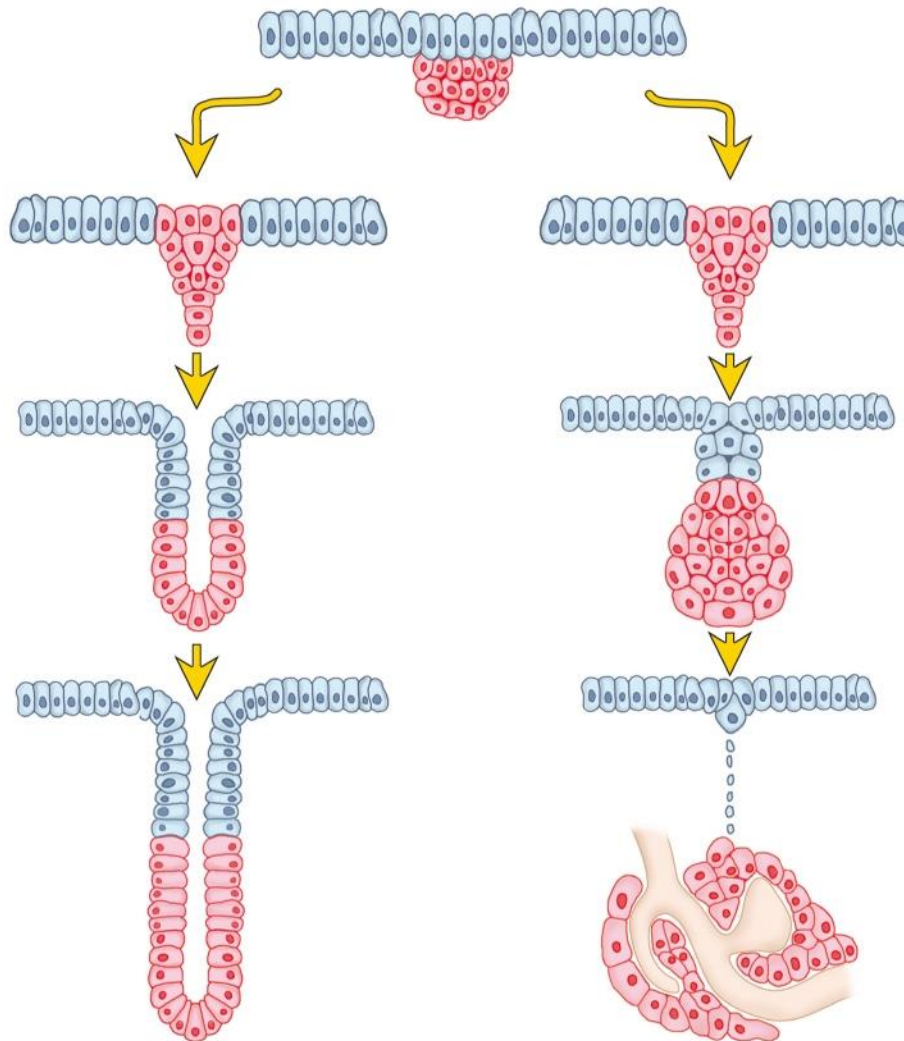
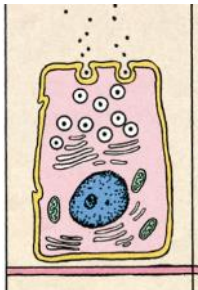


EPITELI SECERNENTI (GHIANDOLARI)

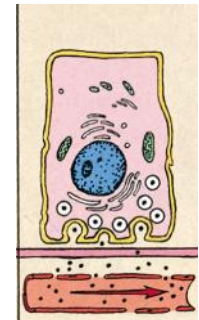
ESOCRINE

Mantengono la connessione con l'epitelio di origine (dotto escretore), riversano il secreto all'esterno dell'organismo o in una cavità interna comunicante con l'esterno. Le cellule sono polarizzate.



ENDOCRINE

Perdono la connessione con l'epitelio di origine, riversano il secreto nei vasi sanguigni. Le cellule non sono polarizzate.

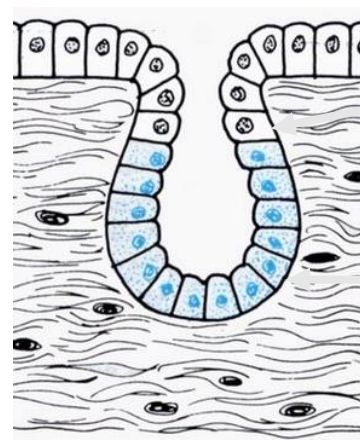
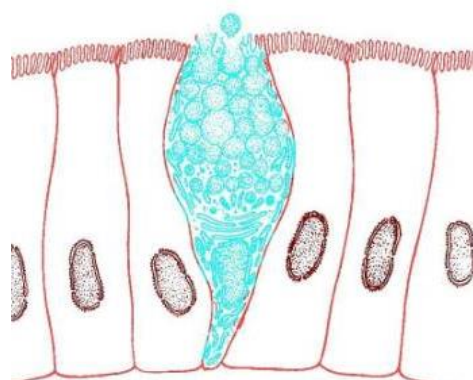


Le **GHIANDOLE ESOCRINE** si possono classificare in base al

numero di cellule

• UNICELLULARI

• PLURICELLULARI



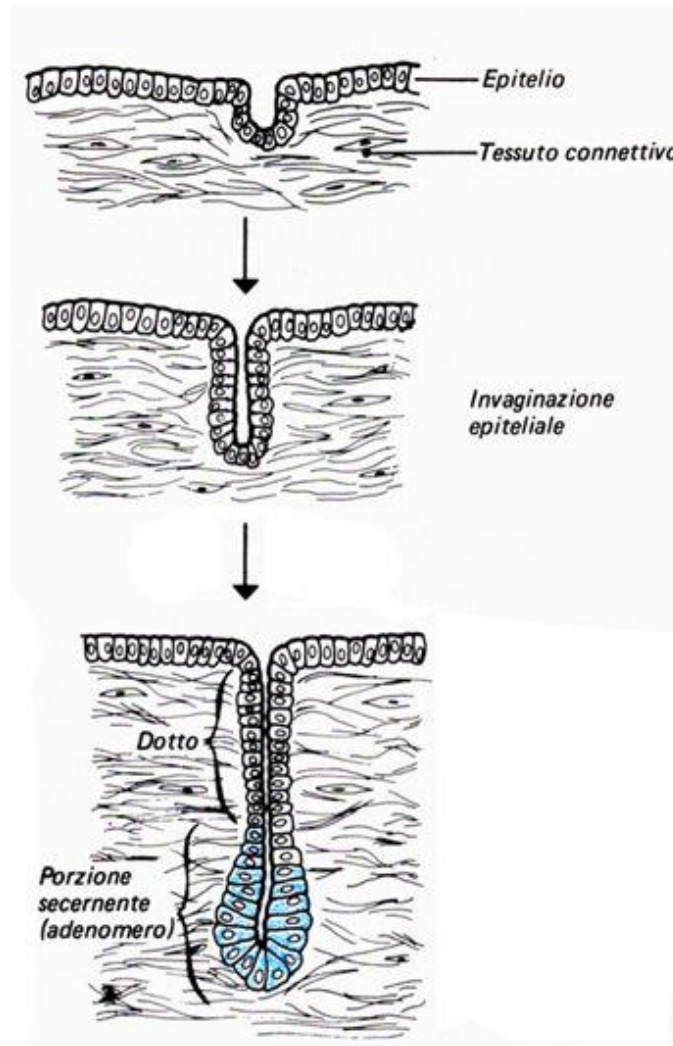
dotto escretore

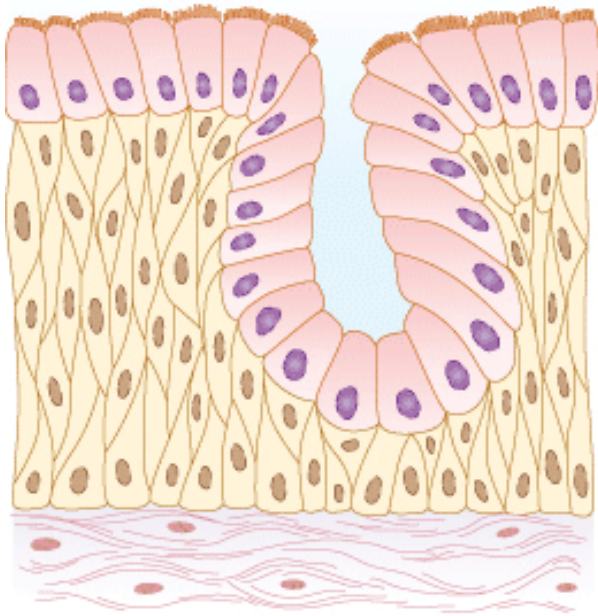
adenomero

Le ghiandole esocrine pluricellulari sono costituite da una porzione secernente, l'adenomero, e un dotto escretore che permette al secreto di essere riversato all'esterno.

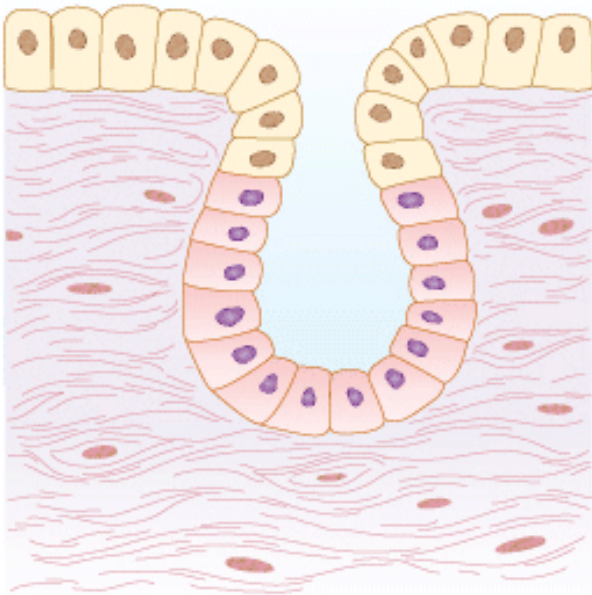
Adenomero +
dotto escretore
=
Parenchima

Tessuto connettivo
=
stroma



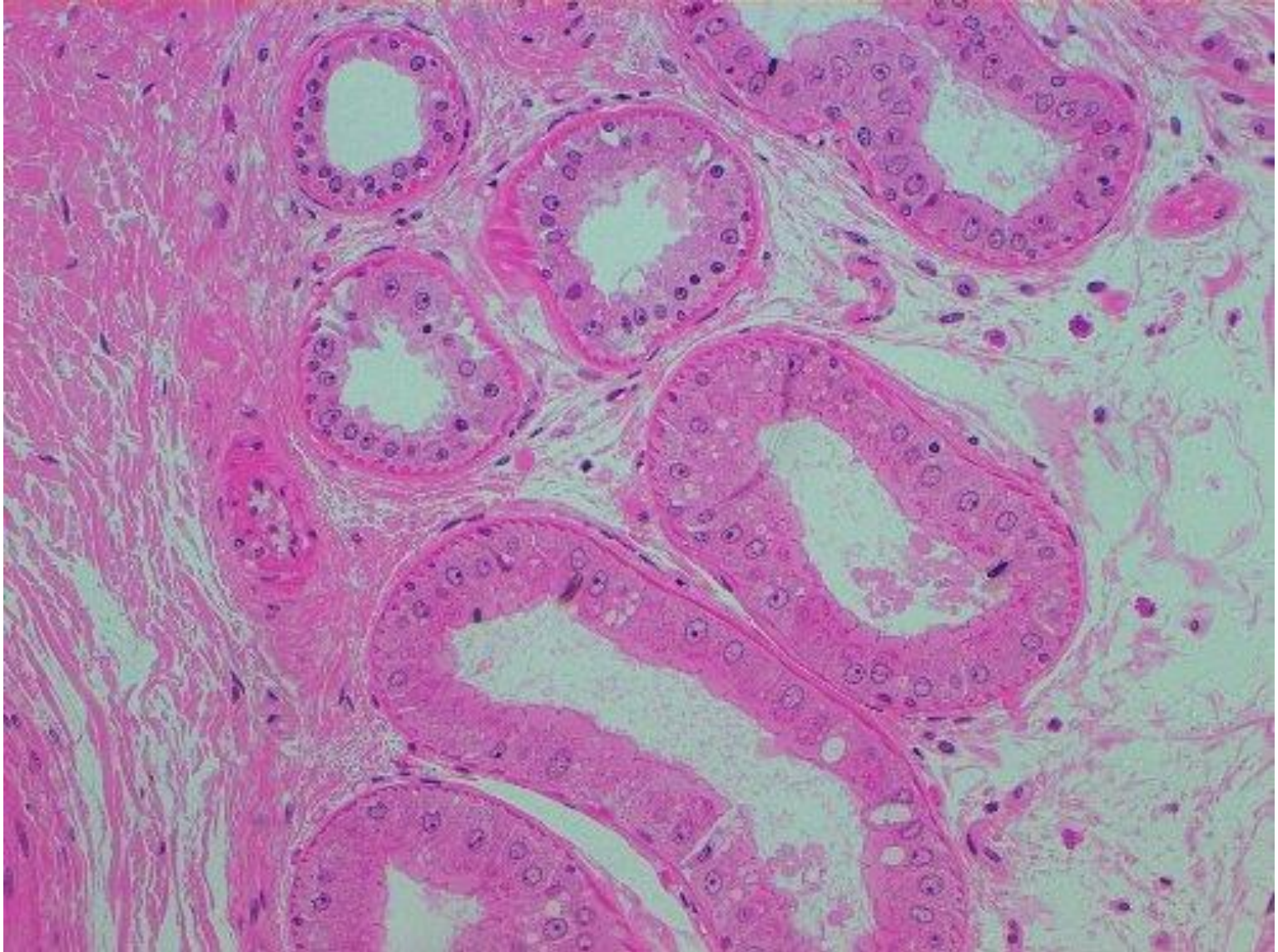


endoepiteliale

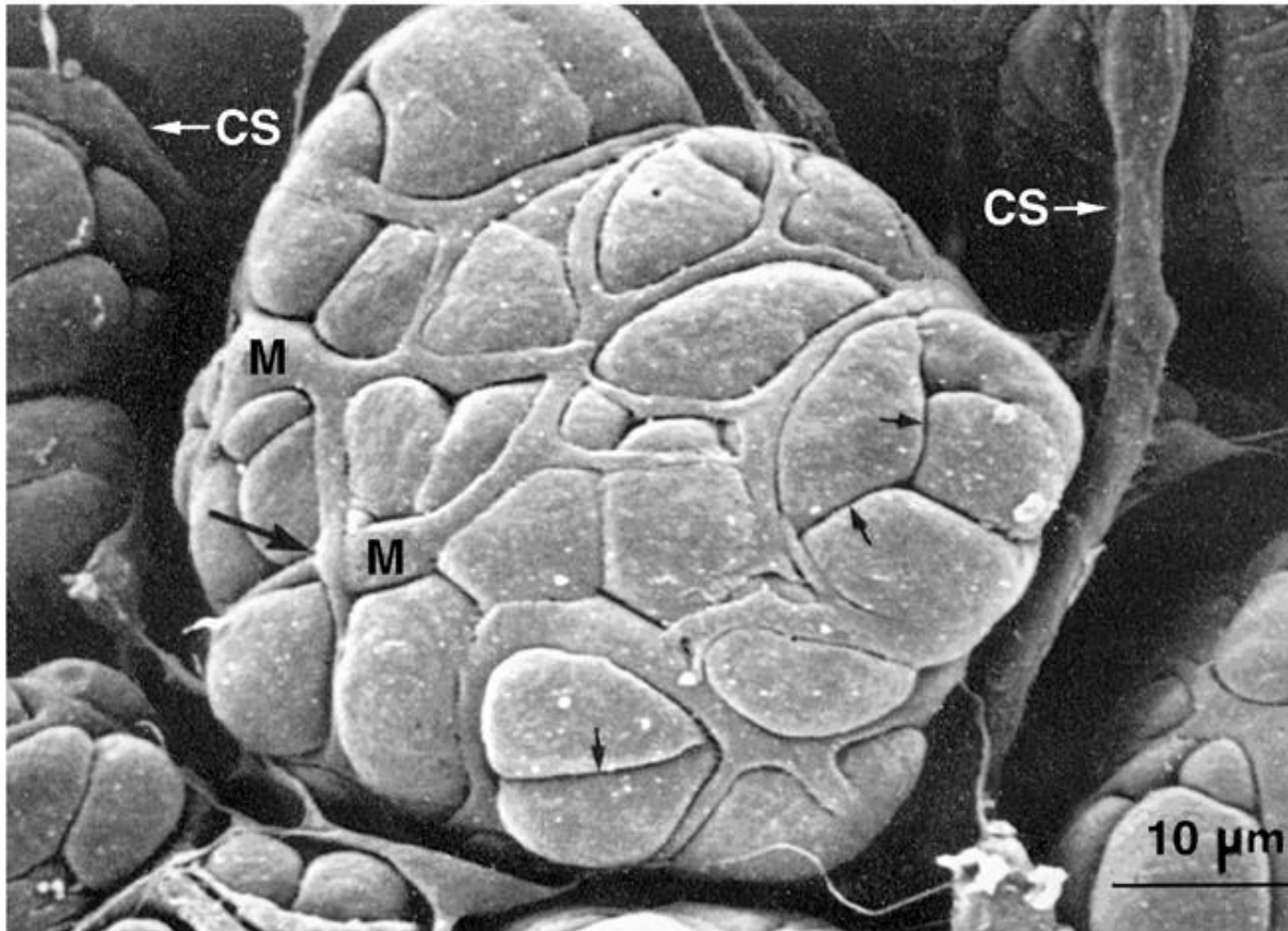


esoepiteliale

Ghiandole sudoripare circondate da cellule mioepiteliali



Cellule mioepiteliali nella gh. mammaria



Le ghiandole esocrine si possono classificare in base alla
forma dell'adenomero

• TUBULARI



• ACINOSE

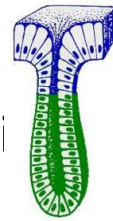


• ALVEOLARI



Le GHIANDOLE ESOCRINE si possono classificare in base alla *complessità dell'organizzazione*

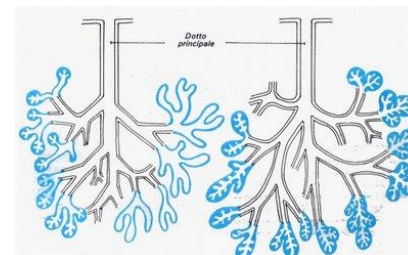
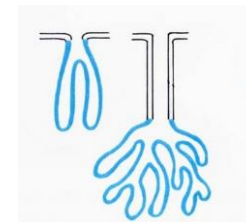
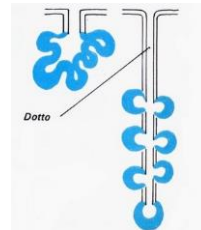
- **Semplici:** 1 adenomero, 1 dotto escretore



- **Ramificate:** più adenomeri confluenti



- **Composte:** più adenomeri ed un sistema ramificato di dotti



FORMA ADENOMERO

TUBULARI

ALVEOLARI

ACINOSE

COMPLESSITA'

SEMPLICI

RAMIFICATE

COMPOSTE



alveolare



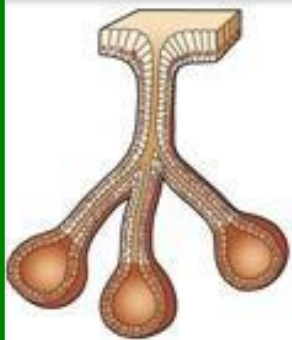
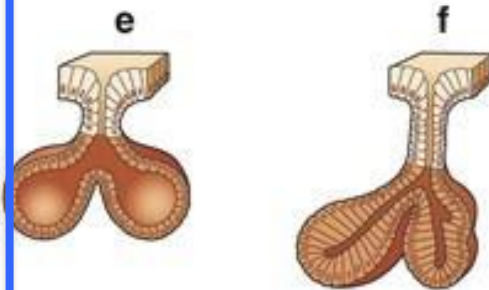
acinosa



tubulare



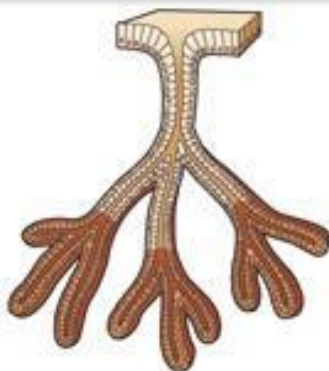
Tubulo-glomerulare



h



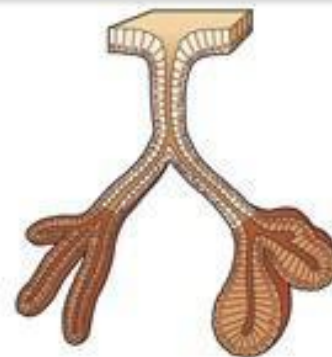
i



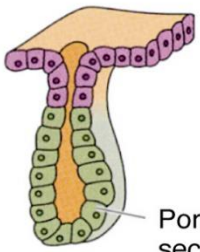
l



m

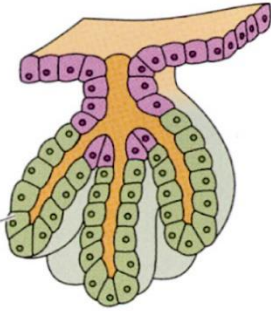


n

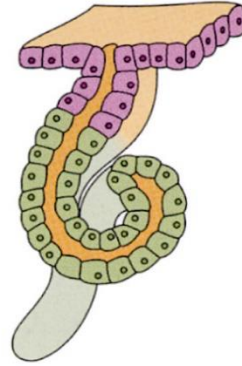


Porzione secretoria

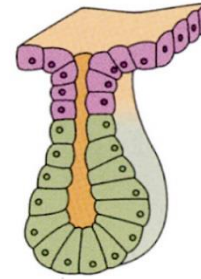
Tubulare semplice



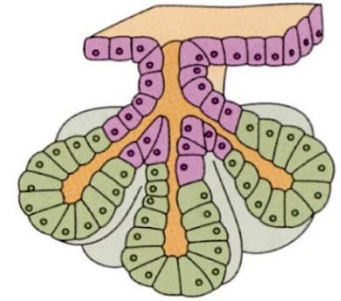
Tubulare ramificata



Tubulare semplice a gomitolo

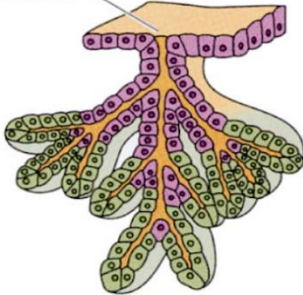


Acinosa semplice

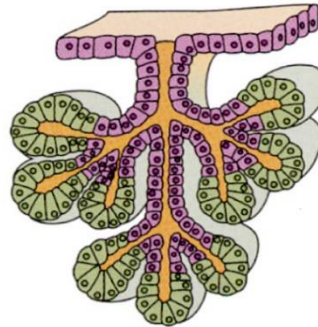


Acinosa ramificata

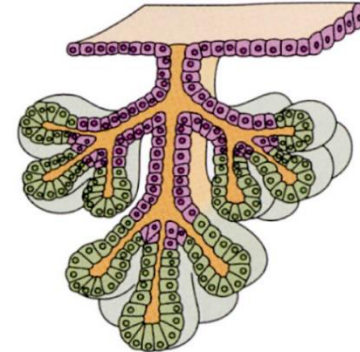
Condotto



Tubulare composta



Acinosa composta



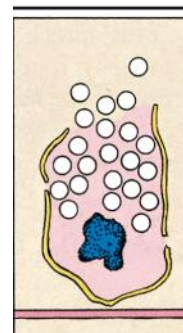
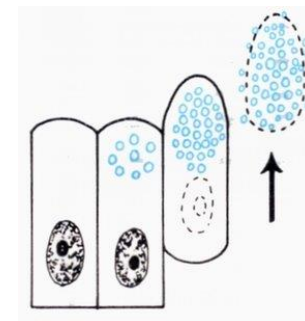
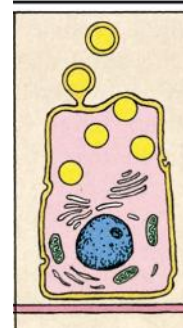
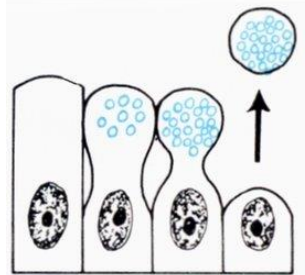
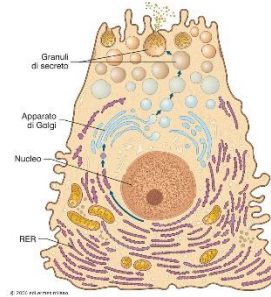
Tubuloacinosa composta

Le GHIANDOLE ESOCRINE si possono classificare in base alla *modalità di secrezione*

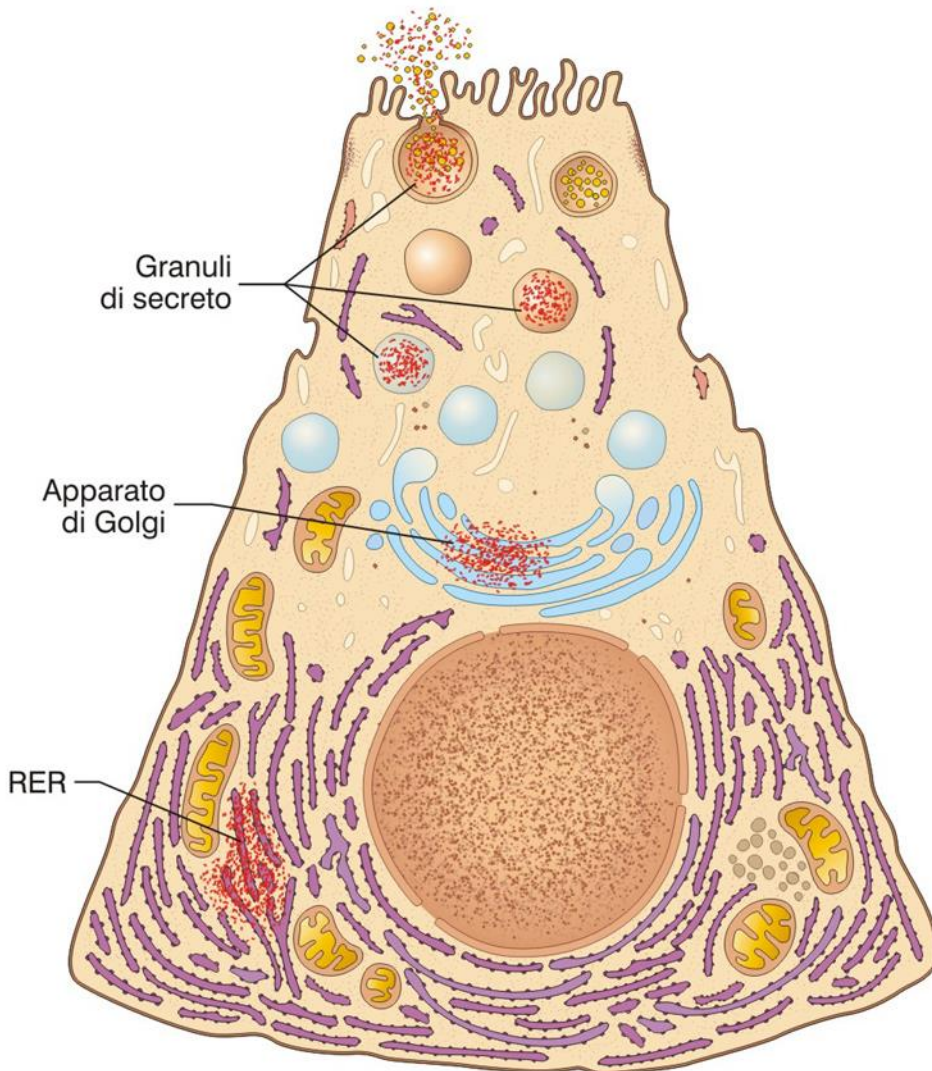
• Merocrine

• Apocrine

• Olochrine



Merocrina: pancreas esocrino



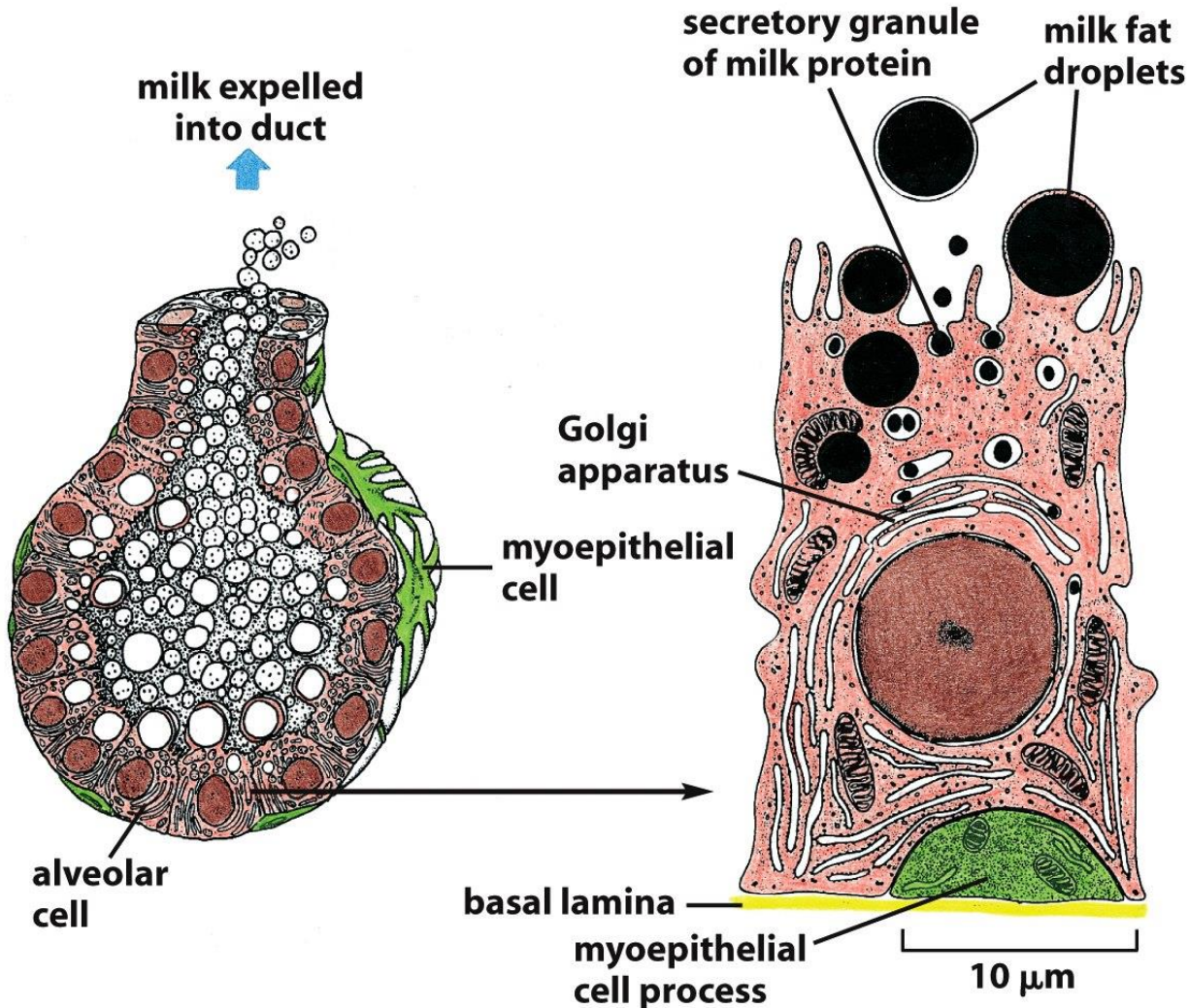
Il secreto:

Si accumula in **granuli di secrezione**
Viene liberato per **esocitosi**

È la modalità più diffusa

Apocrina: ghiandola mammaria

(solo per la componente lipidica del secreto)

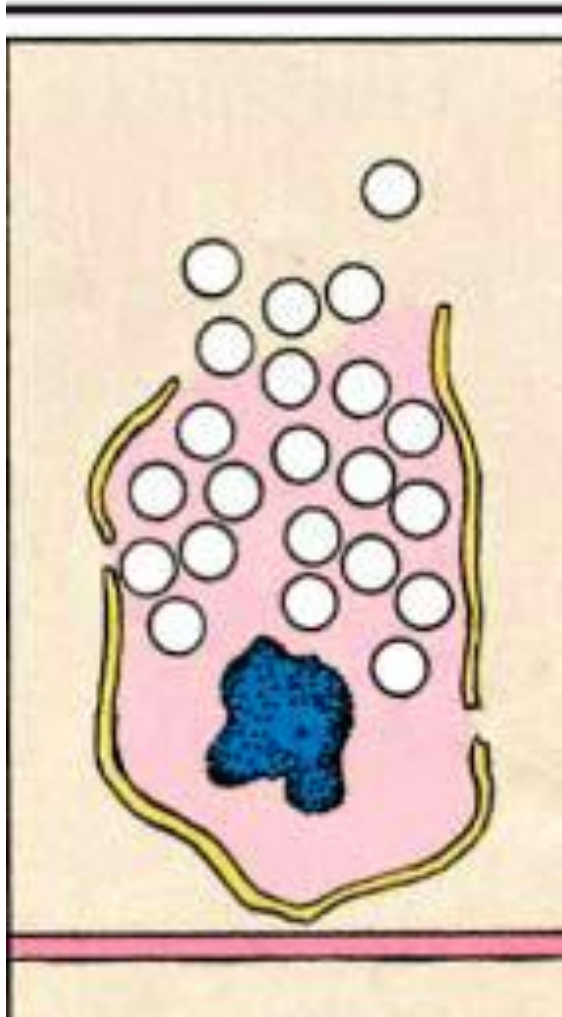


Il secreto è di natura lipidica

Si accumula nella porzione apicale della cellula

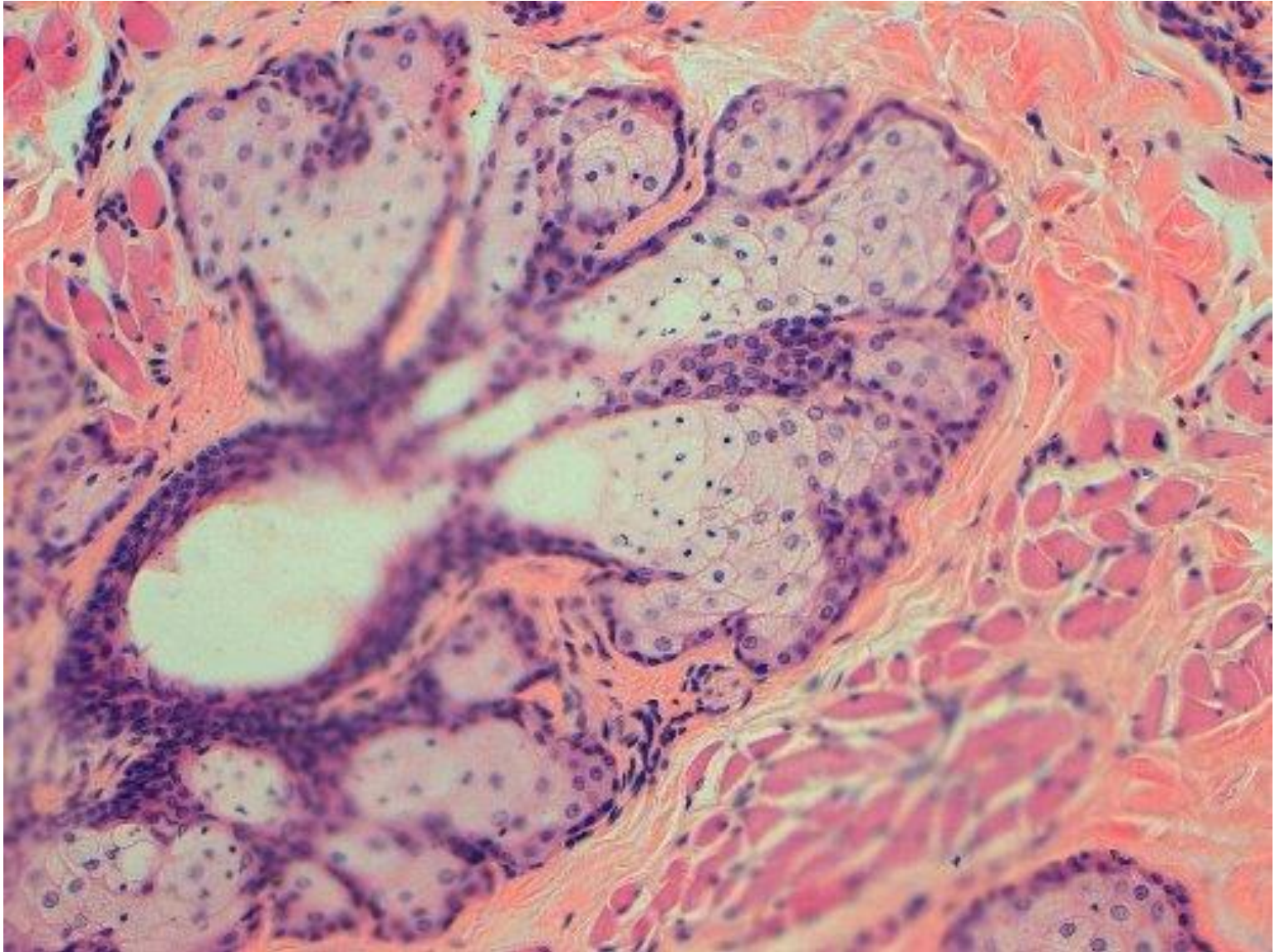
All'atto della secrezione la goccia lipidica viene circondata da membrana plasmatica, che così diventa parte integrante del prodotto di secrezione

Olocrina: ghiandole sebacee



Il secreto è di natura lipidica
Si accumula sotto forma di goccioline lipidiche libere nel citoplasma
La cellula va incontro a morte cellulare programmata; si verifica la disgregazione dell'intera cellula i cui residui entrano a far parte del secreto

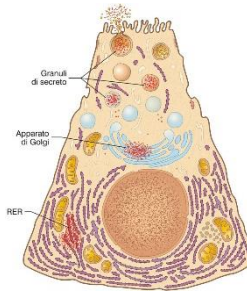
Ghiandola sebacea



Le GHIANDOLE ESOCRINE si possono classificare in base alla *natura del secreto*

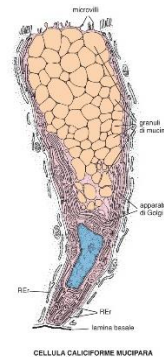
Secrezione **sierosa**: secreto fluido contenente enzimi

• Secrezione **mucosa**: secreto vis



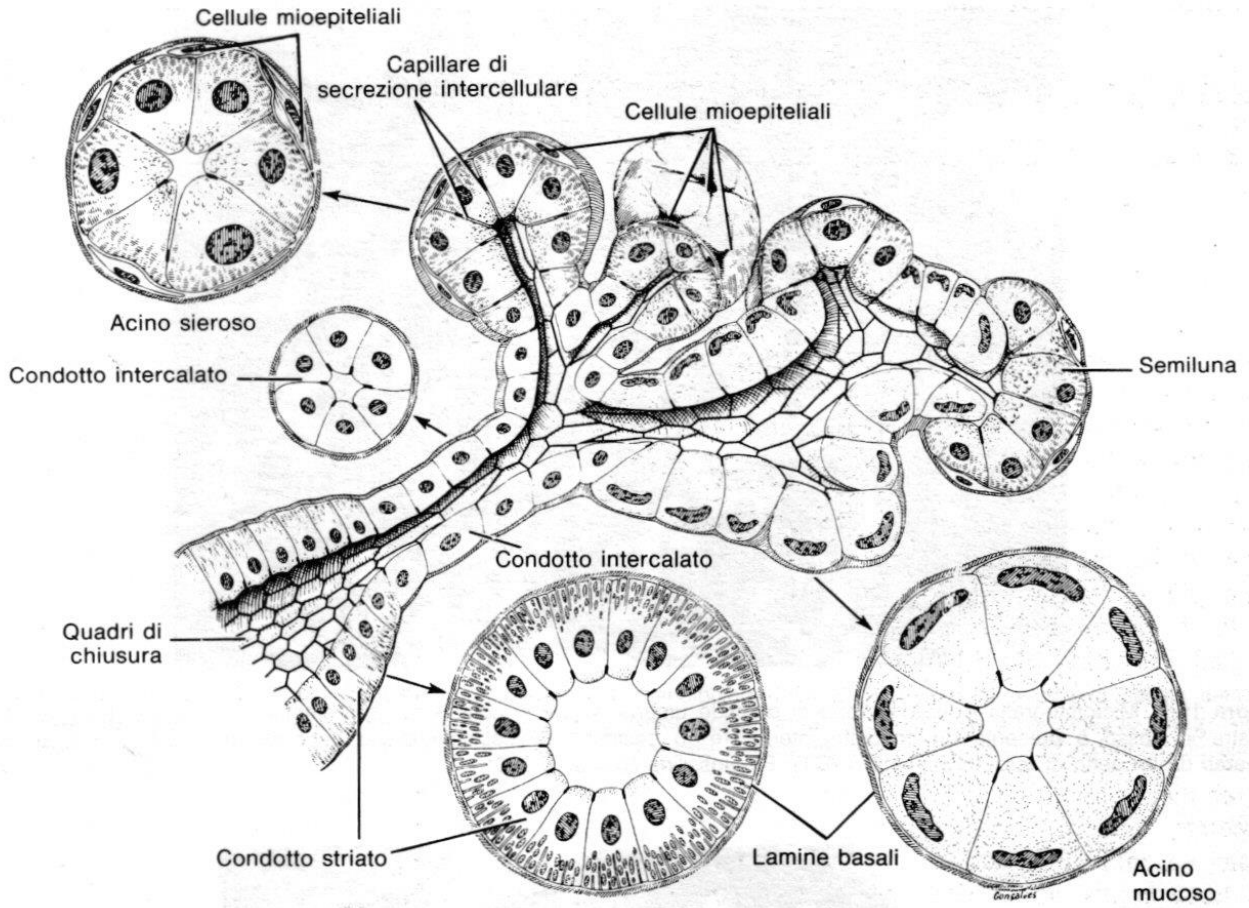
così denso e viscoso contenente mucopolisaccaridi

• Secrezione **mista**: cellule a secret

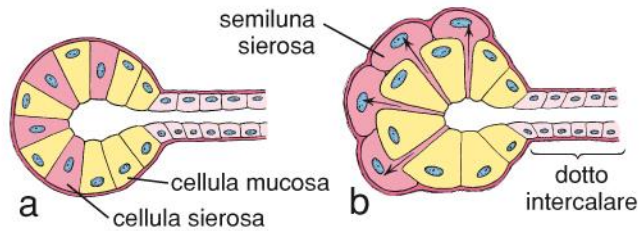


+ cellule a secreto mucoso

Ghiandola a secrezione mista (salivare)



CONGELAMENTO RAPIDO FISSAZIONE CONVENZIONALE

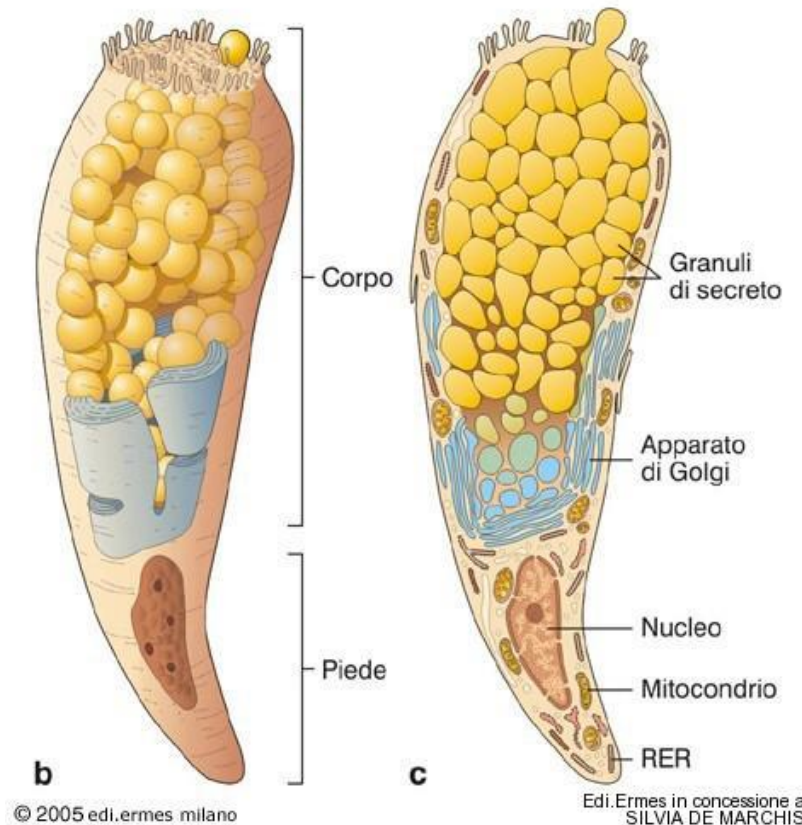


Cellula mucipara caliciforme ghiandola unicellulare

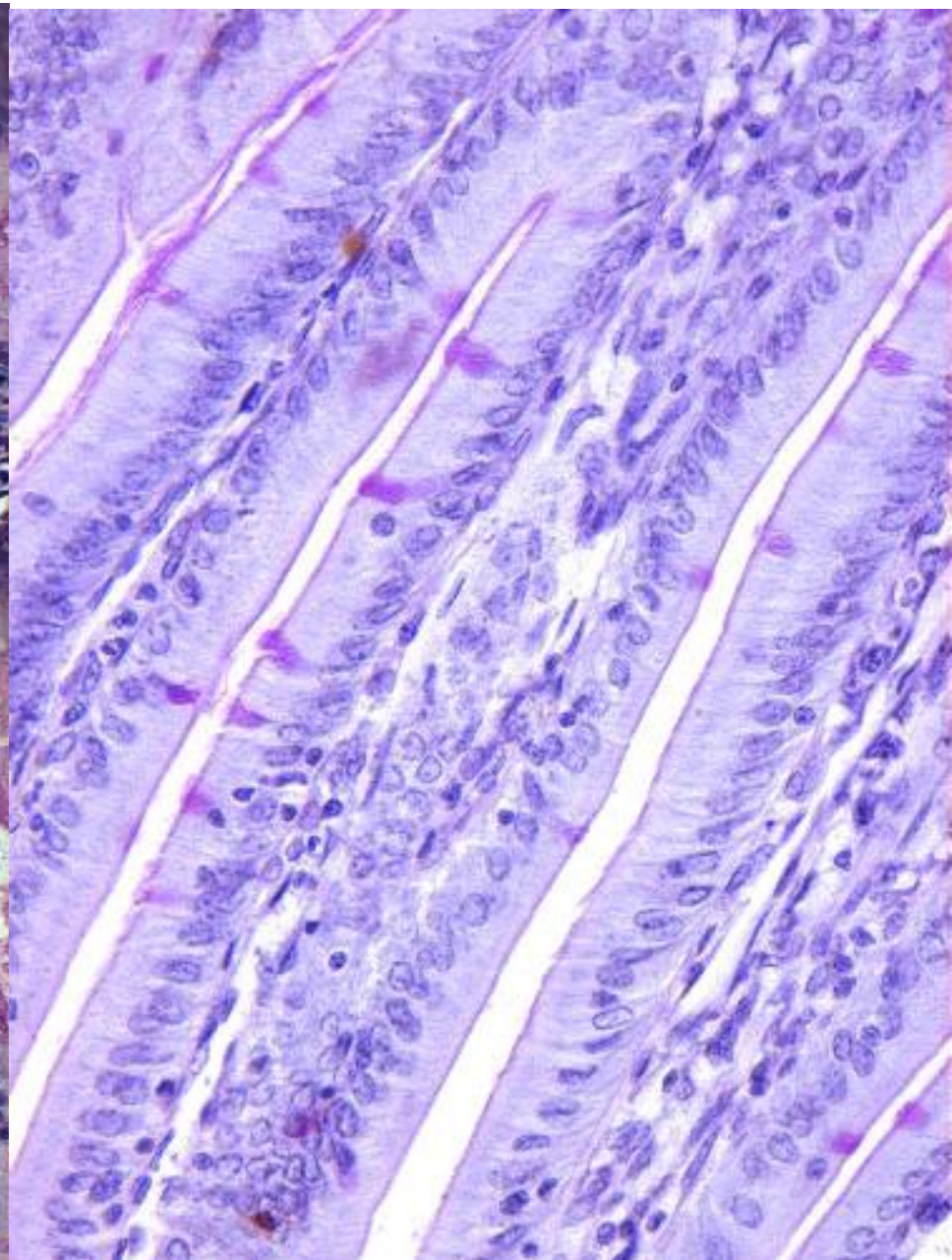
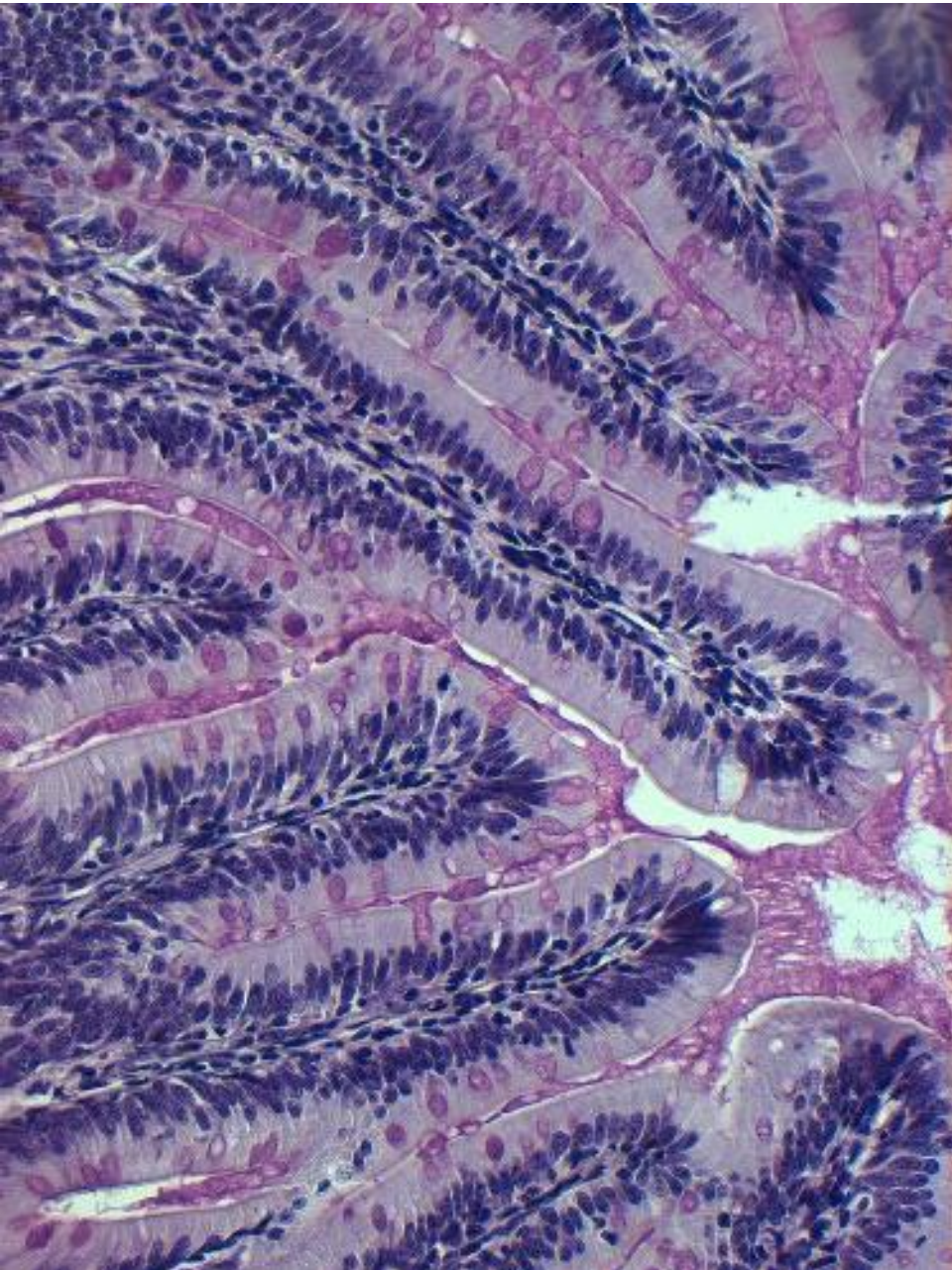
**Secerne mucina
(merocrina)**

**Tratto digerente
Tratto respiratorio**

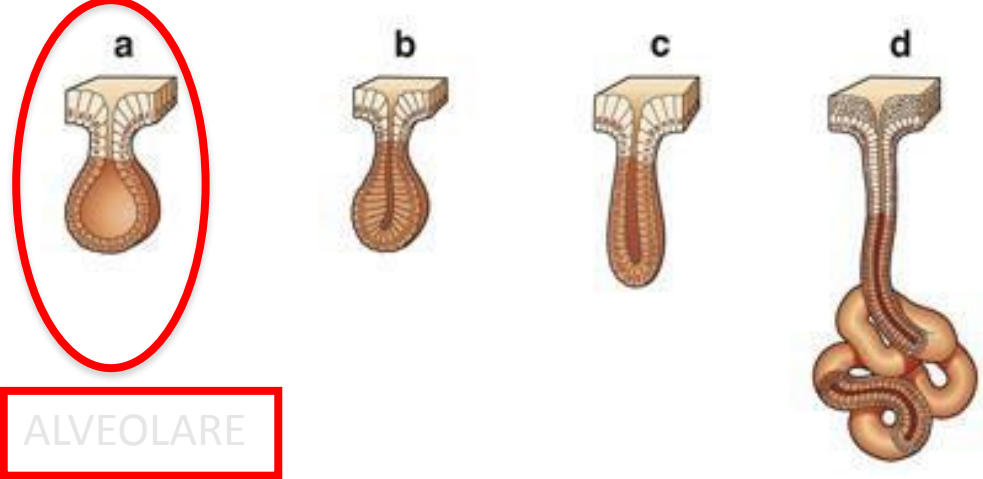
Vita media 3-4 gg



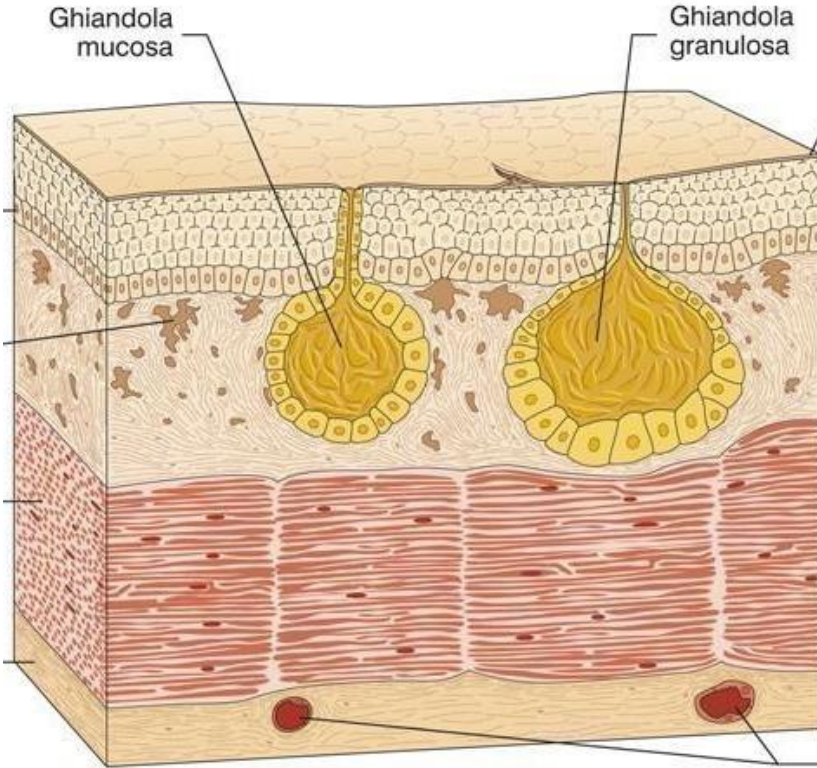
Intestino tenue (reazione PAS)



Esempi di ghiandole esocrine semplici:



ALVEOLARE

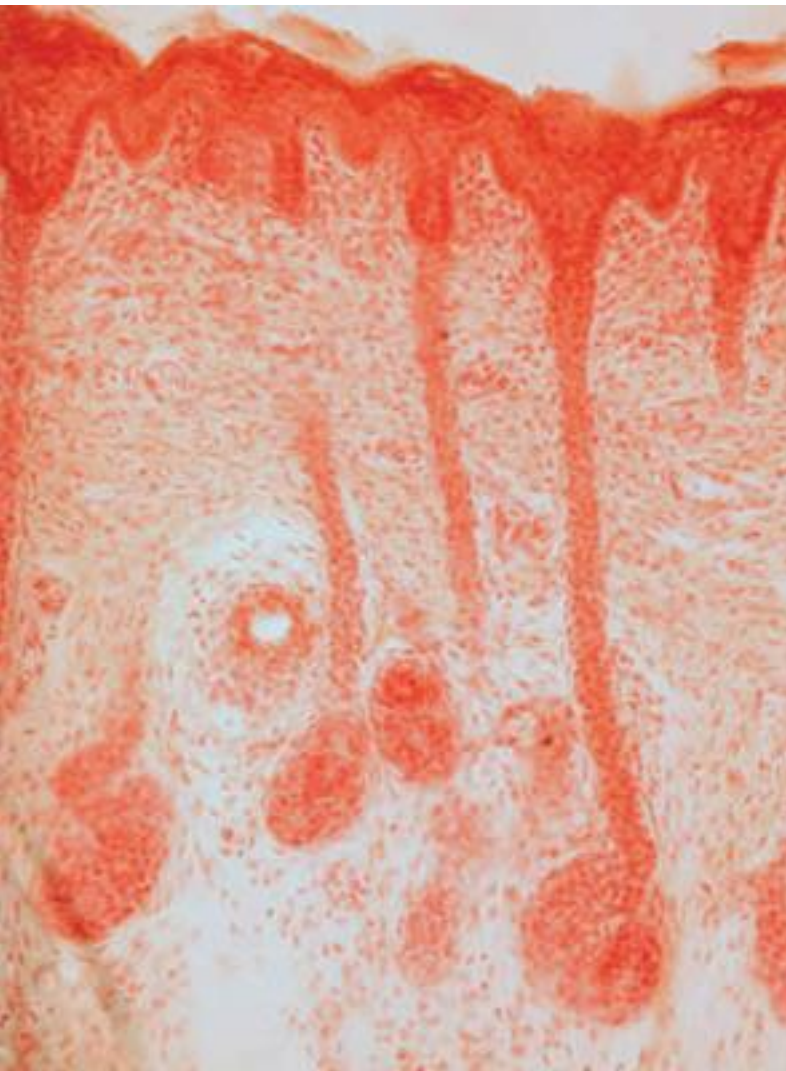
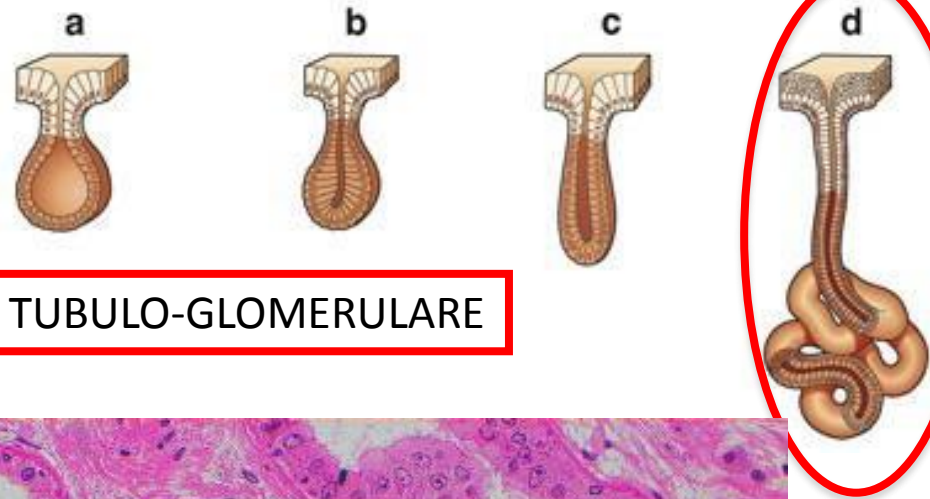


Ghiandole mucose e sierose Cute Anfibia

ilano

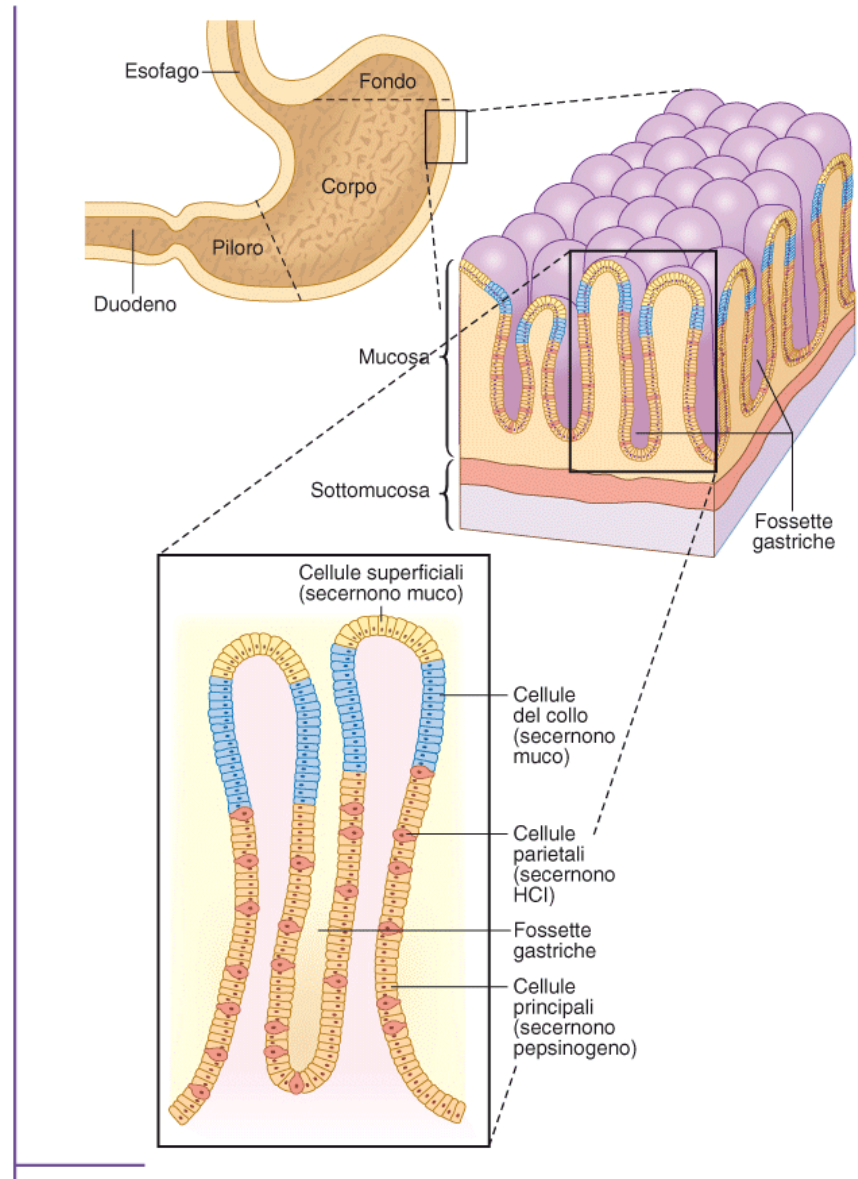
(GHIANDOLA intraparietale extraepiteliale)

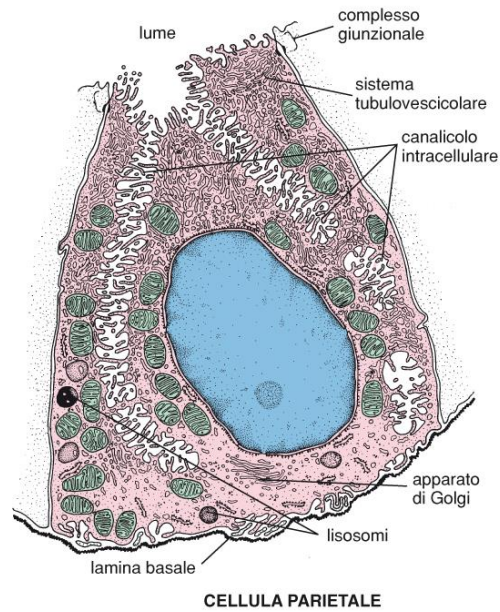
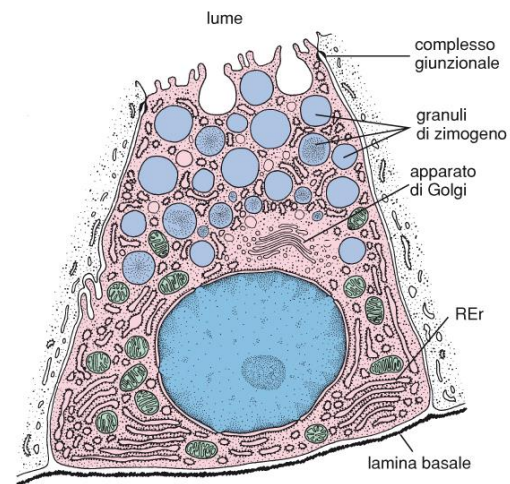
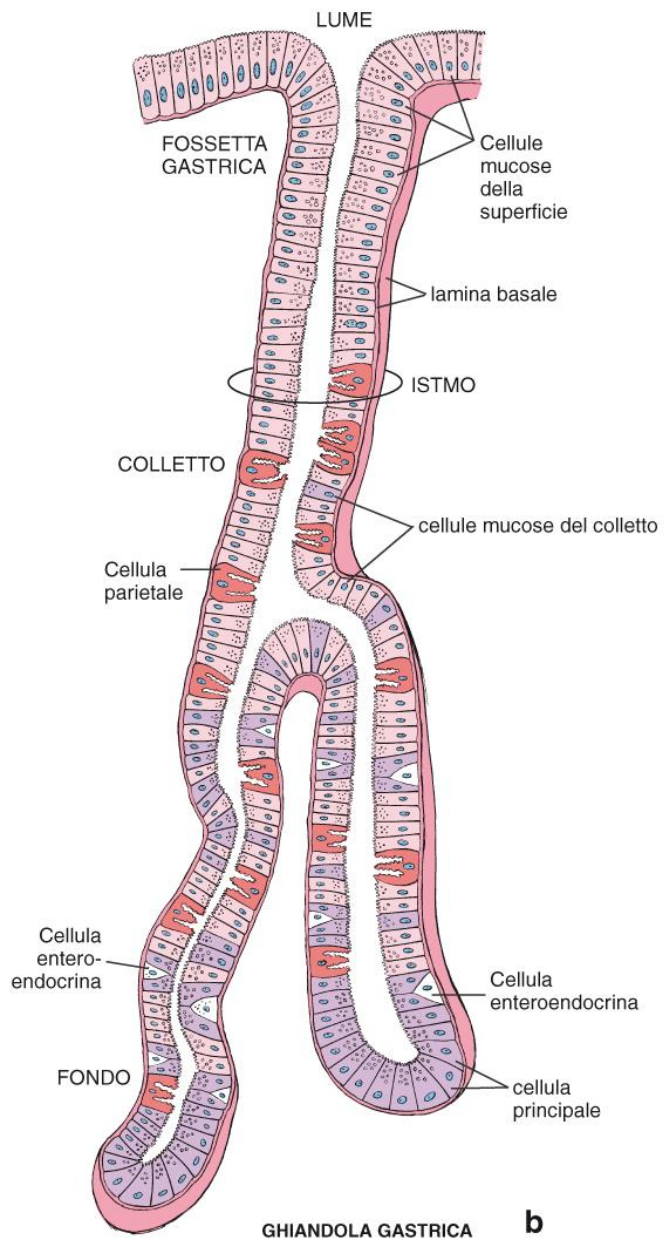
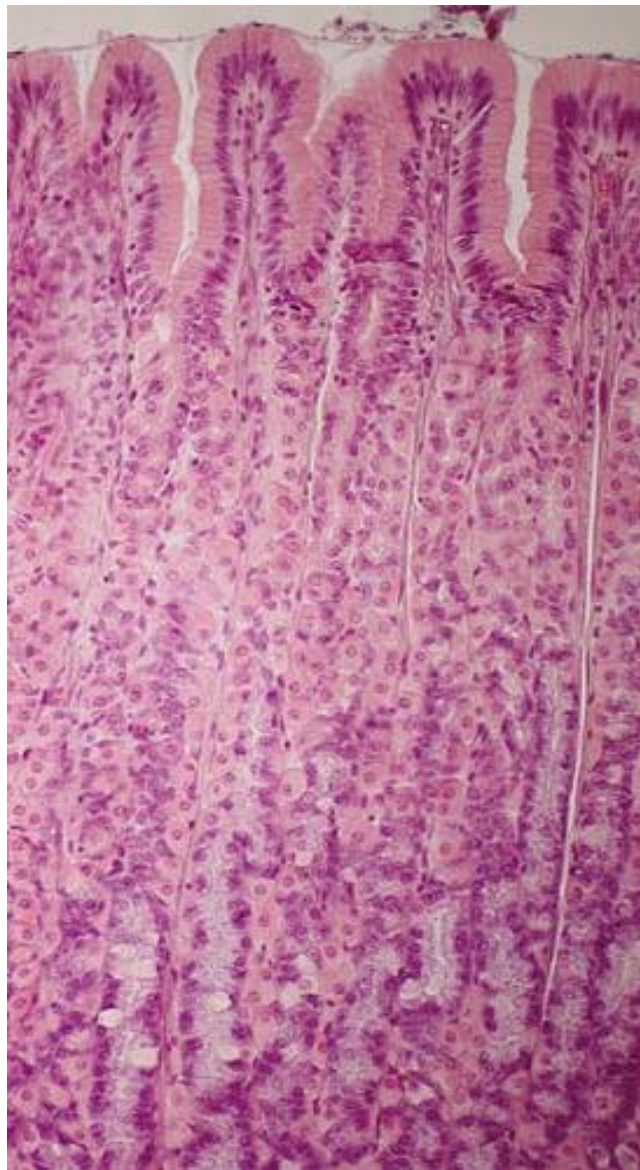
Esempi di ghiandole esocrine semplici:



Ghiandola **sudoripara** della cute (Mammifero)
(Merocrina) → regola temperatura corporea

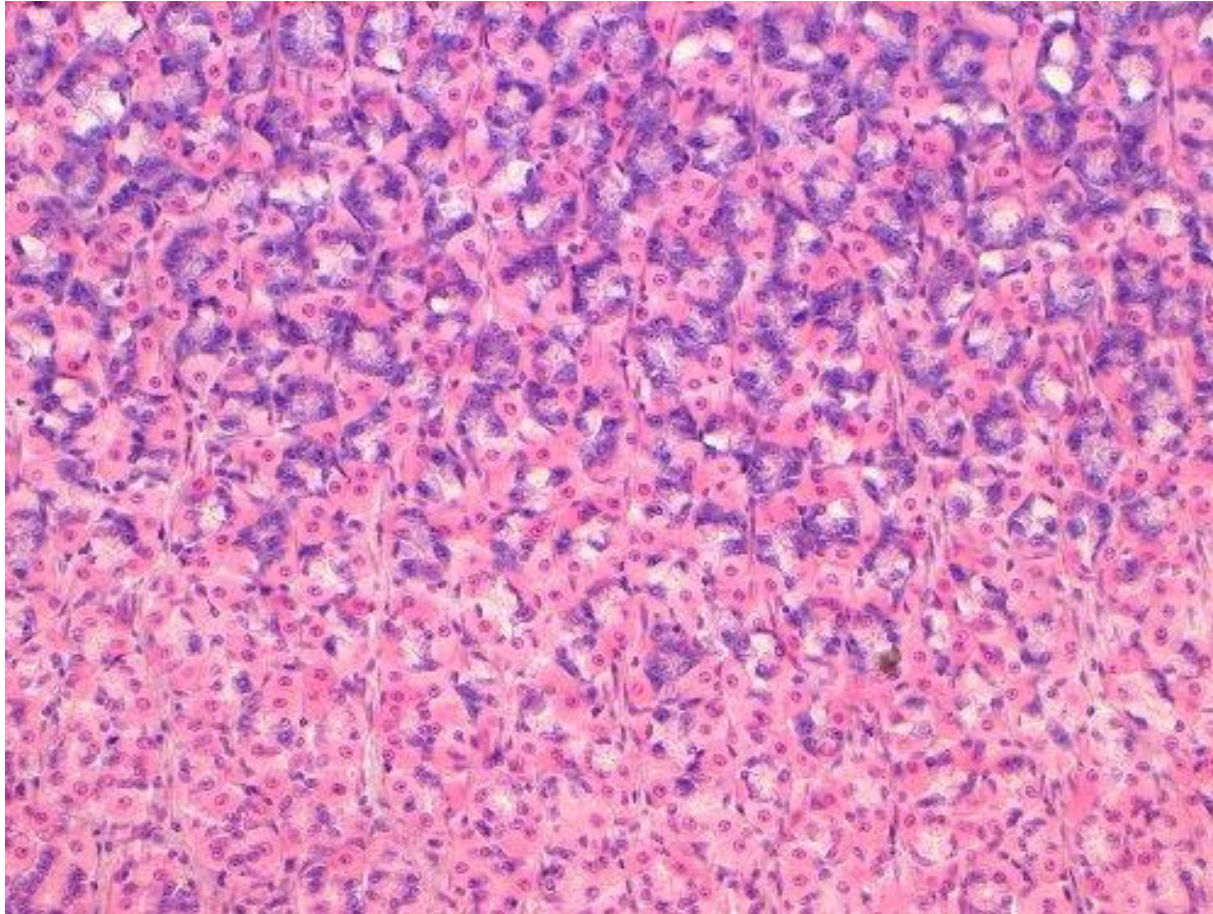
Ghiandole del fondo dello stomaco



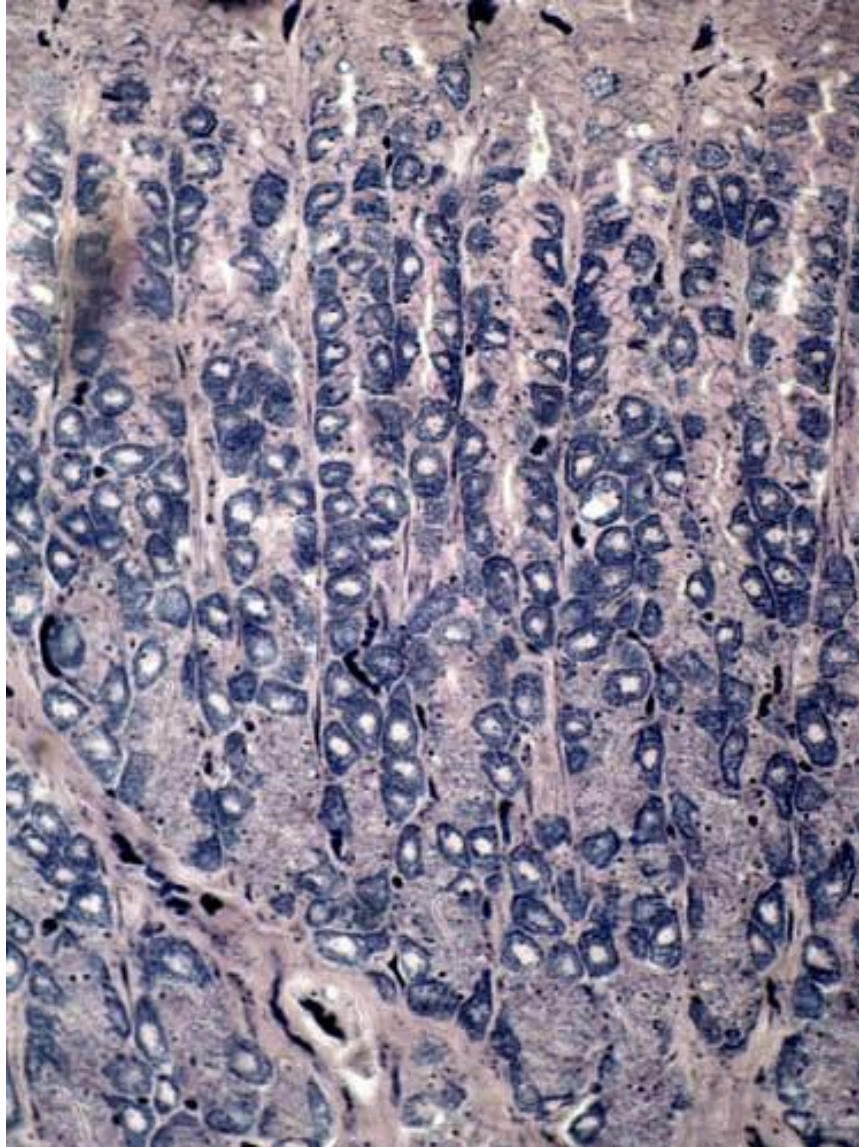


b

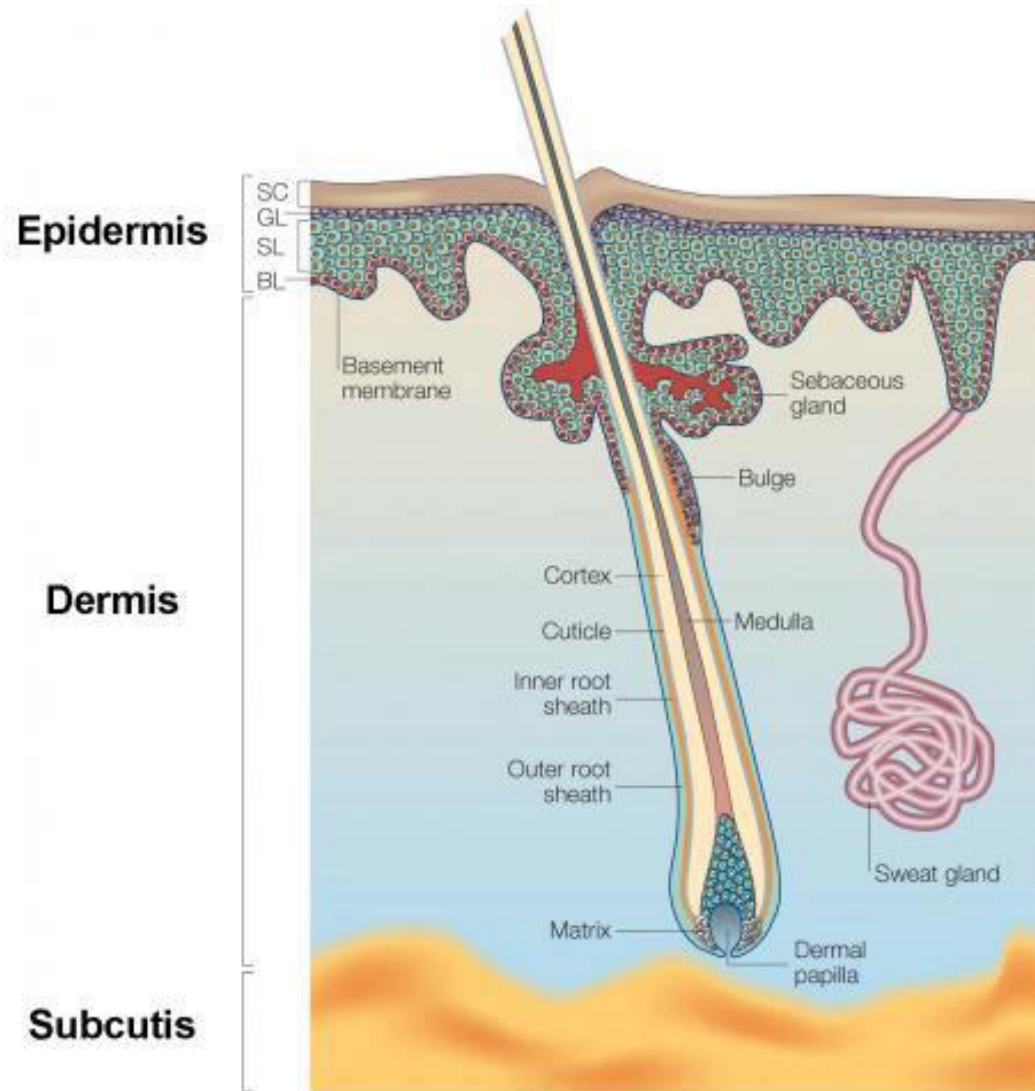
Ghiandole del fondo dello stomaco



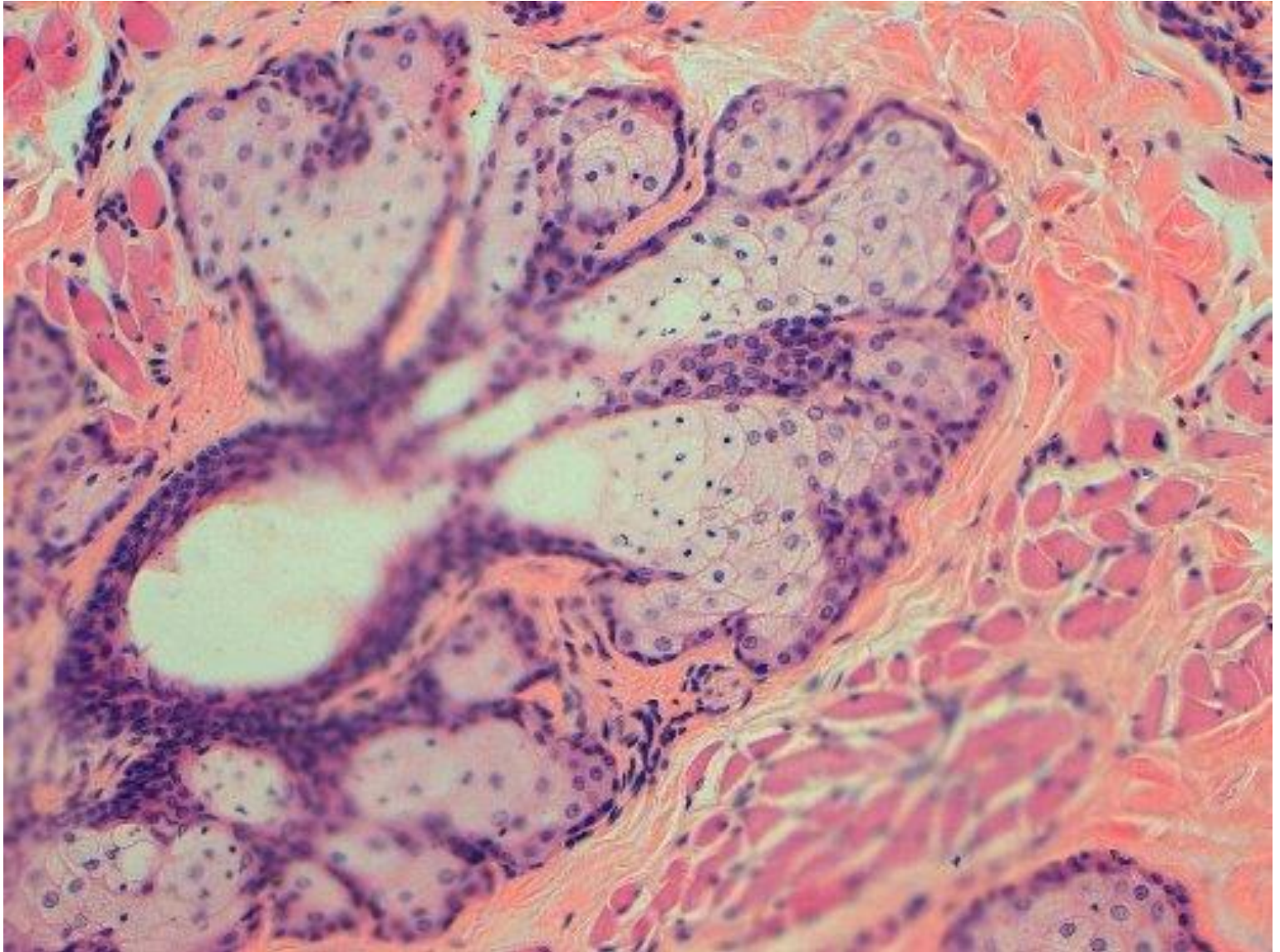
Ghiandole del fondo dello stomaco cellule delomorfe



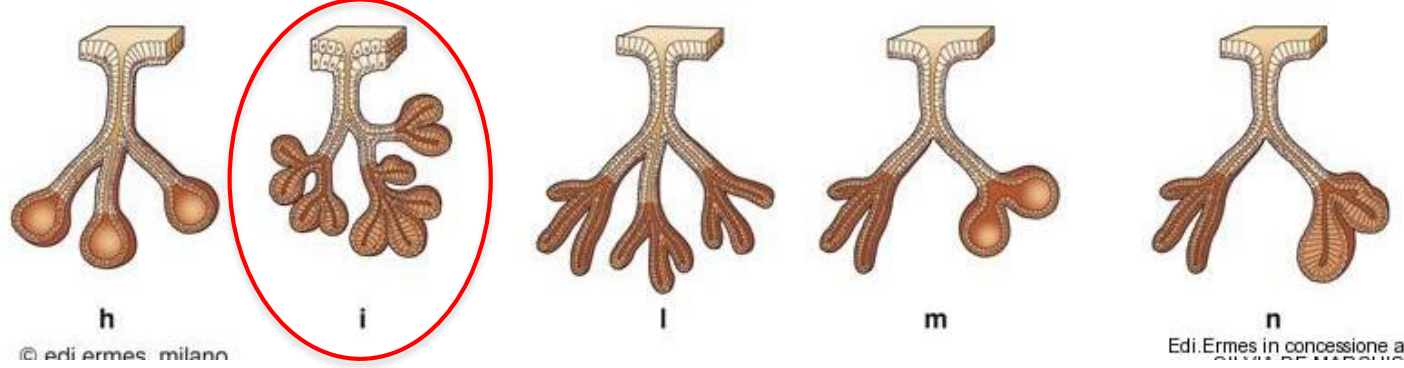
Tegumento mammifero



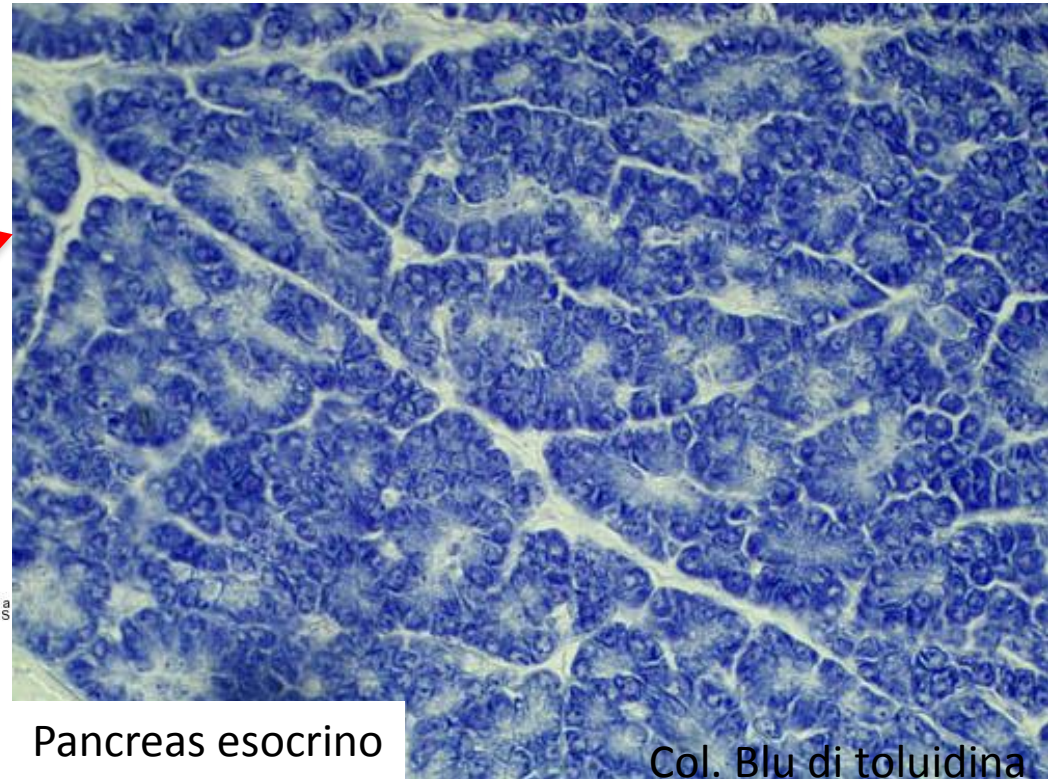
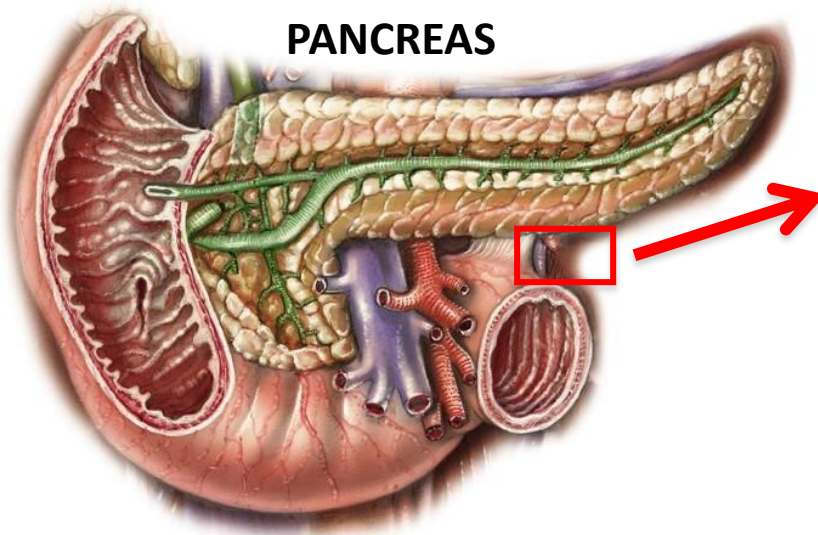
Ghiandola sebacea



Esempi di ghiandole
composte



Ghiandola acinosa composta

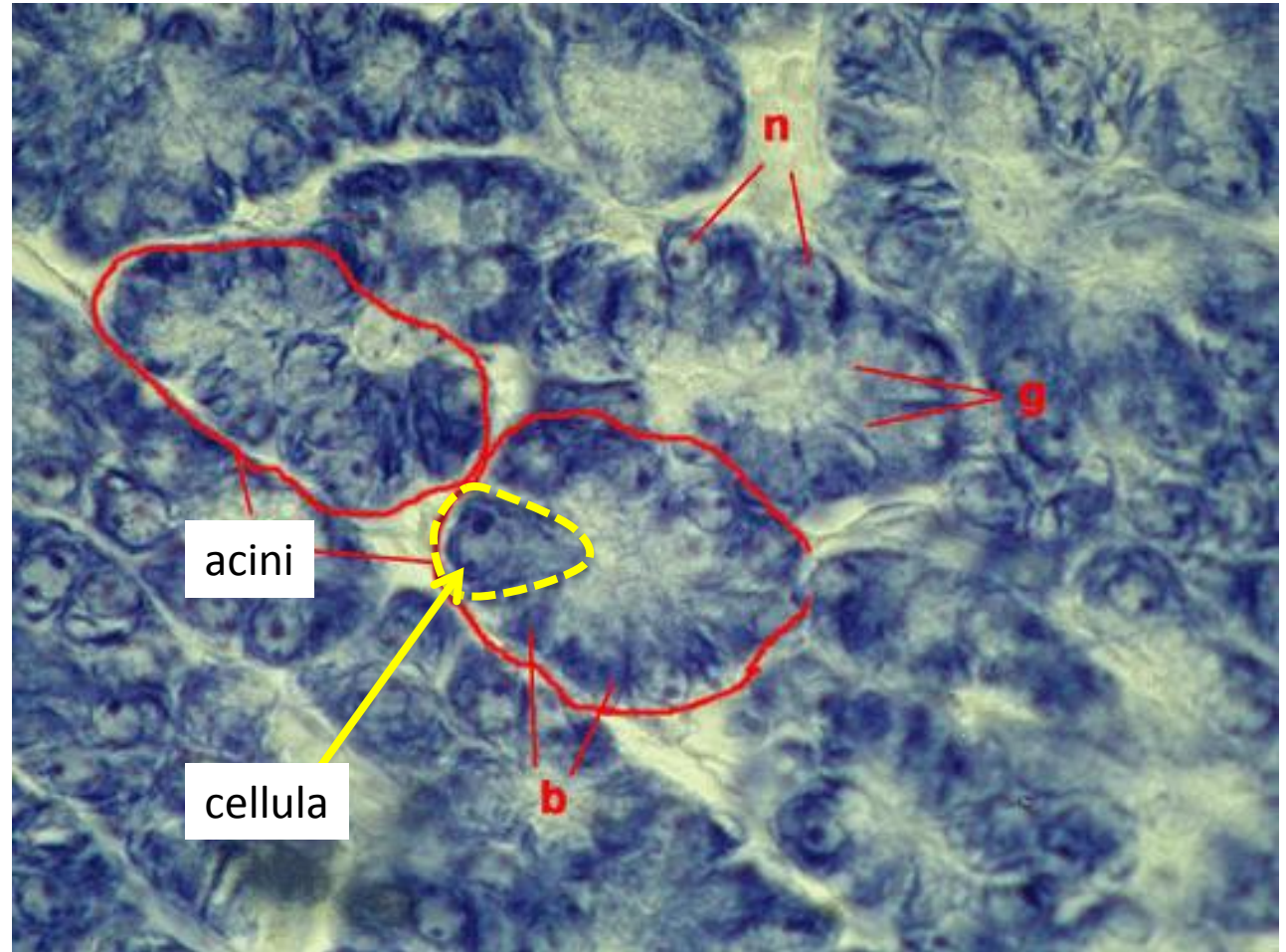
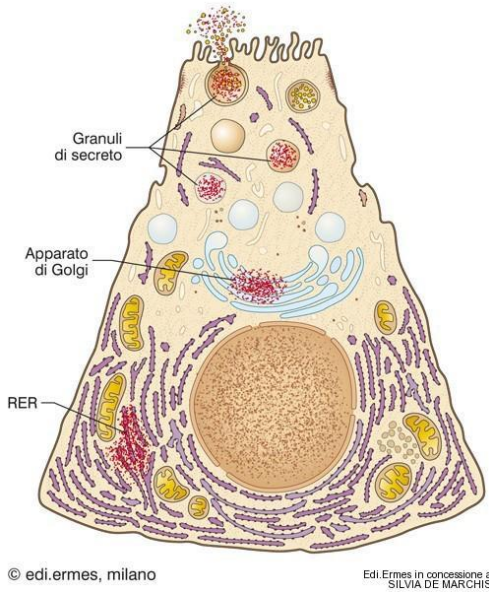


Pancreas esocrino

Col. Blu di toluidina

Atlante DBios

Pancreas esocrino → secrezione merocrina sierosa



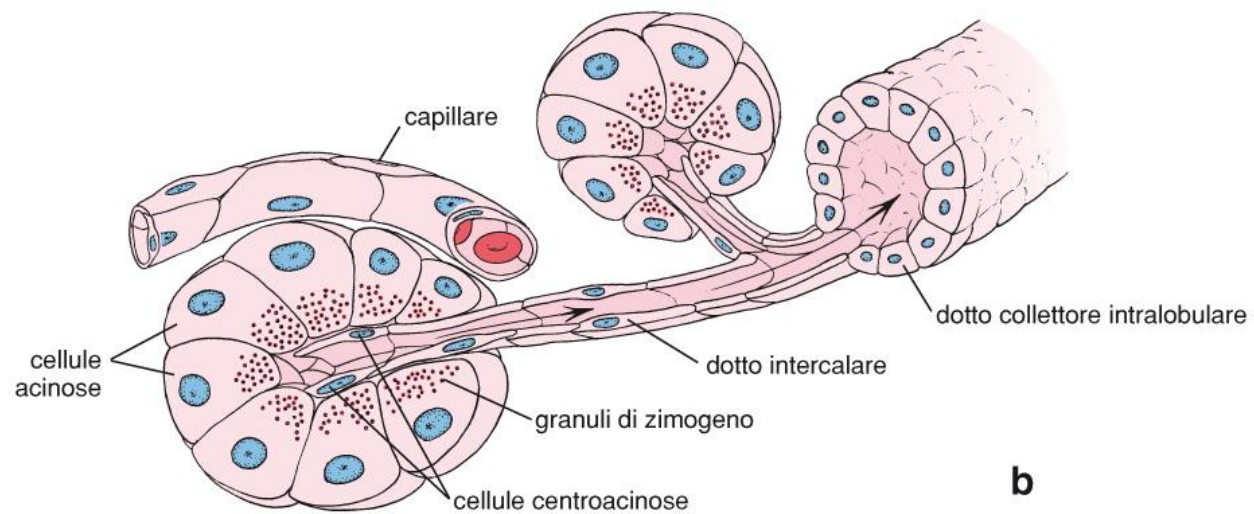
Cellula piramidale sierosa

Epitelio monostratificato

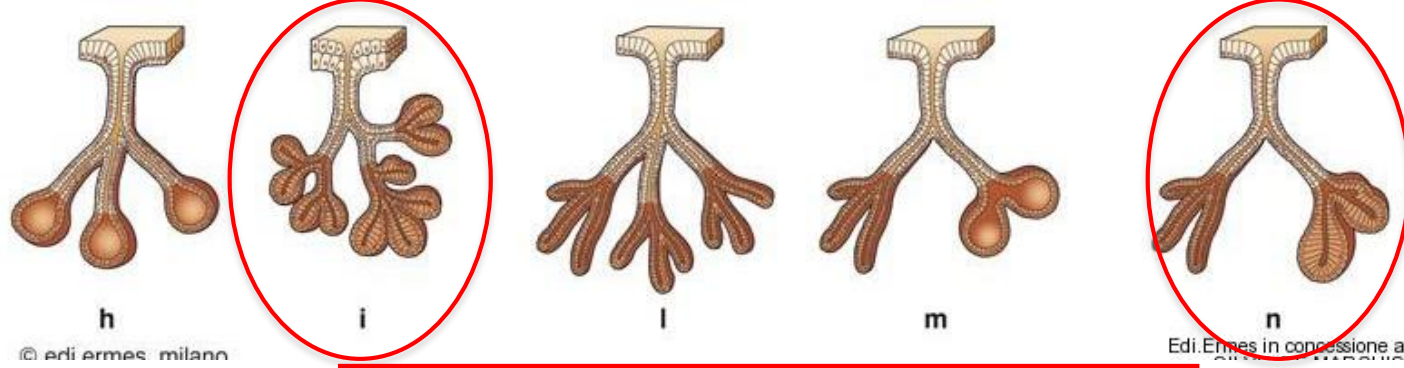
Atlante DBios

Le cell. secernenti sierose dell'acino producono i precursori degli enzimi digestivi secreti dal pancreas

Pancreas



Esempi di ghiandole composte

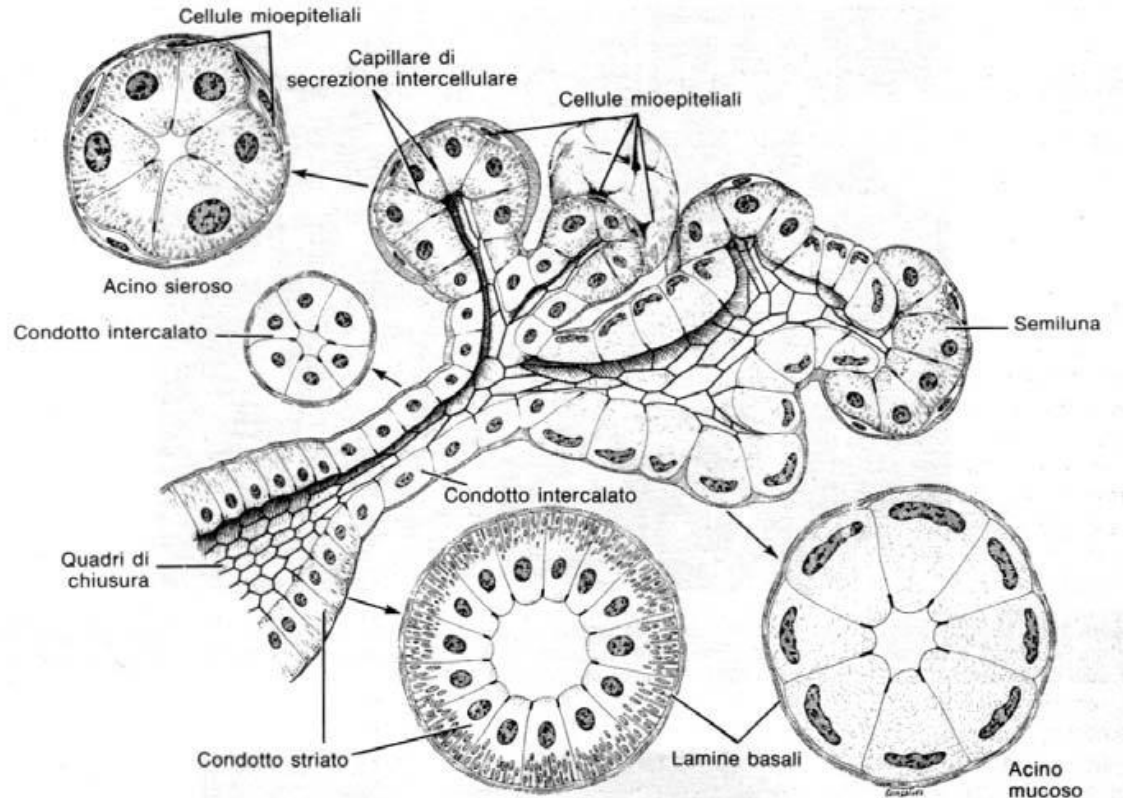
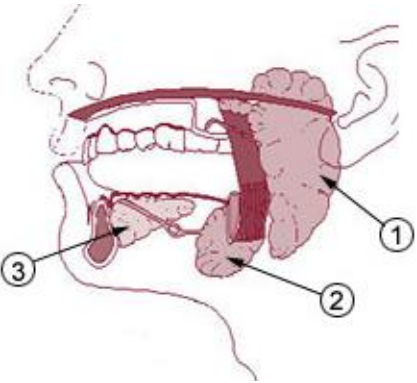


ACINOSE o TUBULO-ACINOSE COMPOSTE

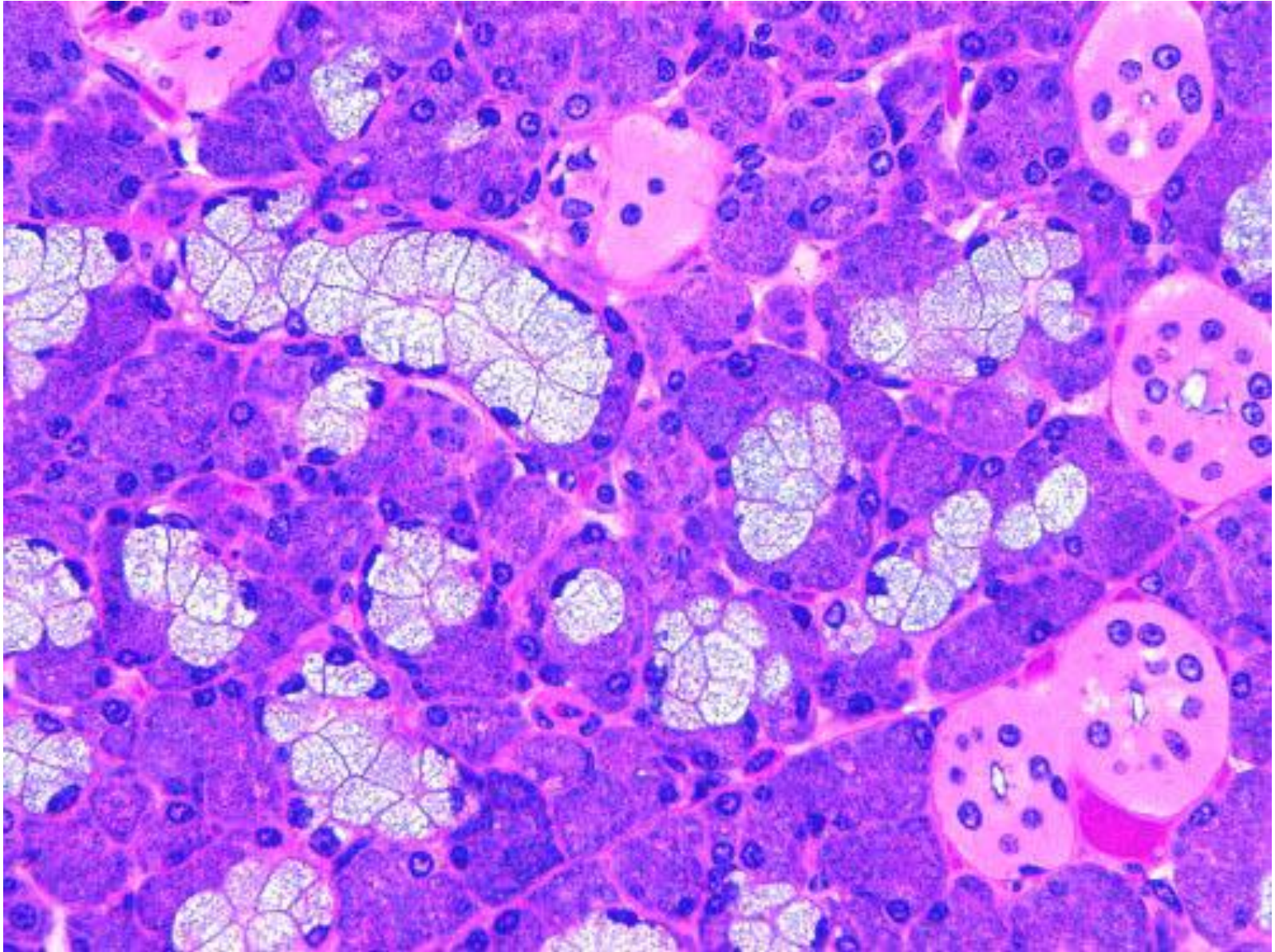
PAROTIDE= SIEROSA

SOTTOLINGUALE E SOTTOMANDIBOLARE=MISTA

GHIANDOLE SALIVARI MAGGIORI



GHIANDOLA SALIVARE TUBULO ACINOSA COMPOSTA MISTA (sottomandibolare)



PAROTIDE → ghiandola salivare a secrezione sierosa

