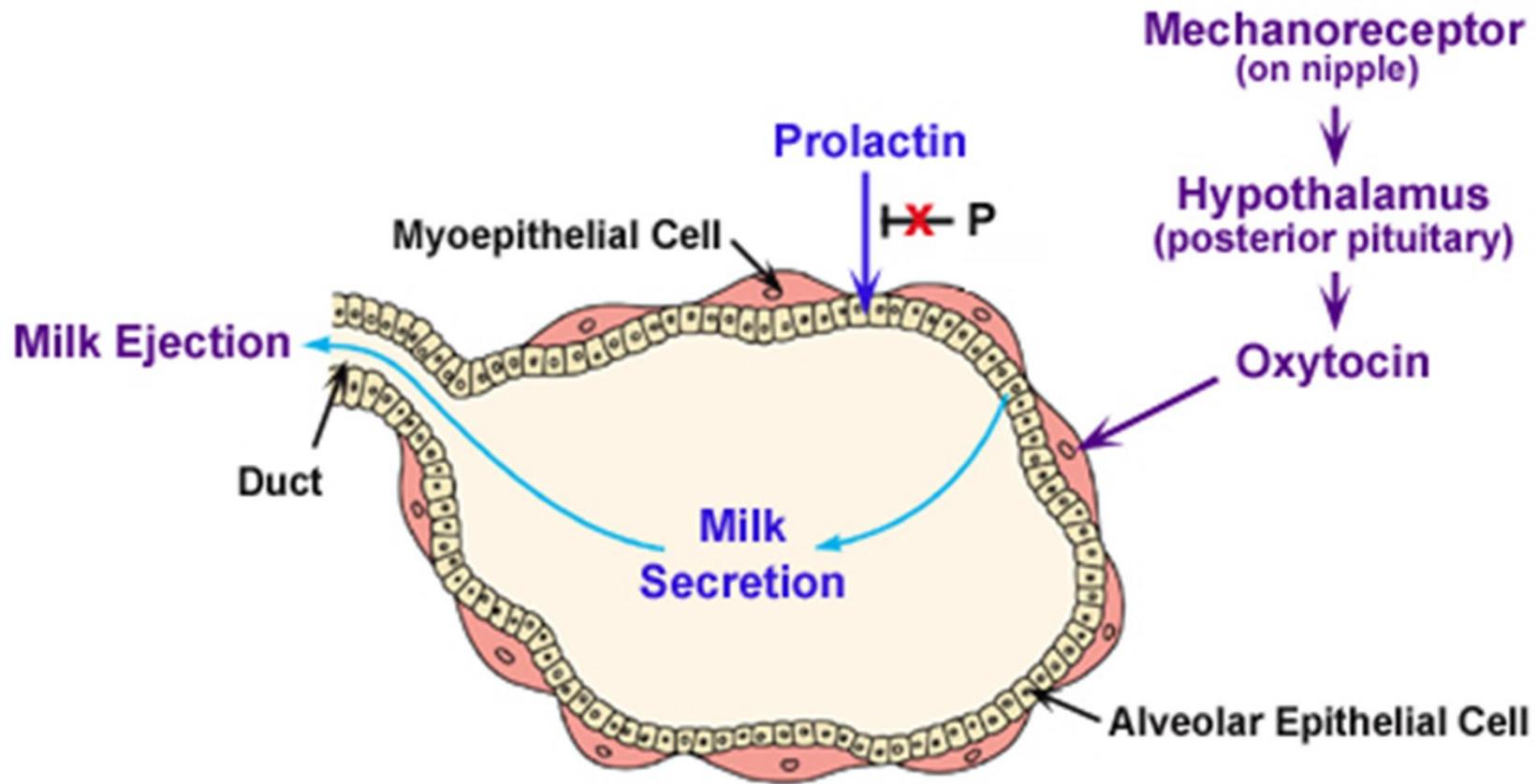
PROLACTINA

<http://mammary.nih.gov/reviews/development/Hennighausen001/index.ht>

Luz do ácino
mamário

Exocitose de
grânulos com
leite

Alvéolo (ou ácino) da glândula mamária

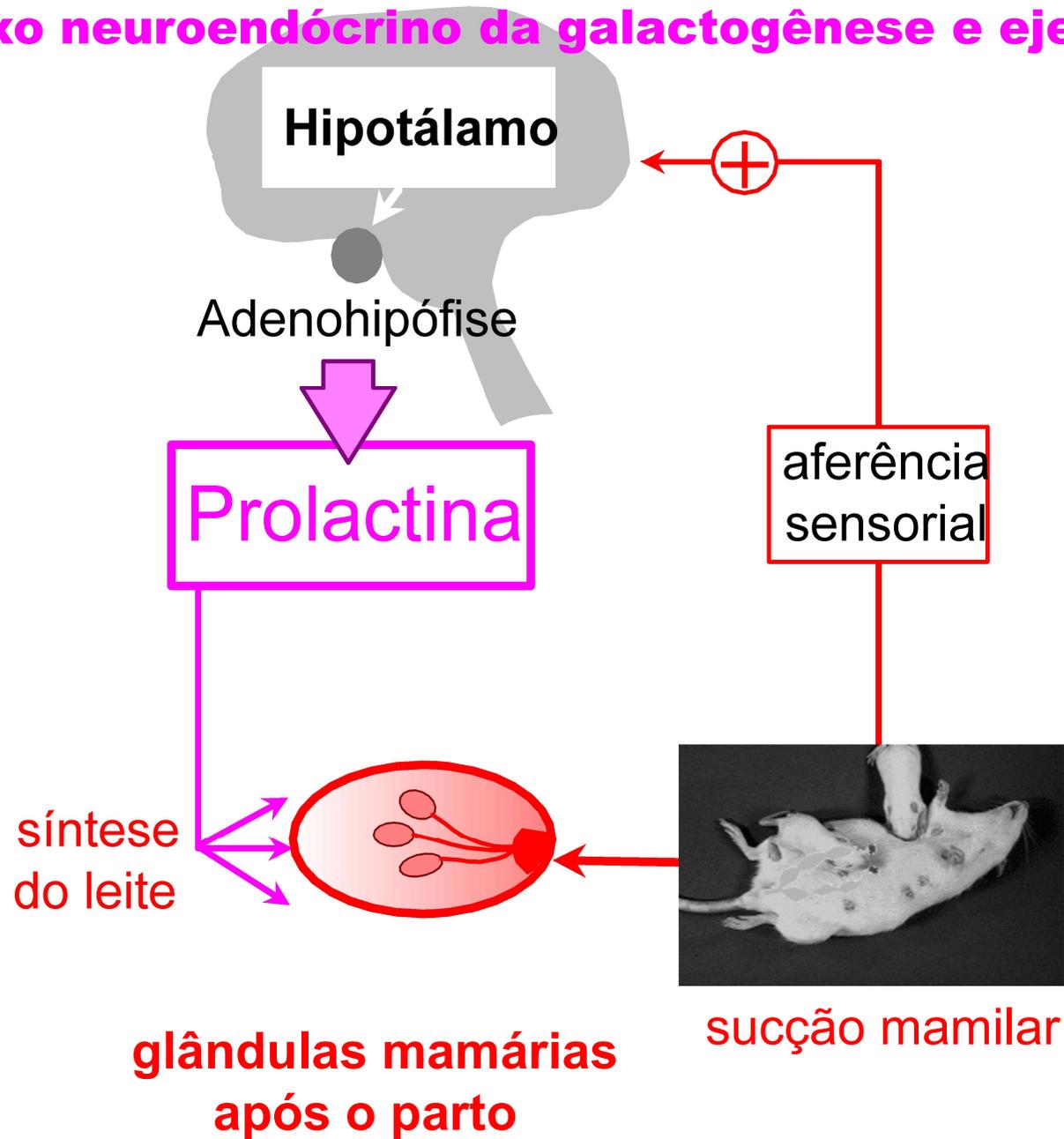


Alveolus of Mammary Gland

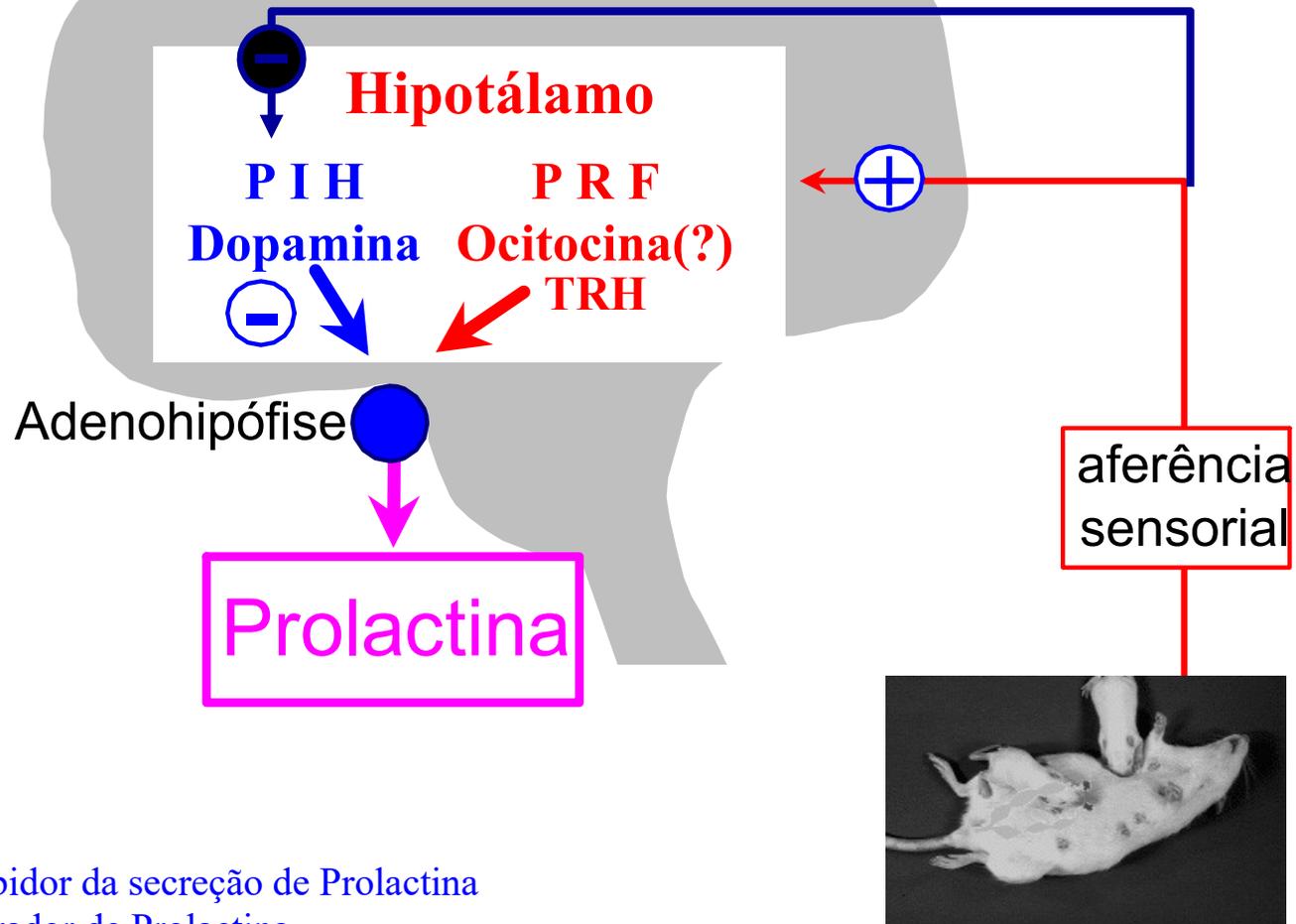
P: a progesterona inibe a lactação durante a gravidez

Secreção de Prolactina pela adenohipófise

O reflexo neuroendócrino da galactogênese e ejeção láctea



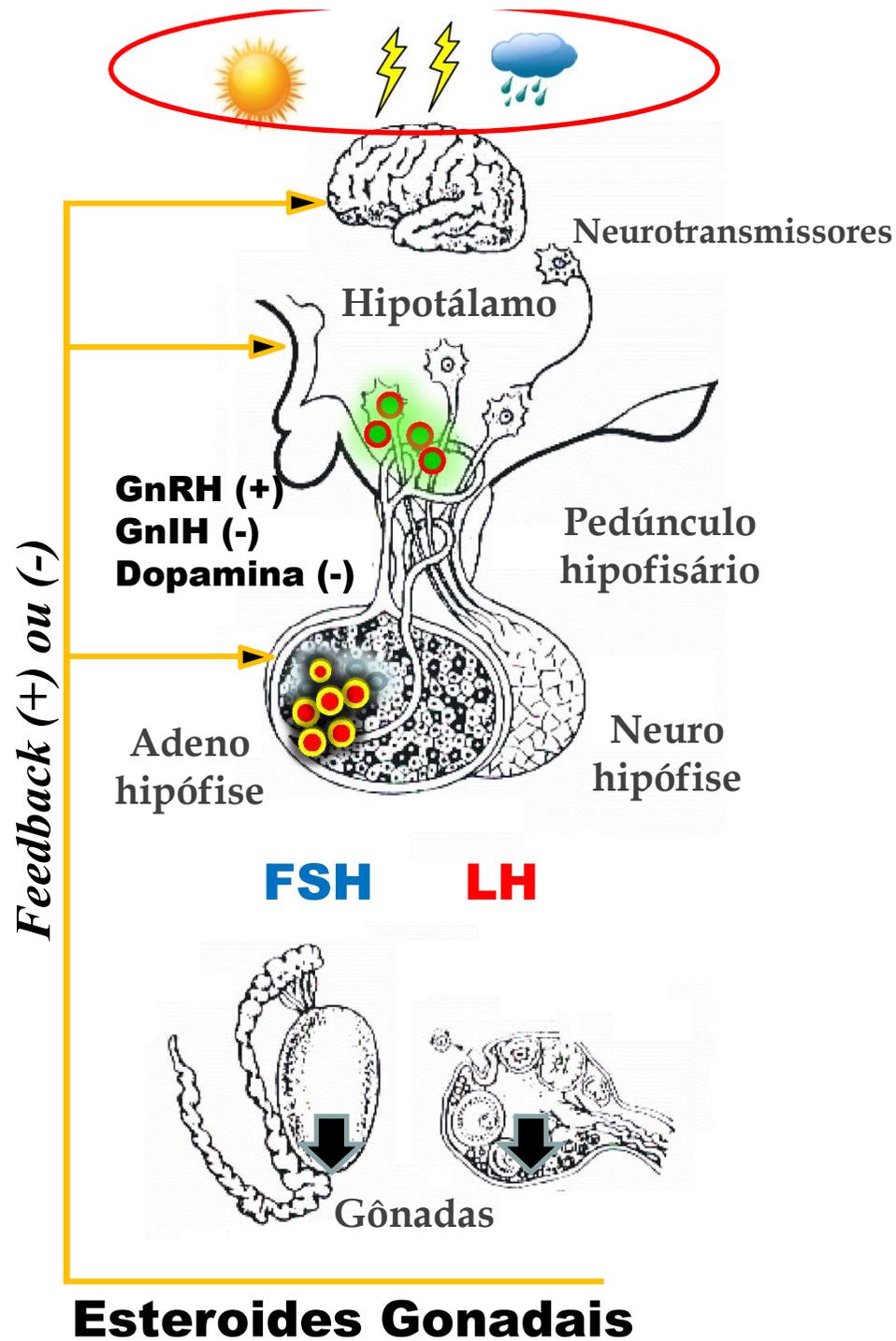
Secreção de Prolactina pela adenohipófise O reflexo neuroendócrino da galactogênese e ejeção láctea



PIH: Horm. Inibidor da secreção de Prolactina
PRF: Fator liberador de Prolactina

**APLICAÇÕES PRÁTICAS DO
ESTUDO DO EIXO
HIPOTÁLAMO-HIPÓFISE-
GÔNADAS**

**O Eixo
Hipotálamo
Hipófise
Gônadas**

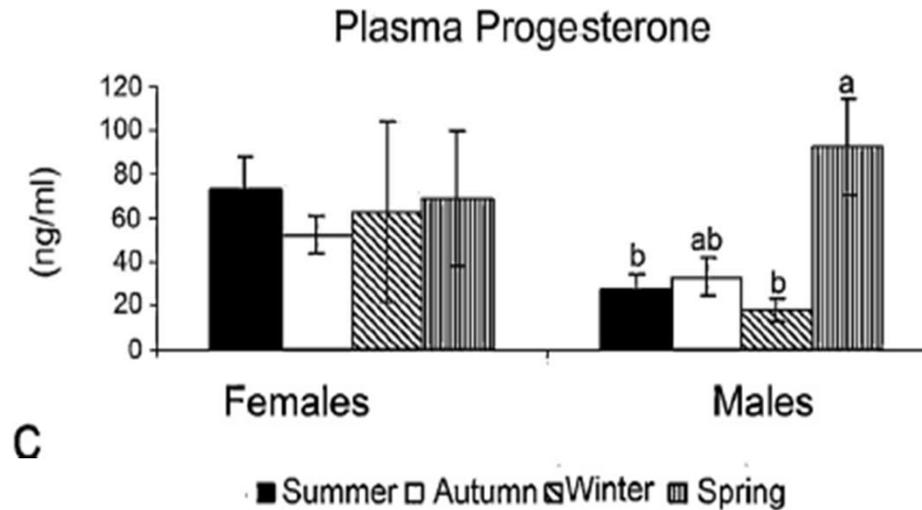


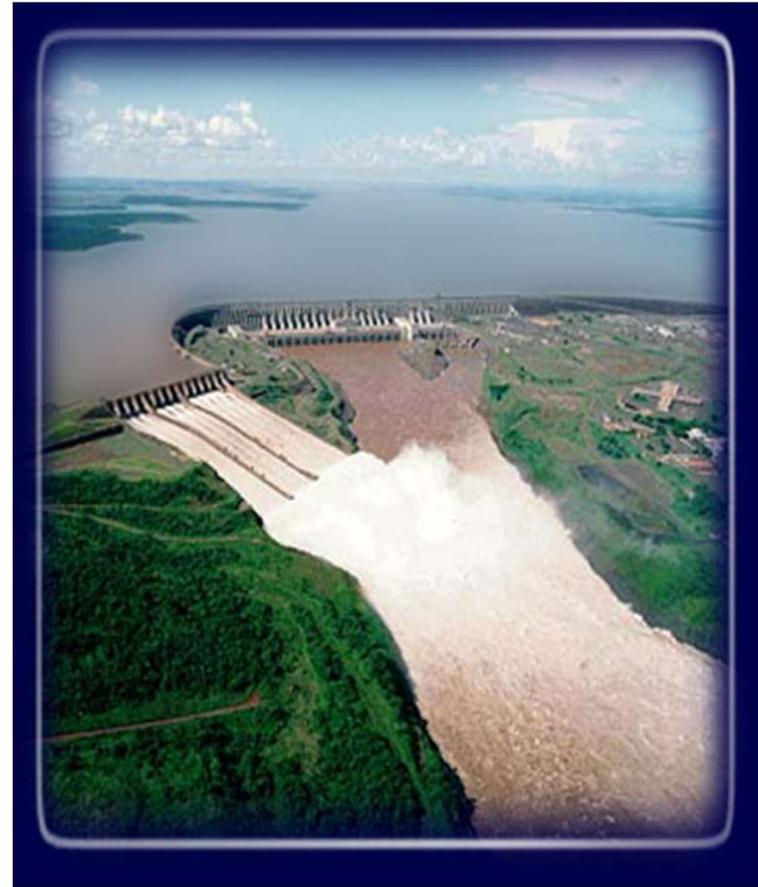
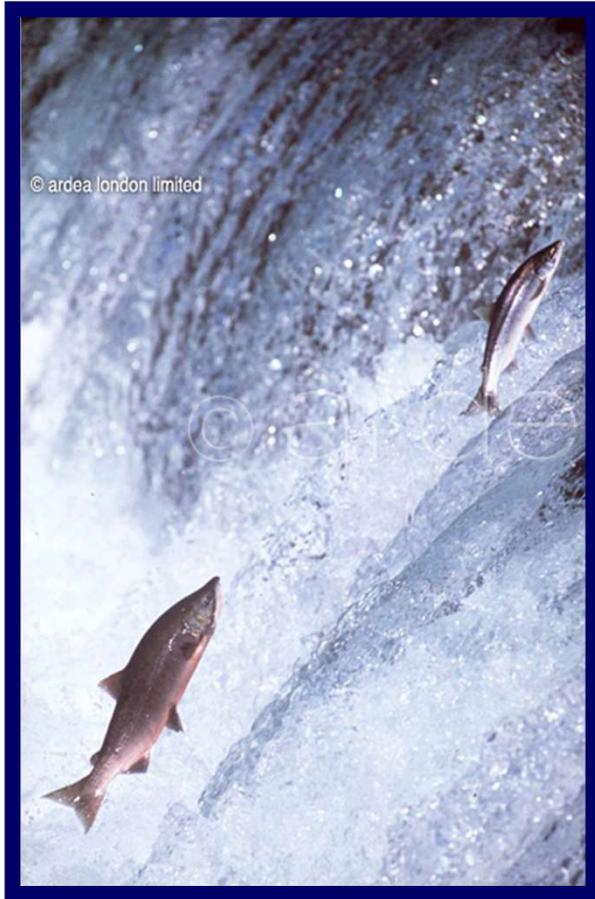


Metabolic and endocrine changes during the reproductive cycle of dermatophagic caecilians in captivity



Aline D. Gomes^a, Carlos A. Navas^a, Carlos Jared^b, Marta M. Antoniazzi^b, Nora R. Ceballos^c, Renata G. Moreira^{a,*}







Terapia Hormonal em Espécies de Cativeiro

Indução hormonal com hCG e cPE



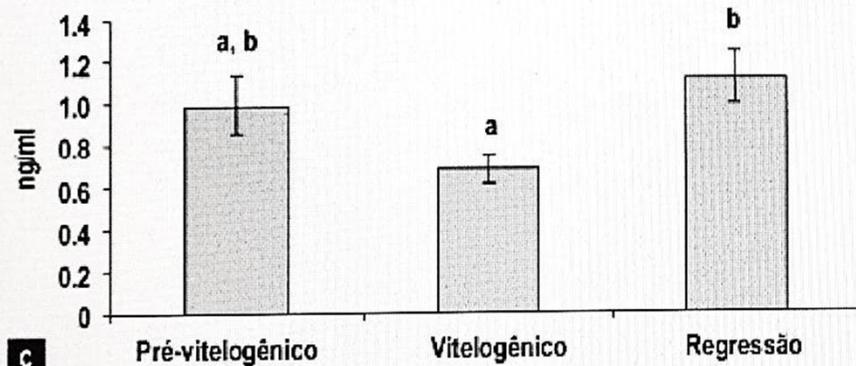
Extrusão dos gametas por massagem abdominal



Produção de ovos e larvas

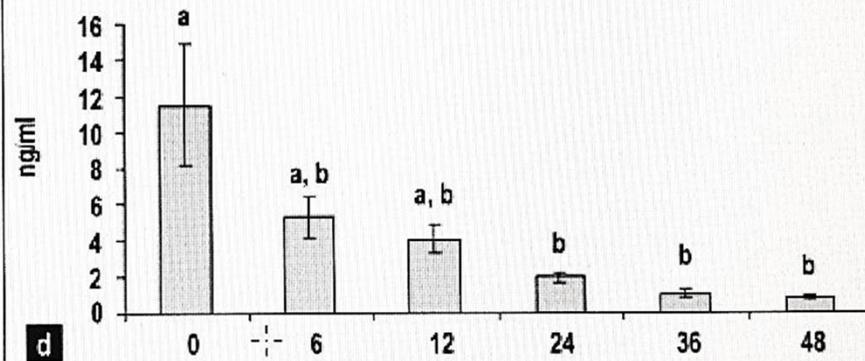


17 α -Hidroxiprogesterona (17 α -OHP) - ciclo reprodutivo

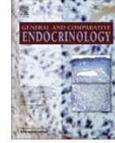


c

17 α -Hidroxiprogesterona (17 α -OHP) - reprodução

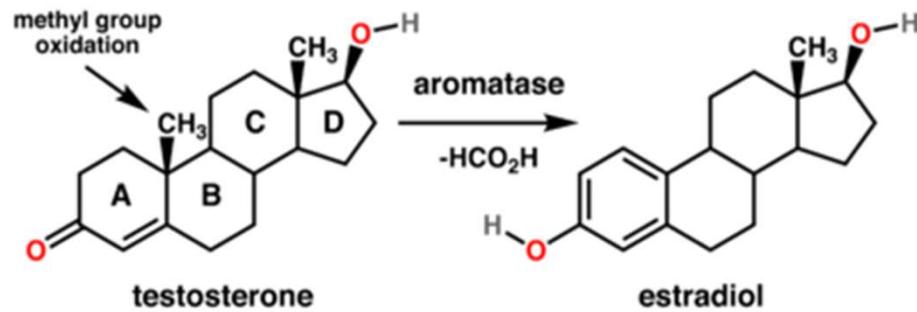


d



Involvement of pituitary gonadotropins, gonadal steroids and breeding season in sex change of protogynous dusky grouper, *Epinephelus marginatus* (Teleostei: Serranidae), induced by a non-steroidal aromatase inhibitor

Carlos Eduardo de O. Garcia^{a,c}, Bruno C. Araújo^{a,c}, Paulo H. Mello^{a,c}, Amanda de M. Narcizo^a, Jandyr A. Rodrigues-Filho^{b,c}, Andreone T. Medrado^a, Ricardo A. Zampieri^a, Lucile M. Floeter-Winter^a, Renata Guimarães Moreira^{a,c,*}



Threatened fishes of the world: *Epinephelus marginatus* (Lowe, 1834) (Serranidae: Epinephelinae)

Jandyr de Almeida Rodrigues Filho · Eduardo Gomes Sanches · Carlos Eduardo de Oliveira Garcia · Carolina Viana Pannuti · Evandro Figueiredo Sebastiani · Renata Guimarães Moreira



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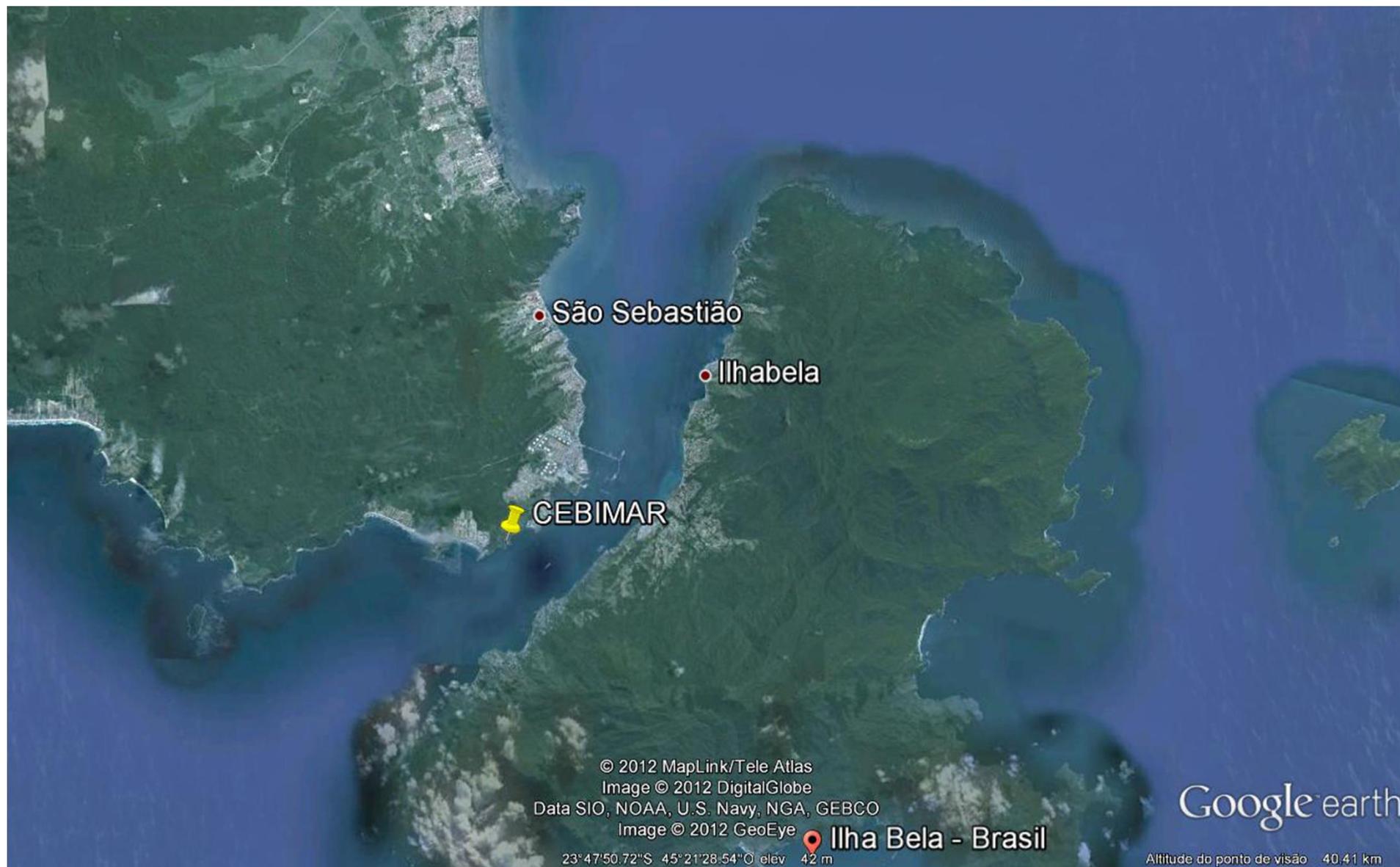
Epinephelus marginatus

<http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T7859A12857009.en>

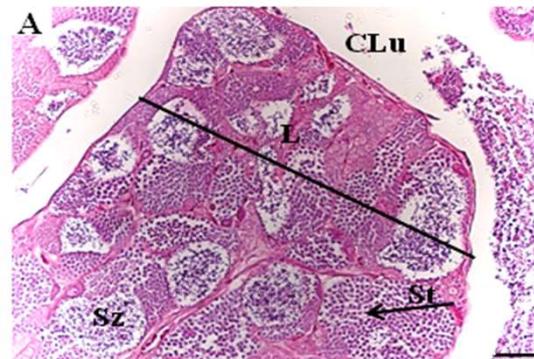
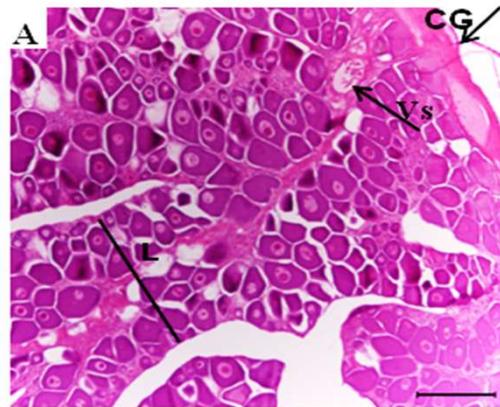
Scope: Global
Language: English
[Download assessment](#) [Download supplementary material](#)



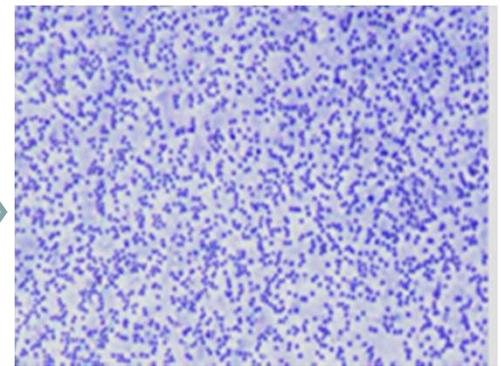
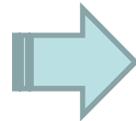
Localização



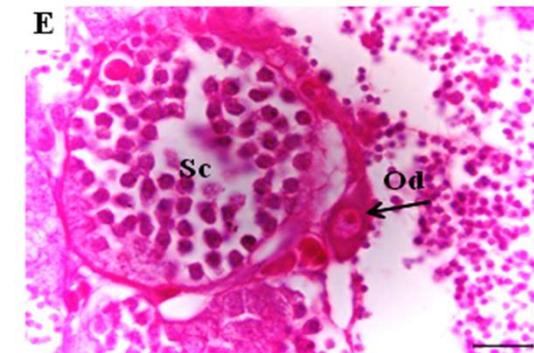
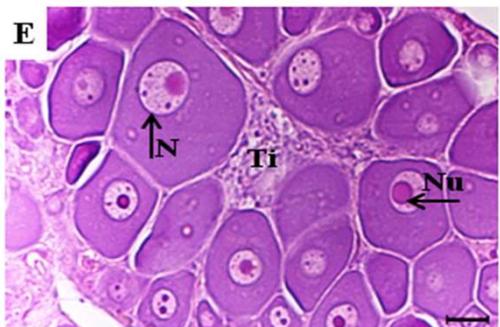
Inversão Sexual Induzida e produção de sêmen

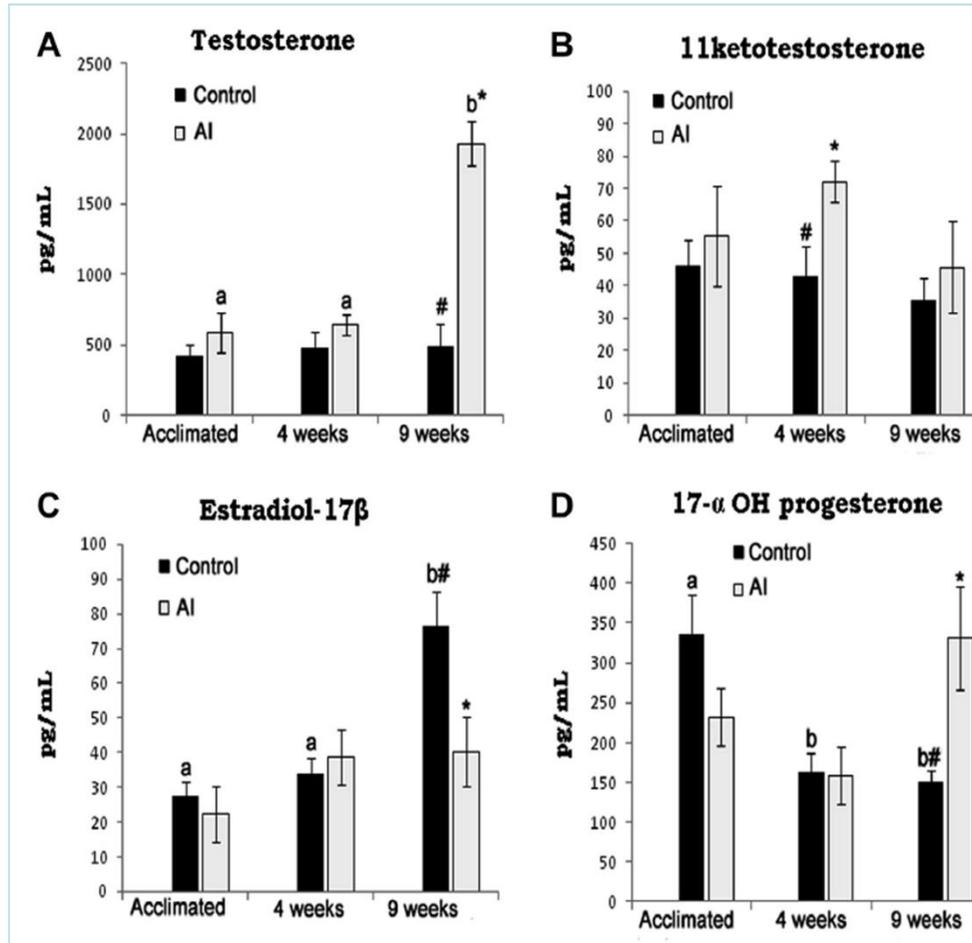


Inibidor de aromatase



Produção de espermatozoides





In Vitro Fertilization

