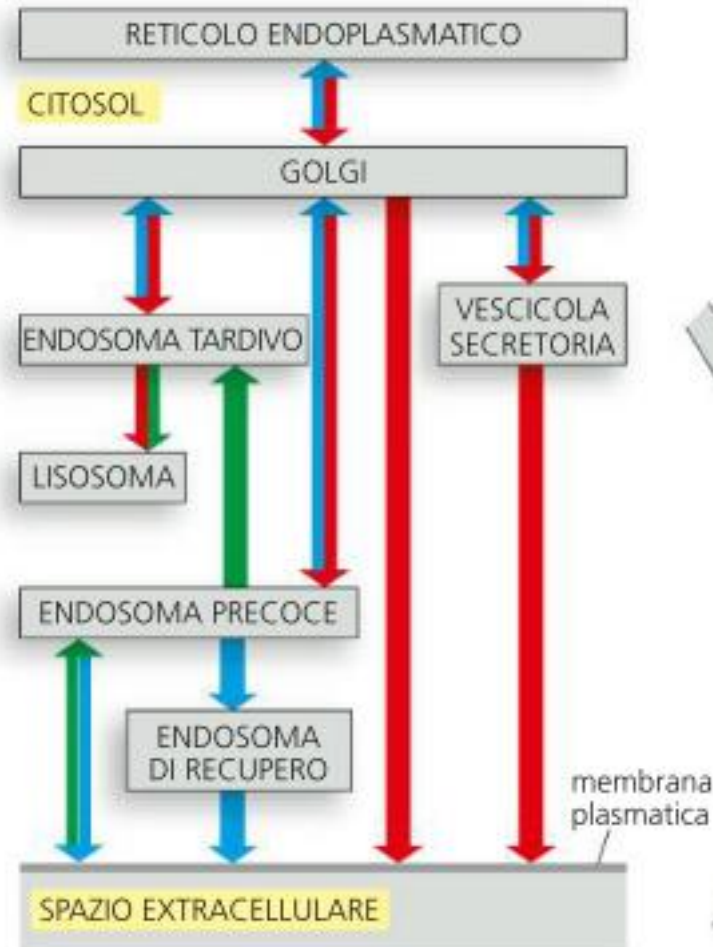
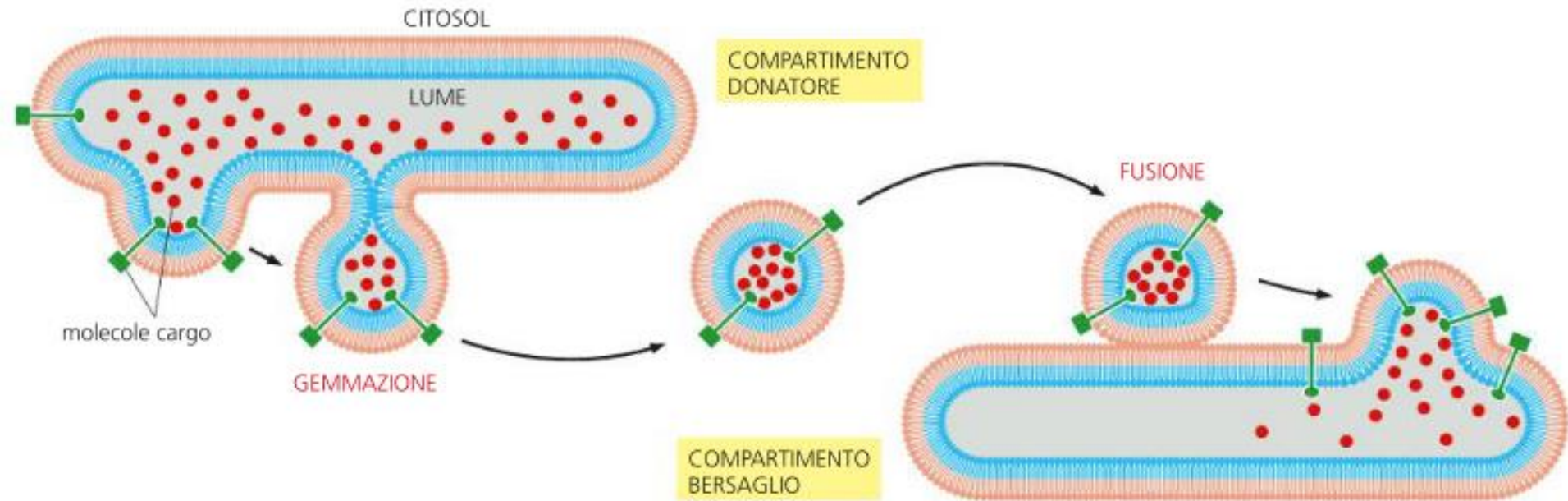


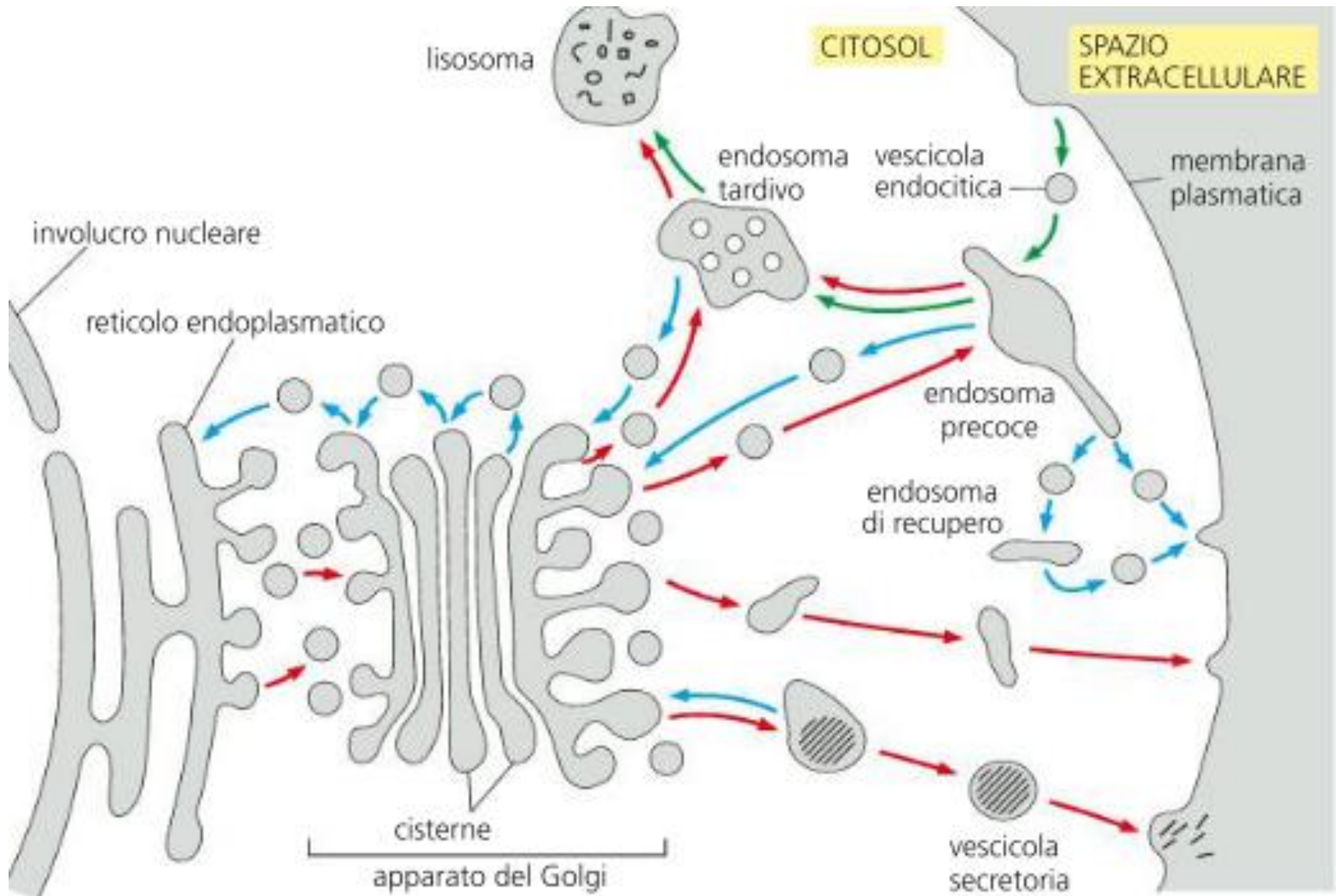
# ENDOCITOSI ED ESOCITOSI



# IL TRAFFICO VESCICOLARE



# La mappa stradale della via **secretoria** ed **endocitica**



# VI SONO DIFFERENTI TIPI DI ENDOCITOSI

**TIPO DI MATERIALE INTERNALIZZATO**

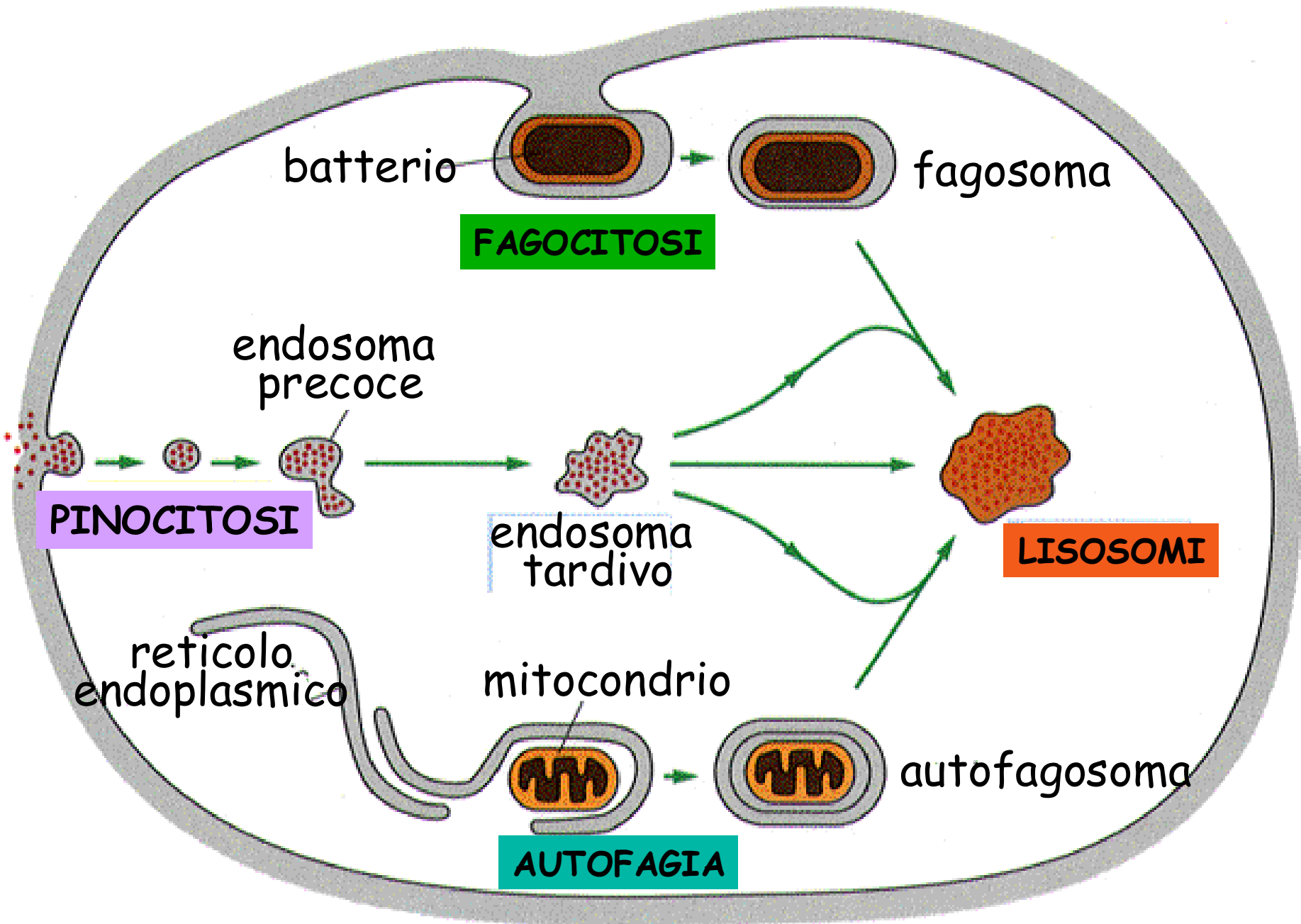
FAGOCITOSI

PINOCITOSI (micro-macro)

**TIPO DI VESCICOLA CHE SI FORMA**

ENDOCITOSI MEDIATA DA CAVEOLE (caveolina)

ENDOCITOSI MEDIATA DA RECETTORE (clatrina)



# FAGOCITOSI

batterio



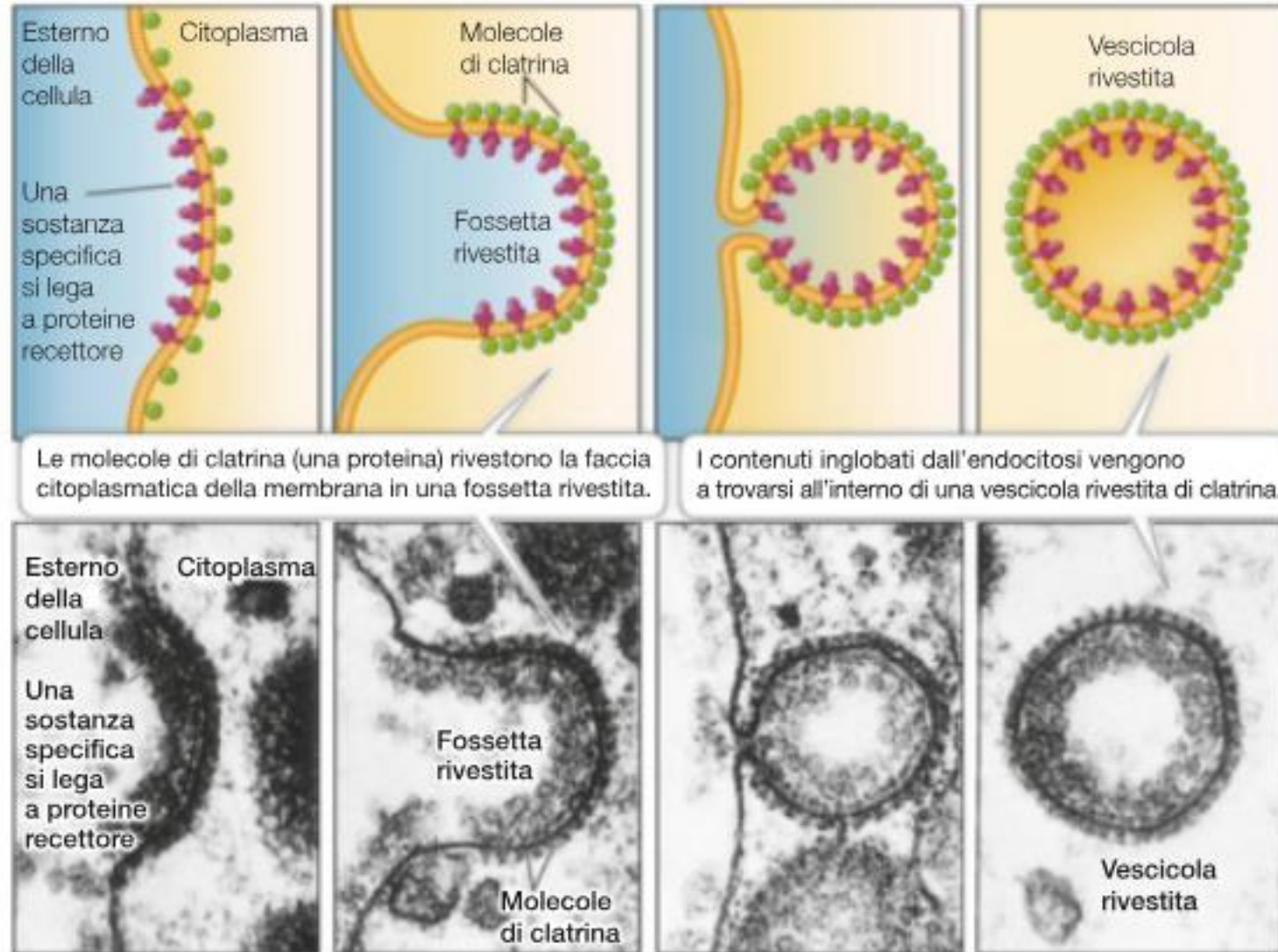
pseudopodo

membrana  
plasmatica

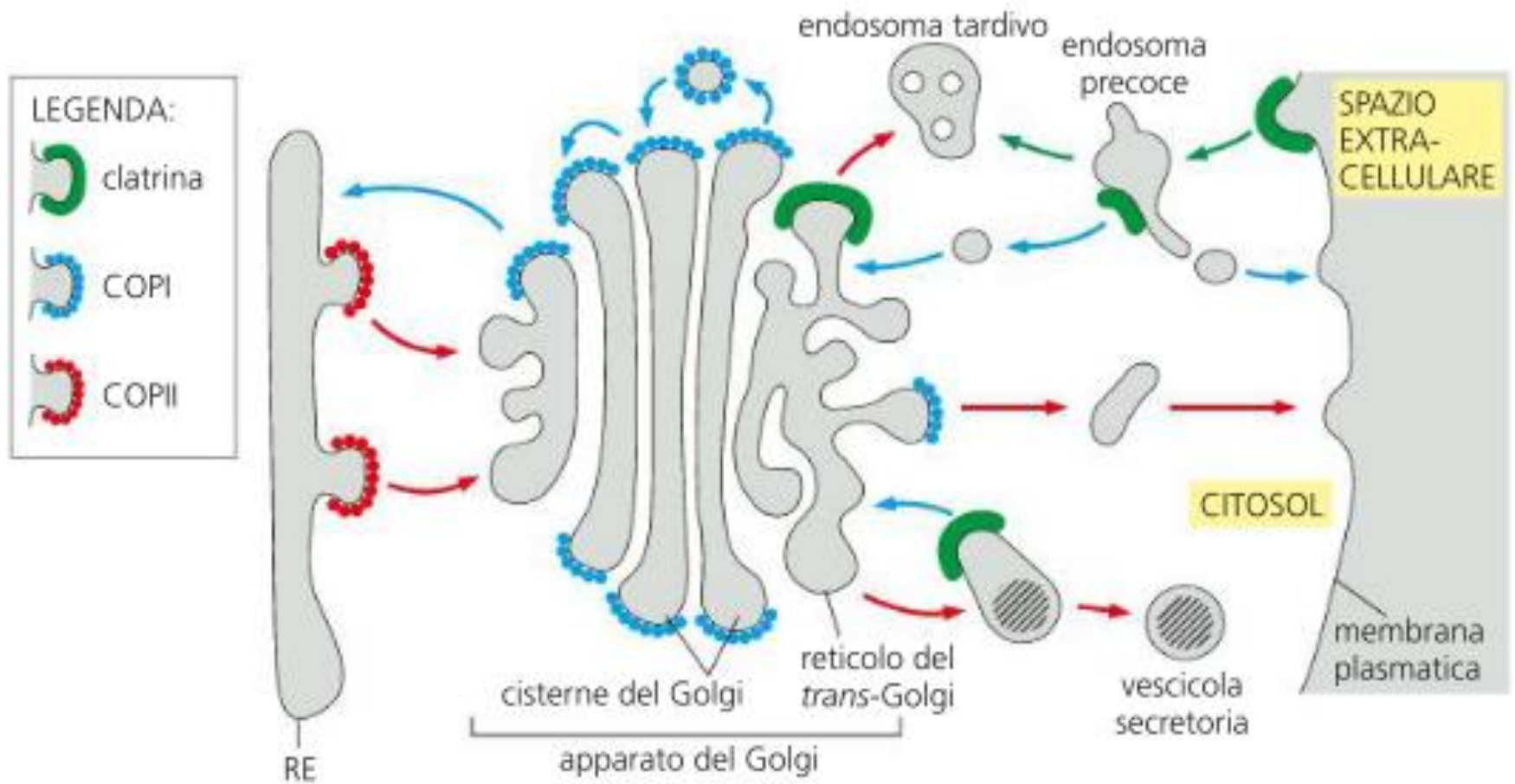
1  $\mu$ m

video

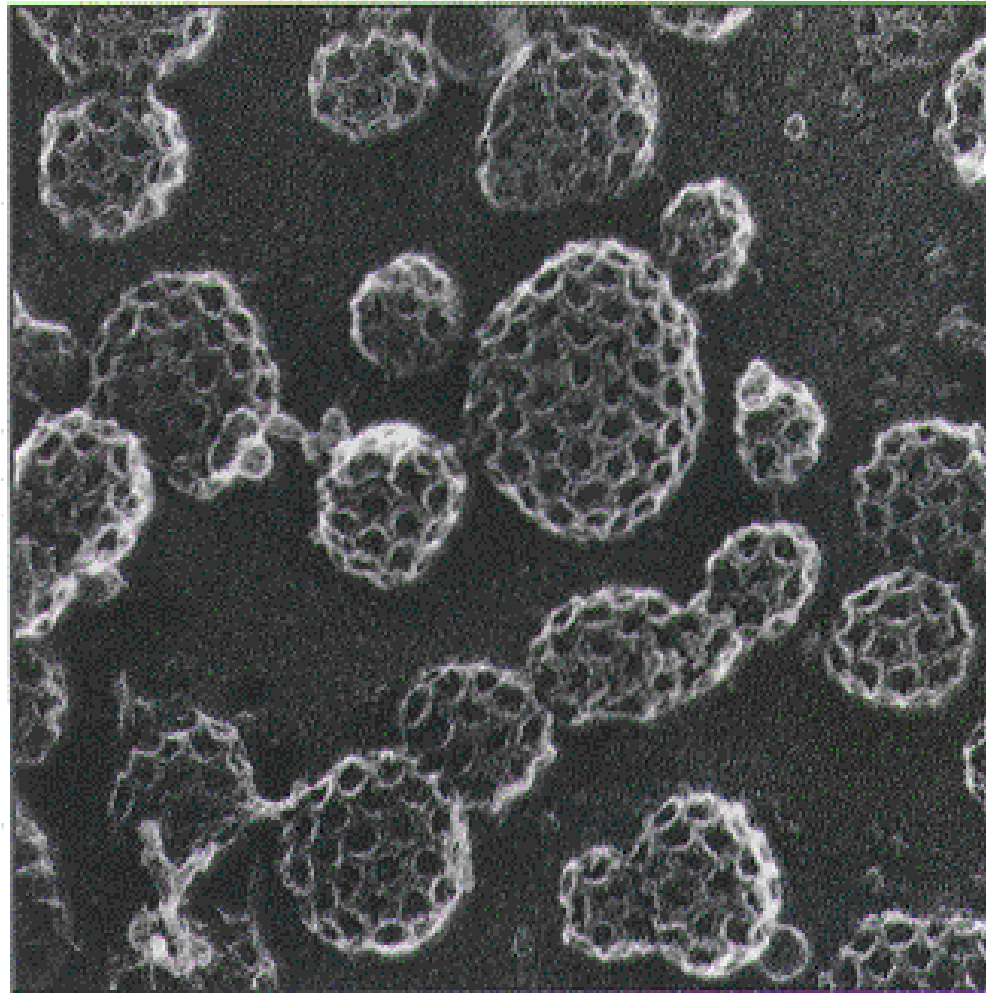
# ENDOCITOSI MEDIATA DA RECETTORE



# I DIVERSI RIVESTIMENTI DEL TRAFFICO VESCICOLARE

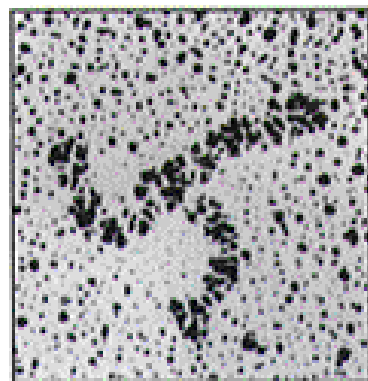
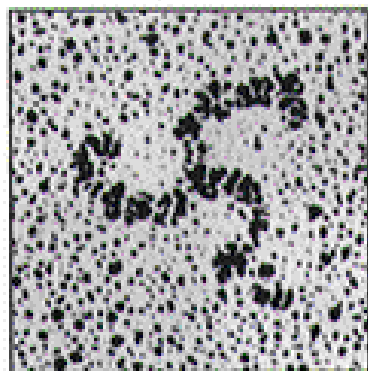
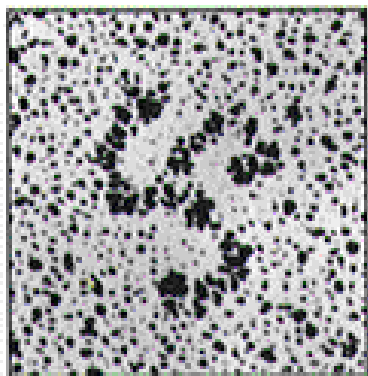


# IL RIVESTIMENTO DI CLATRINA HA UNA PRECISA ORGANIZZAZIONE GEOMETRICA



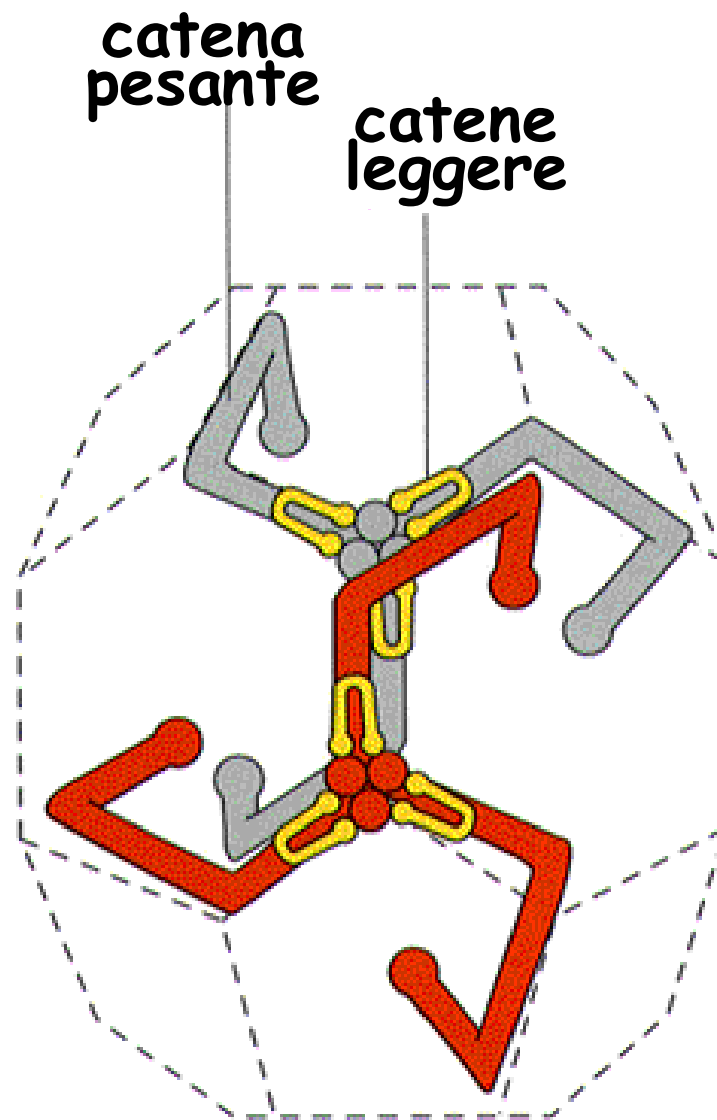
0.2  $\mu\text{m}$

# IL TRISKELION E' L'UNITA' DI BASE DELLA CLATRINA



(A)

50 nm

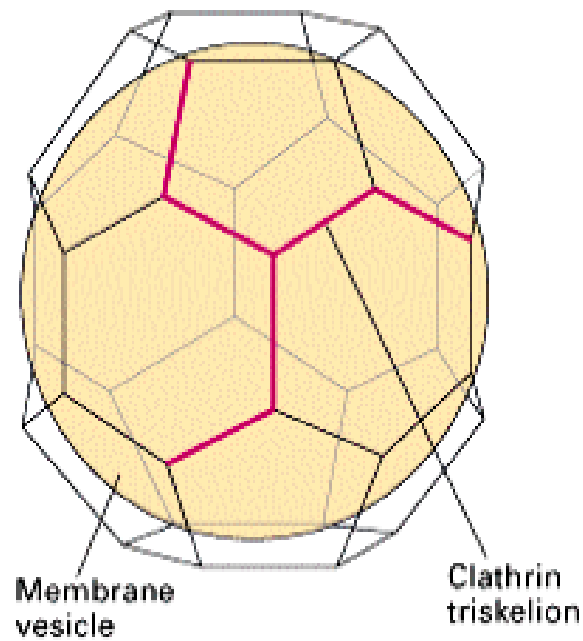


(B)

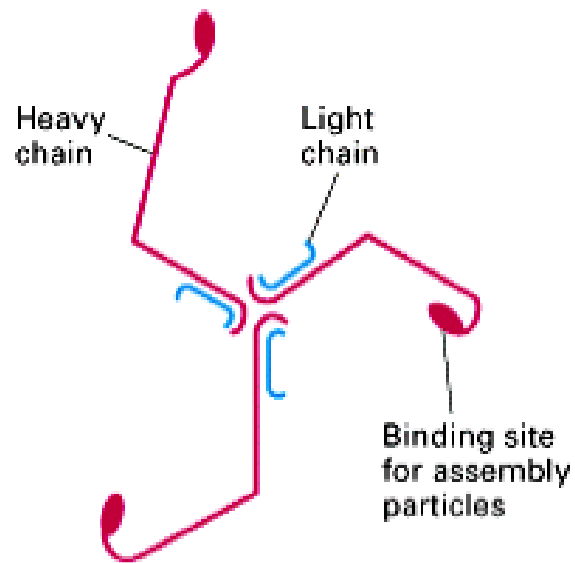
# LA CLATRINA È ORGANIZZATA IN ESAGONI E PENTAGONI

(a) Coated vesicle

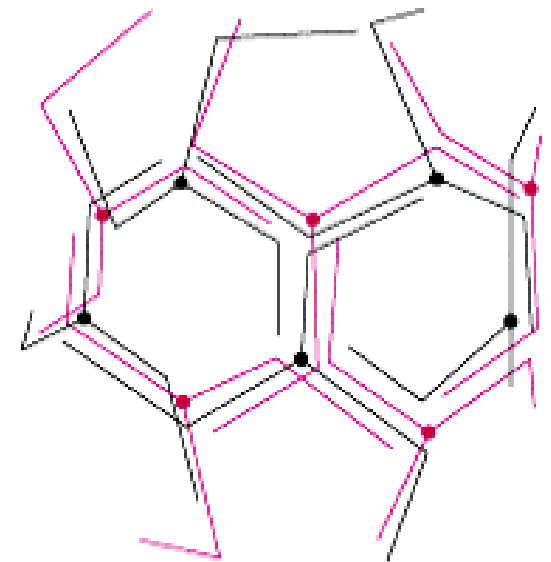
50 nm



(b) Triskelion structure



(c) Assembly intermediate

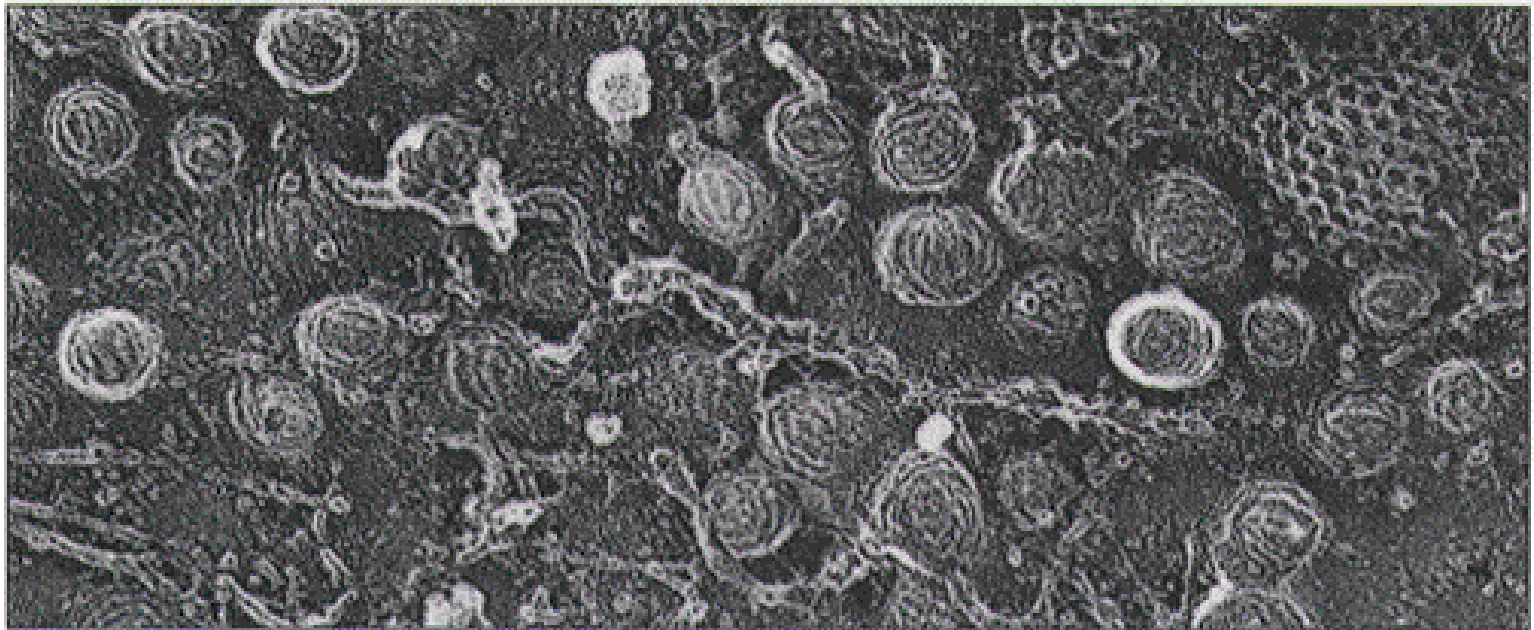


# ENDOCITOSI MEDIATA DA CAVEOLINA E CLATRINA

(A)

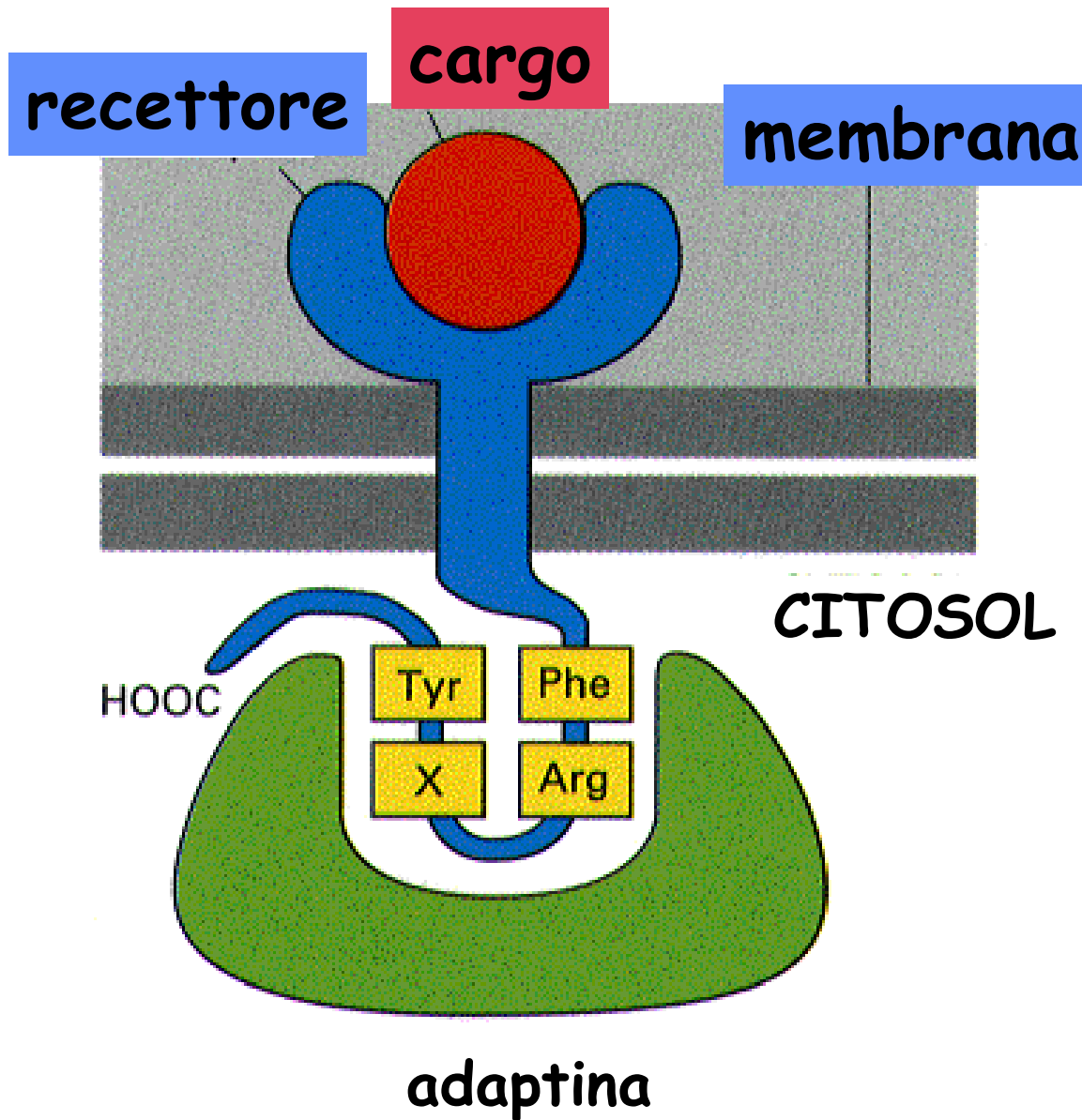


(B)



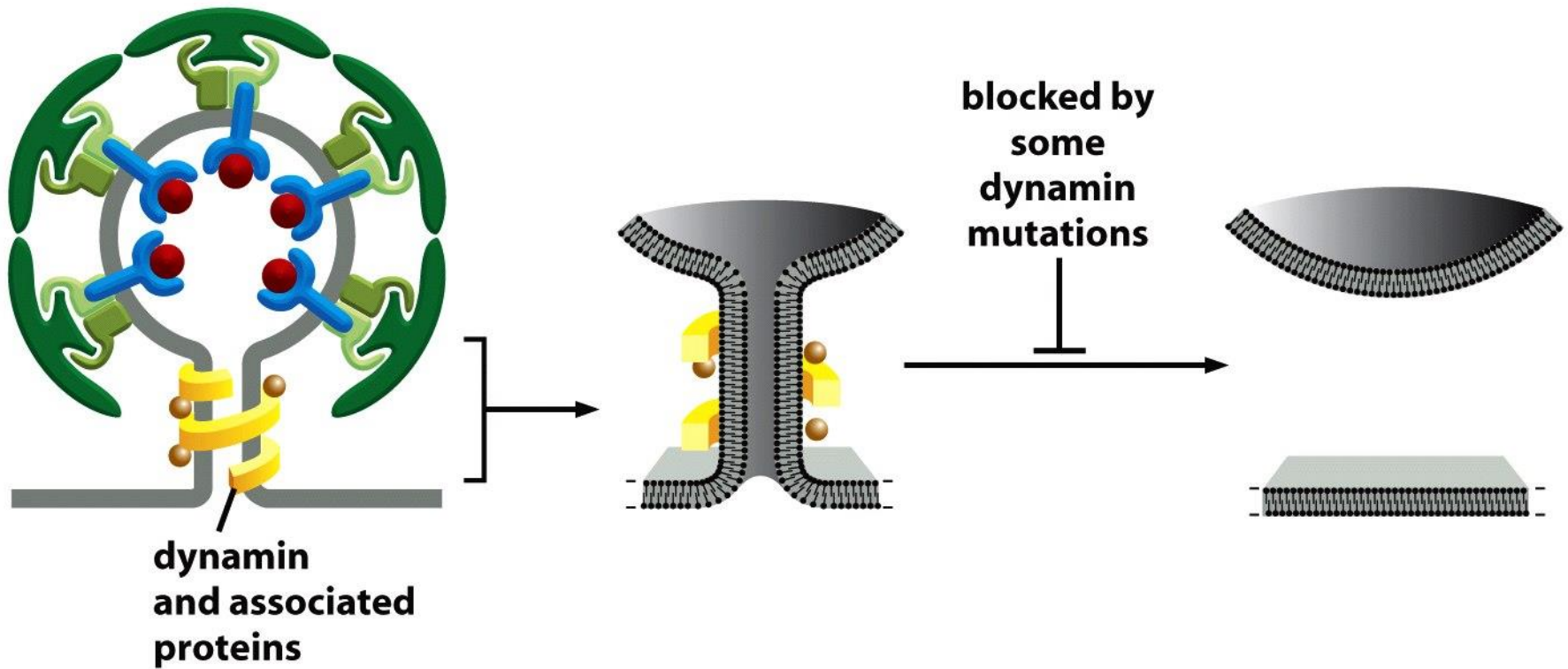
0.2  $\mu\text{m}$

# IL SEGNALE DI ENDOCITOSI VIENE RICONOSCIUTO DALLA ADAPTINA

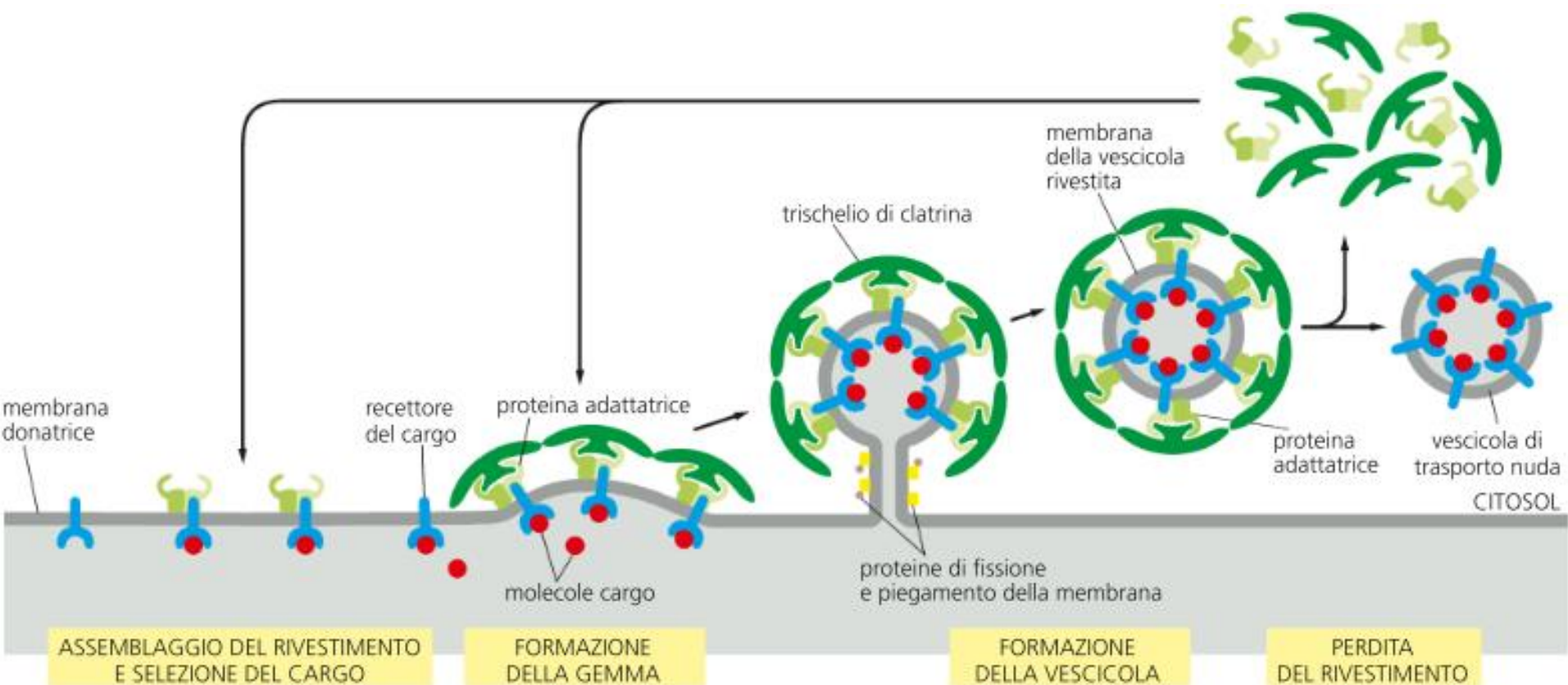


Tf-R

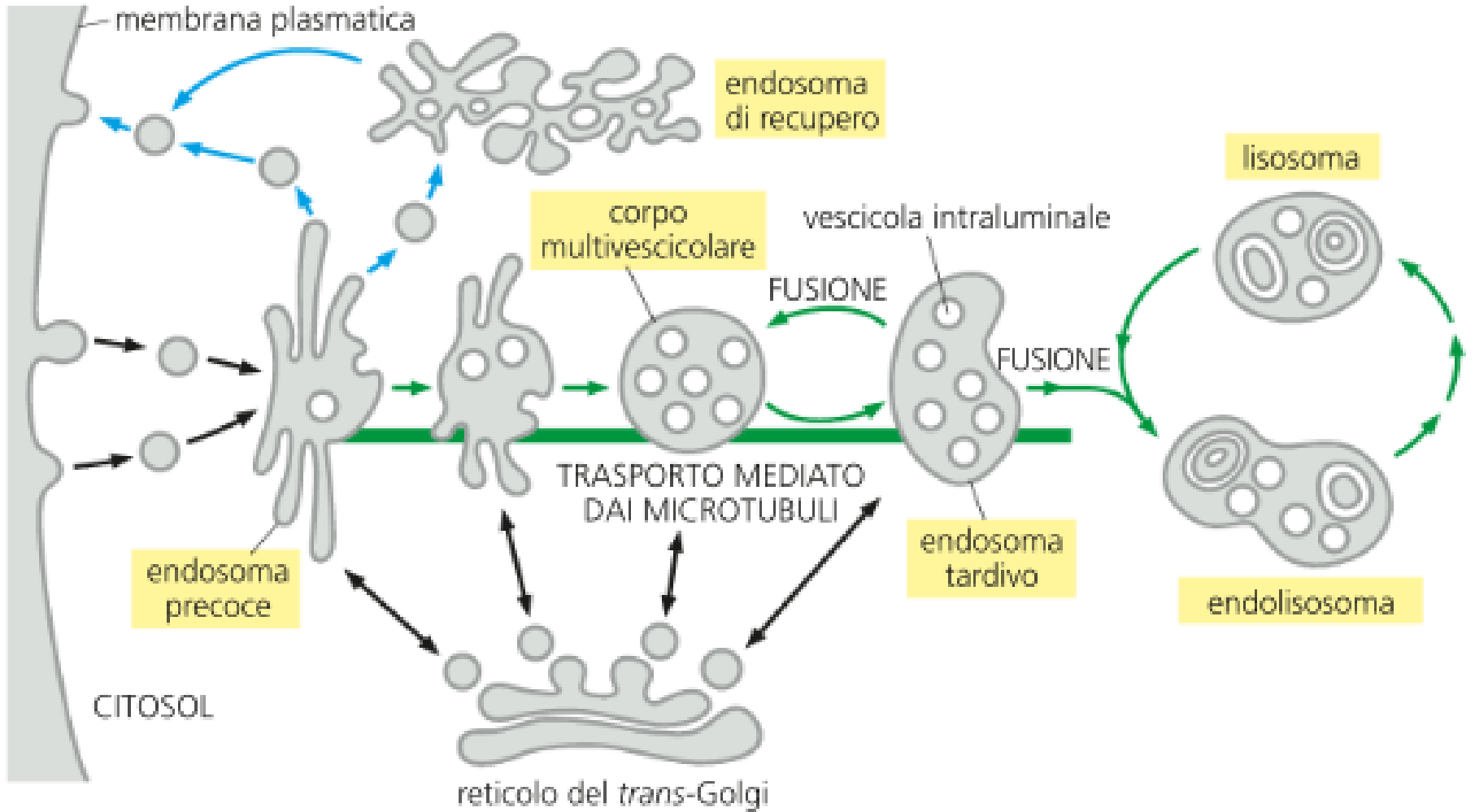
# LA DINAMINA 'STRANGOLA' LE VESCICOLE



# LA FORMAZIONE DI VESCICOLE RICOPERTE DI CLATRINA AVVIENE ATTRAVERSO PIU' FASI



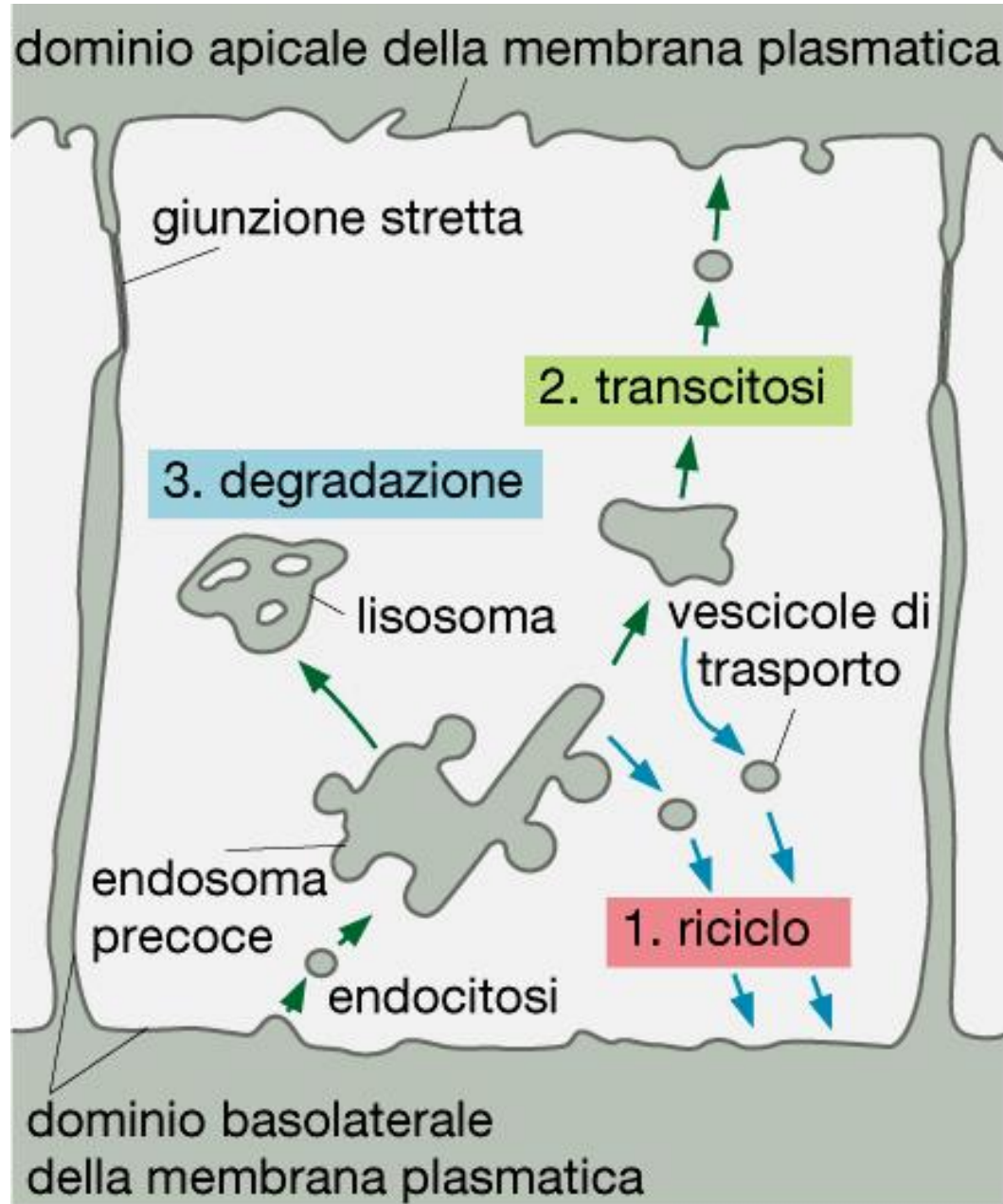
# TAPPE DI ENDOCITOSI



# TAPPE DELLA ENDOCITOSI MEDIATA DA RECETTORE

1. INTERAZIONE LIGANDO-RECETTORE
2. LEGAME DELL' ADAPTINA AL RECETTORE
3. FORMAZIONE DEL COAT DI CLATRINA
4. INVAGINAZIONE DELLA MEMBRANA
5. FISSIONE
6. PERDITA DEL COAT DI CLATRINA
7. FUSIONE CON ENDOSOMI PRECOCI
8. ACIDIFICAZIONE
9. DISTACCO LIGANDO-RECETTORE
10. FORMAZIONE DI CORPI MULTIVESCICOLARI
11. FORMAZIONE DI ENDOSOMI TARDIVI
12. FORMAZIONE DI ENDOLISOSOMI
13. TRASPORTO AI LISOSOMI E/O GOLGI  
(O RICICLO O TRANSCITOSI)

# INDIRIZZI DELLA ENDOCITOSI



# ESEMPI DI ENDOCITOSI DI:

① LDL

② TRANSFERRINA

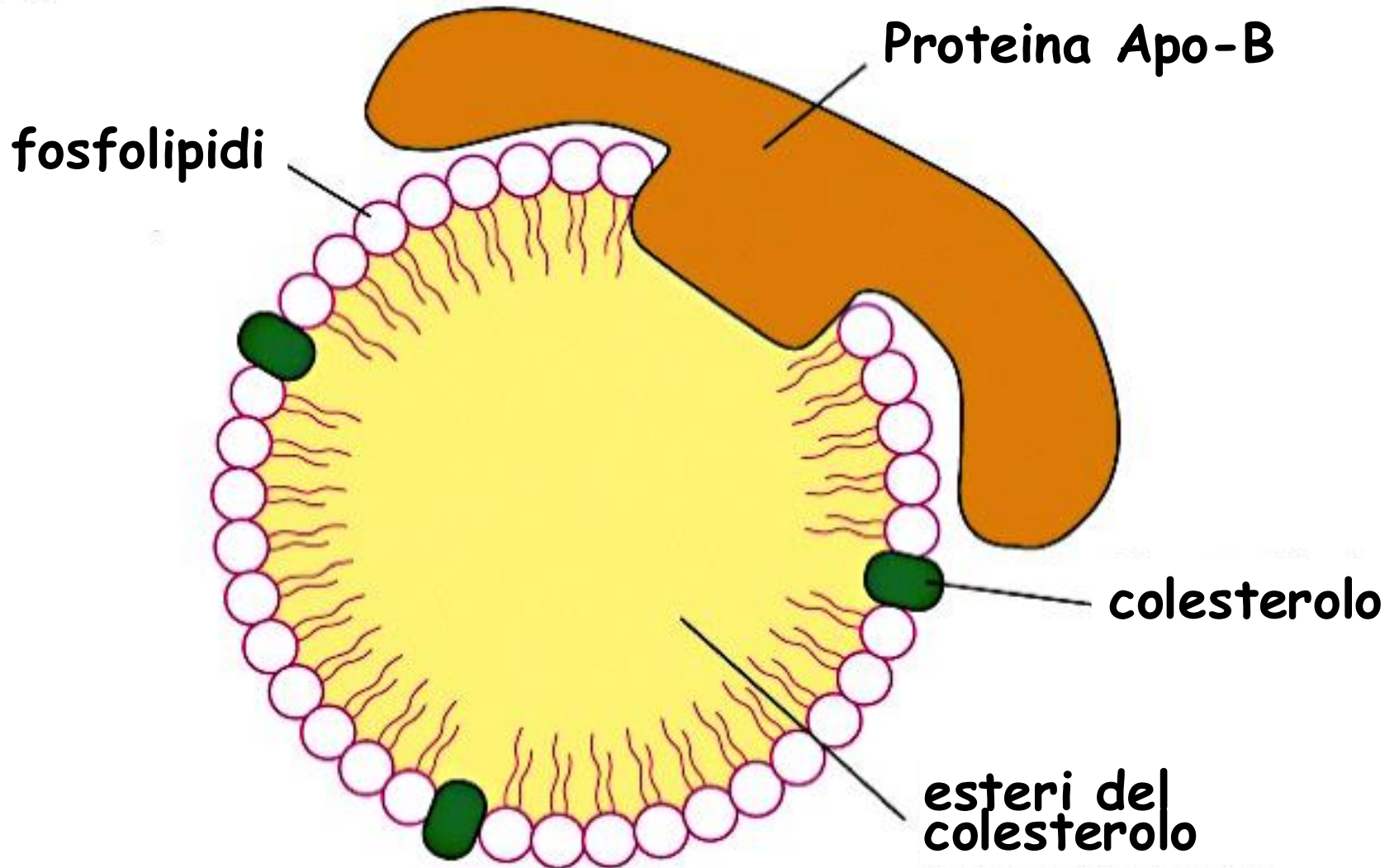
③ VIRUS

④ EGF

⑤ Ig POLIMERICHE

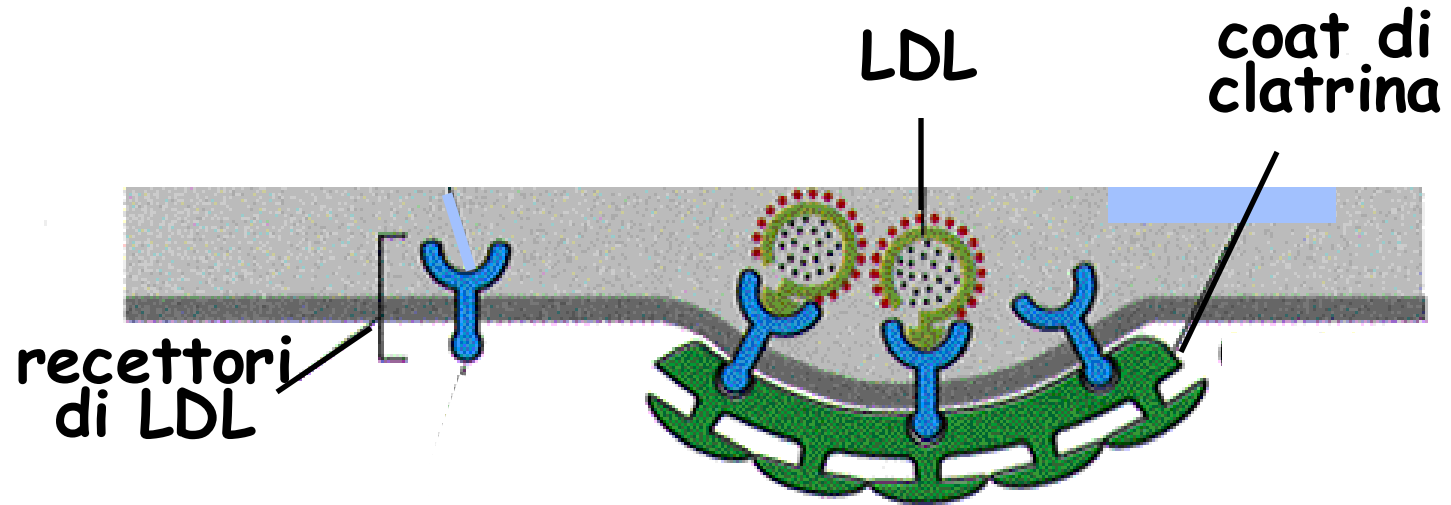
①

# LE LDL TRASPORTANO COLESTEROLO



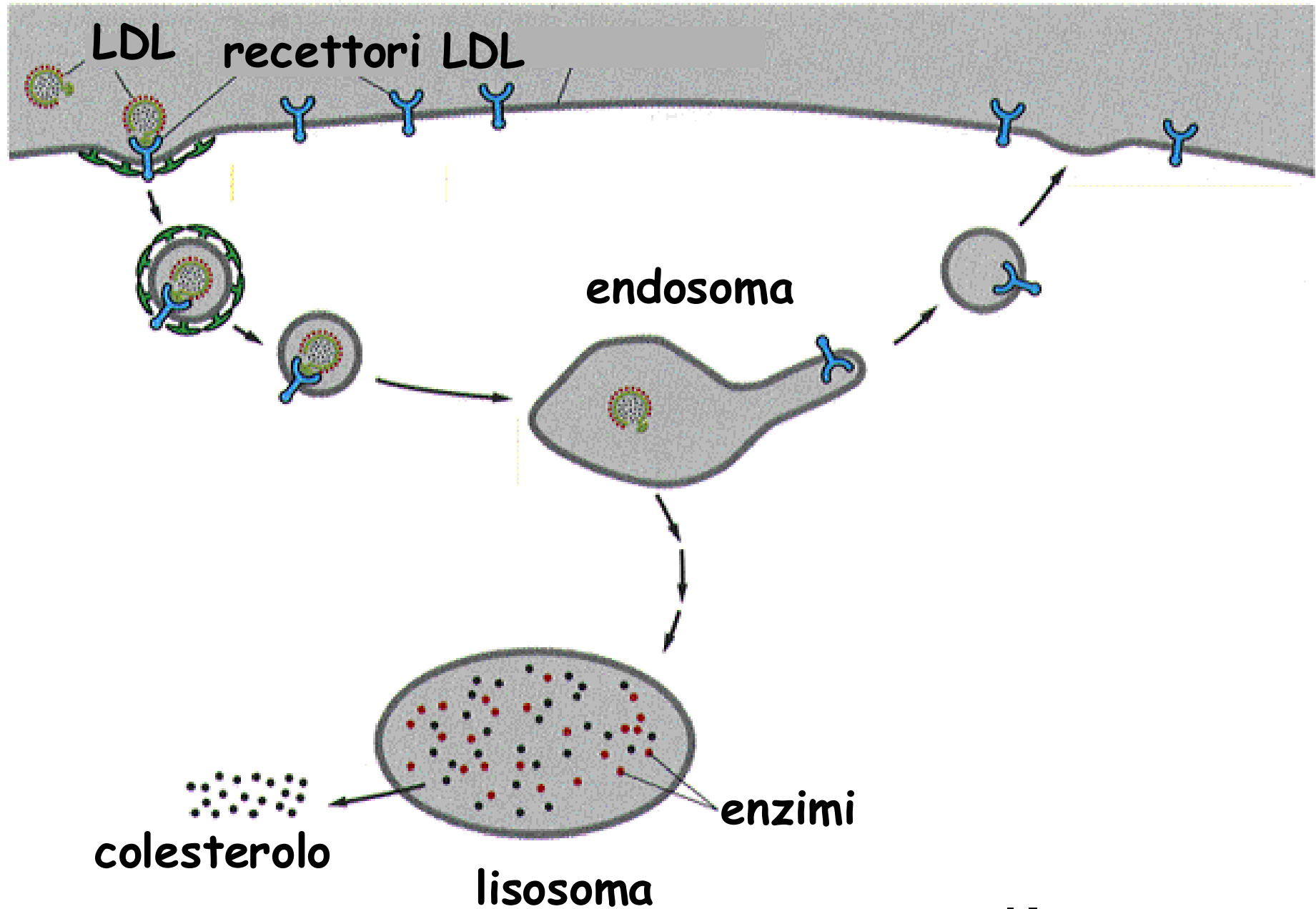
# ENDOCITOSI DI LDL

A



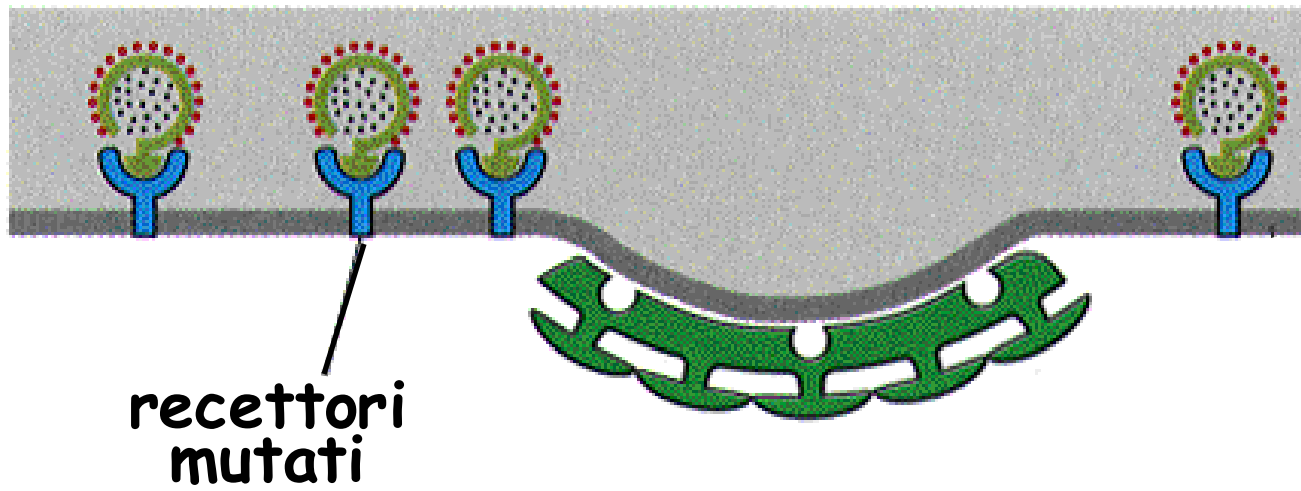
movie

# ENDOCITOSI DI LDL



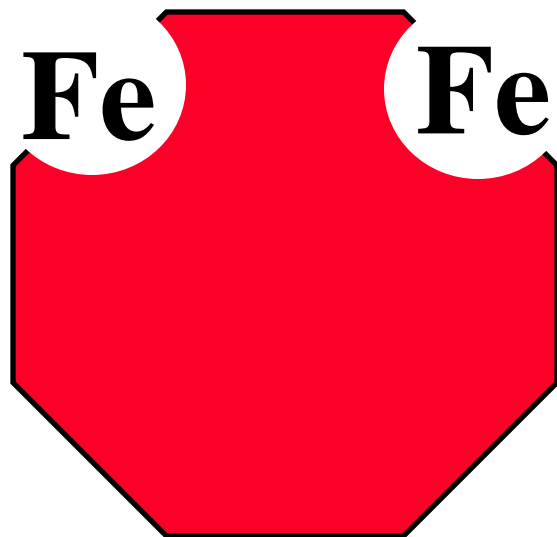
# IPERCOLESTEROLEMIA FAMILIARE

**B**

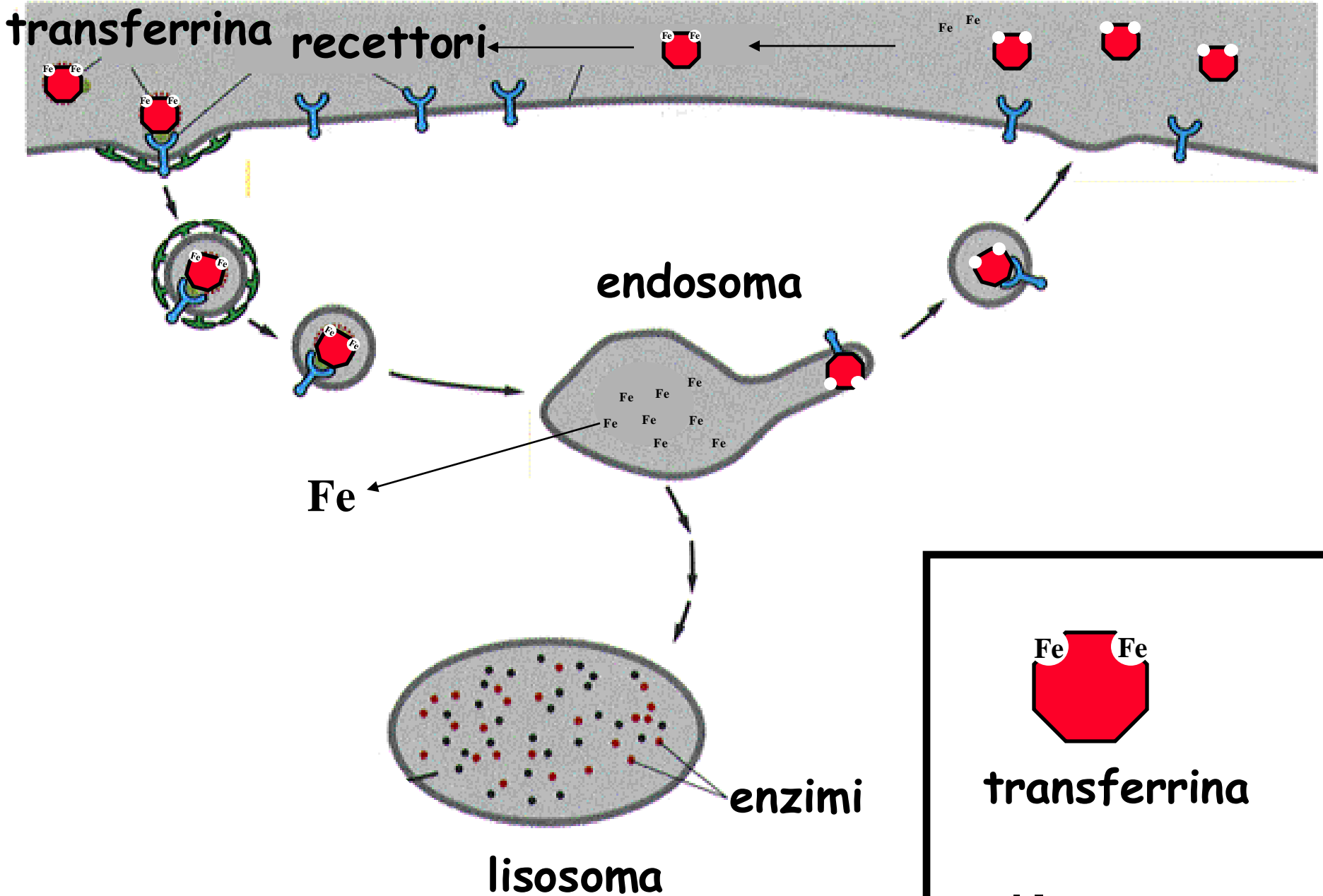


②

## LA TRANSFERRINA LEGA IL FERRO

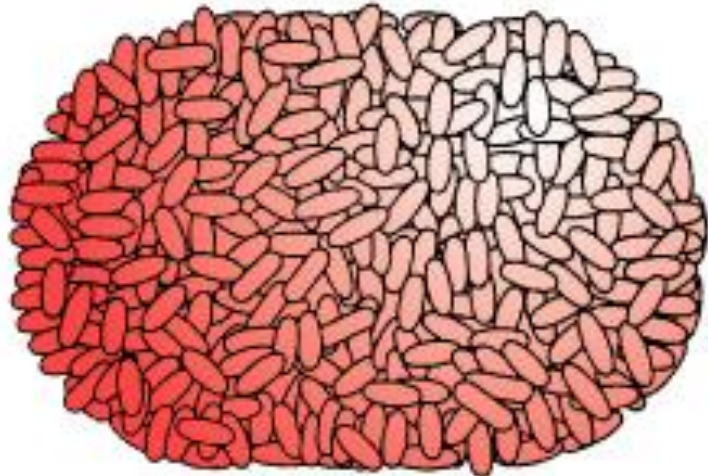


# ENDOCITOSI DELLA TRANSFERRINA



③

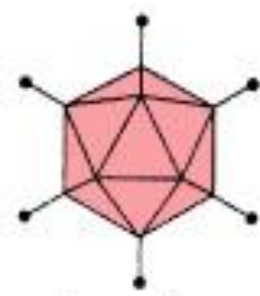
## **ENDOCITOSI DI VIRUS**



poxvirus



herpesvirus



adenovirus



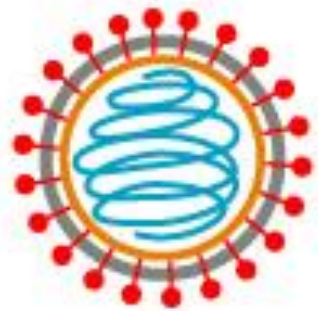
virus della verruca



parvovirus

100 nm

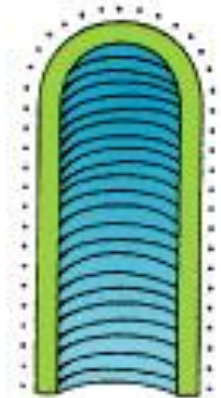
VIRUS A DNA



virus dell'influenza



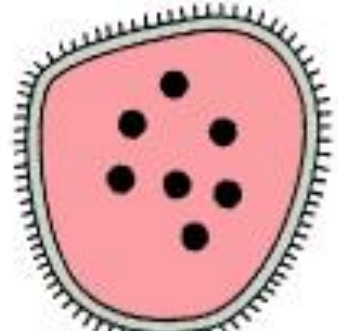
virus della parotite



virus della rabbia



HIV (virus dell'AIDS)



LCM virus



rotavirus



virus dell'encefalite orientale equina

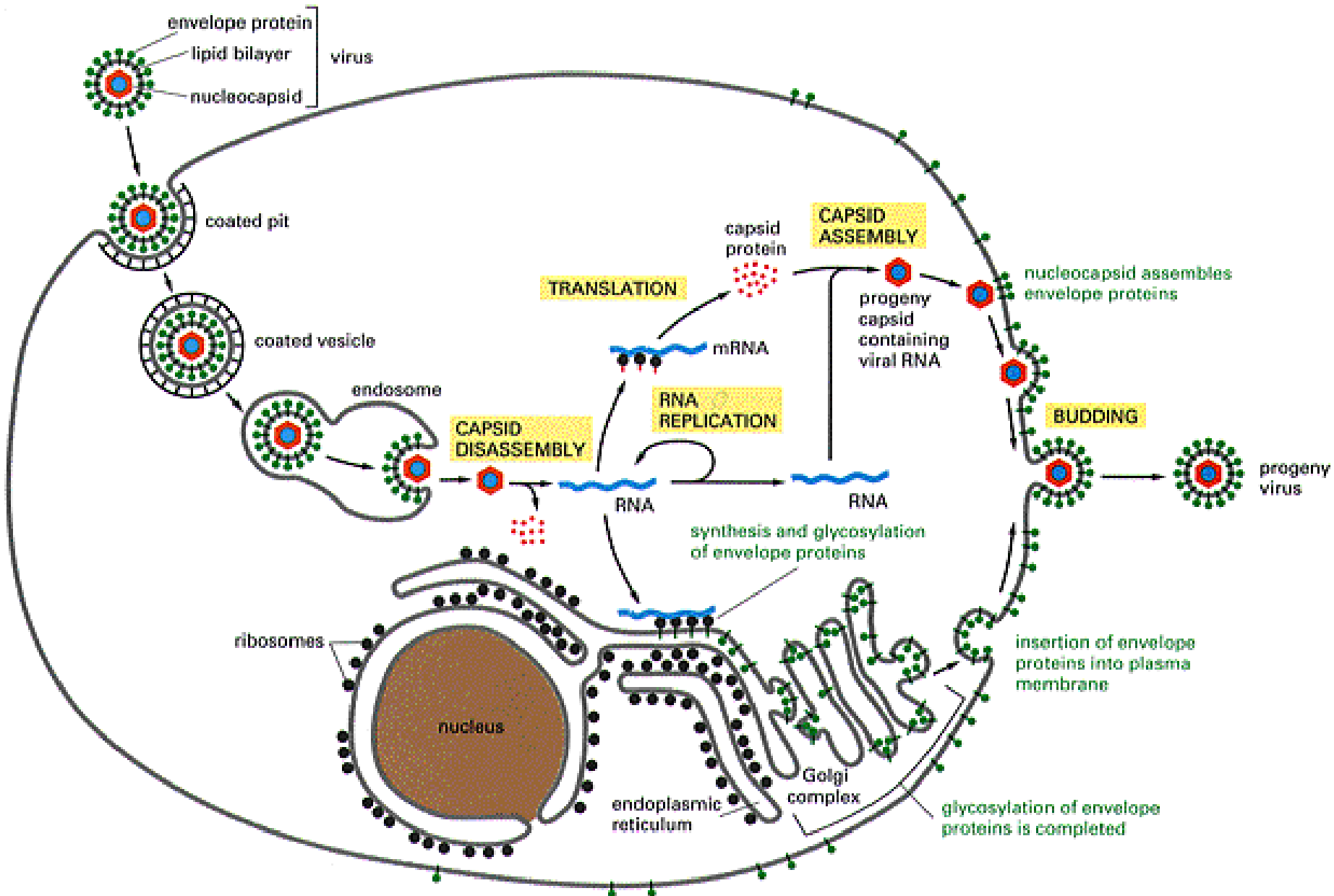


corona virus (raffreddore comune)

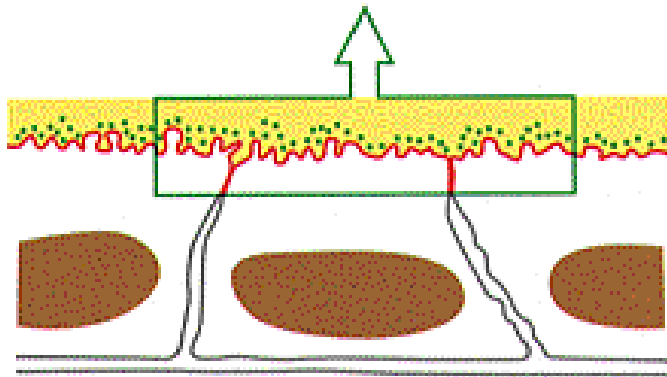
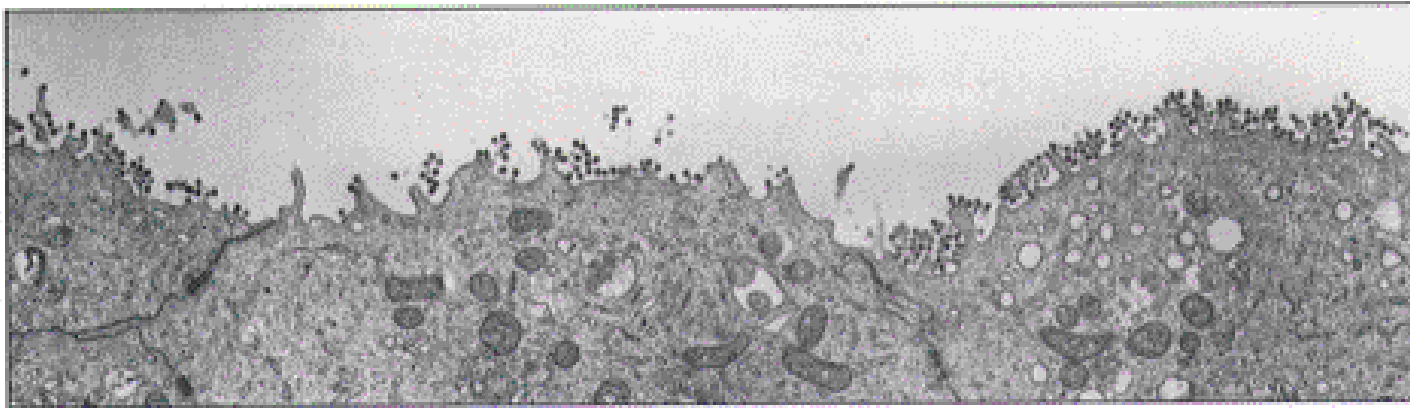


polio virus

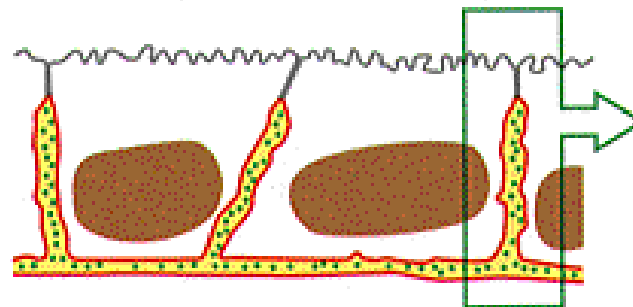
VIRUS A RNA



# IN CELLULE POLARIZZATE L'ESOCITOSI DI UN VIRUS PUO' ESSERE POLARIZZATA

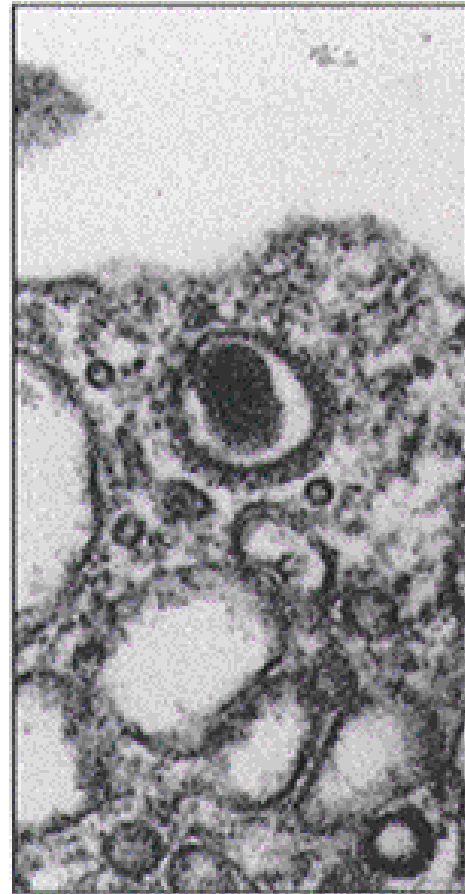


influenza virus buds only from the apical plasma membrane



vesicular stomatitis virus buds only from the basolateral plasma membrane

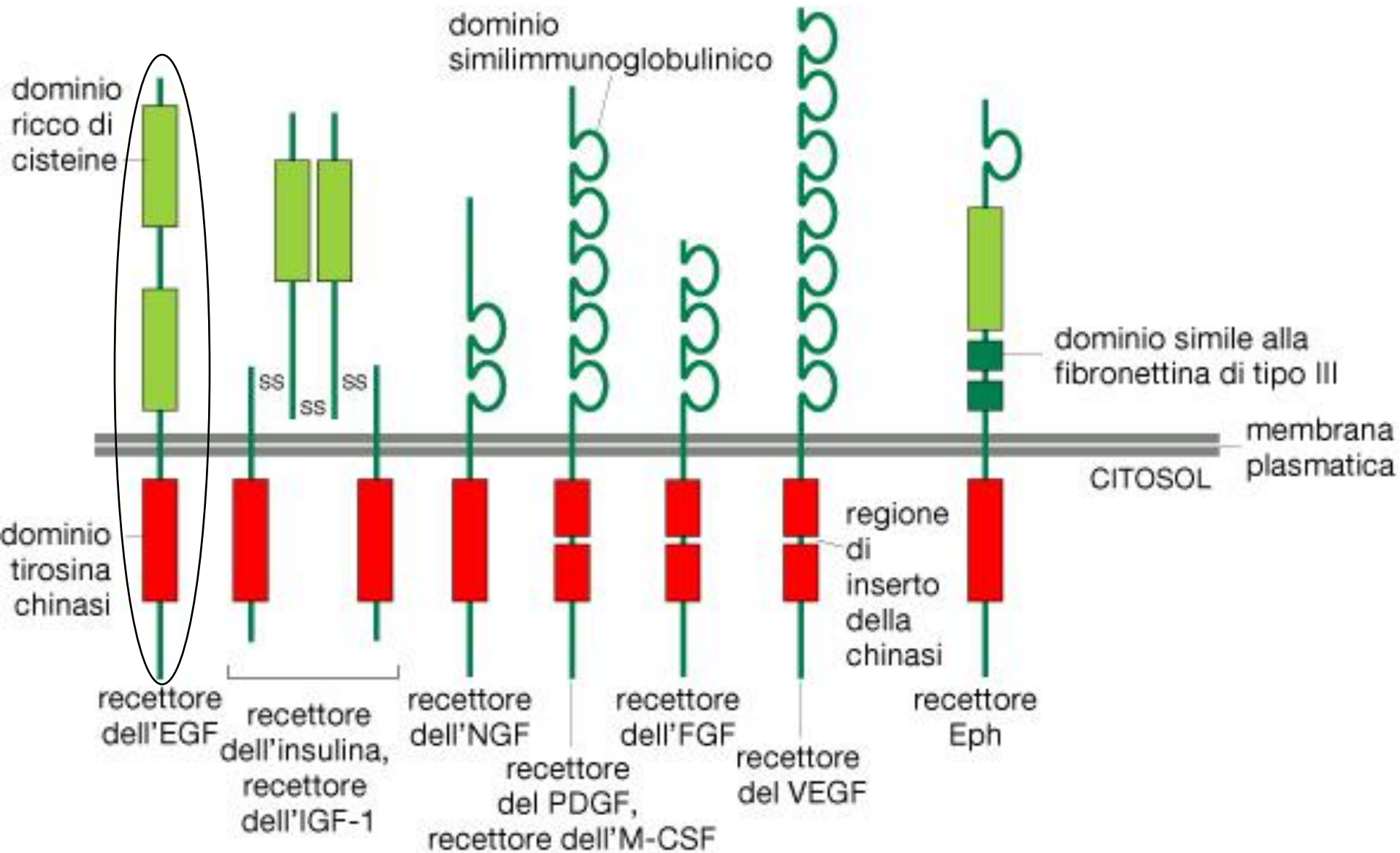
# INGRESSO DI VIRUS IN UNA CELLULA



0.2 μm

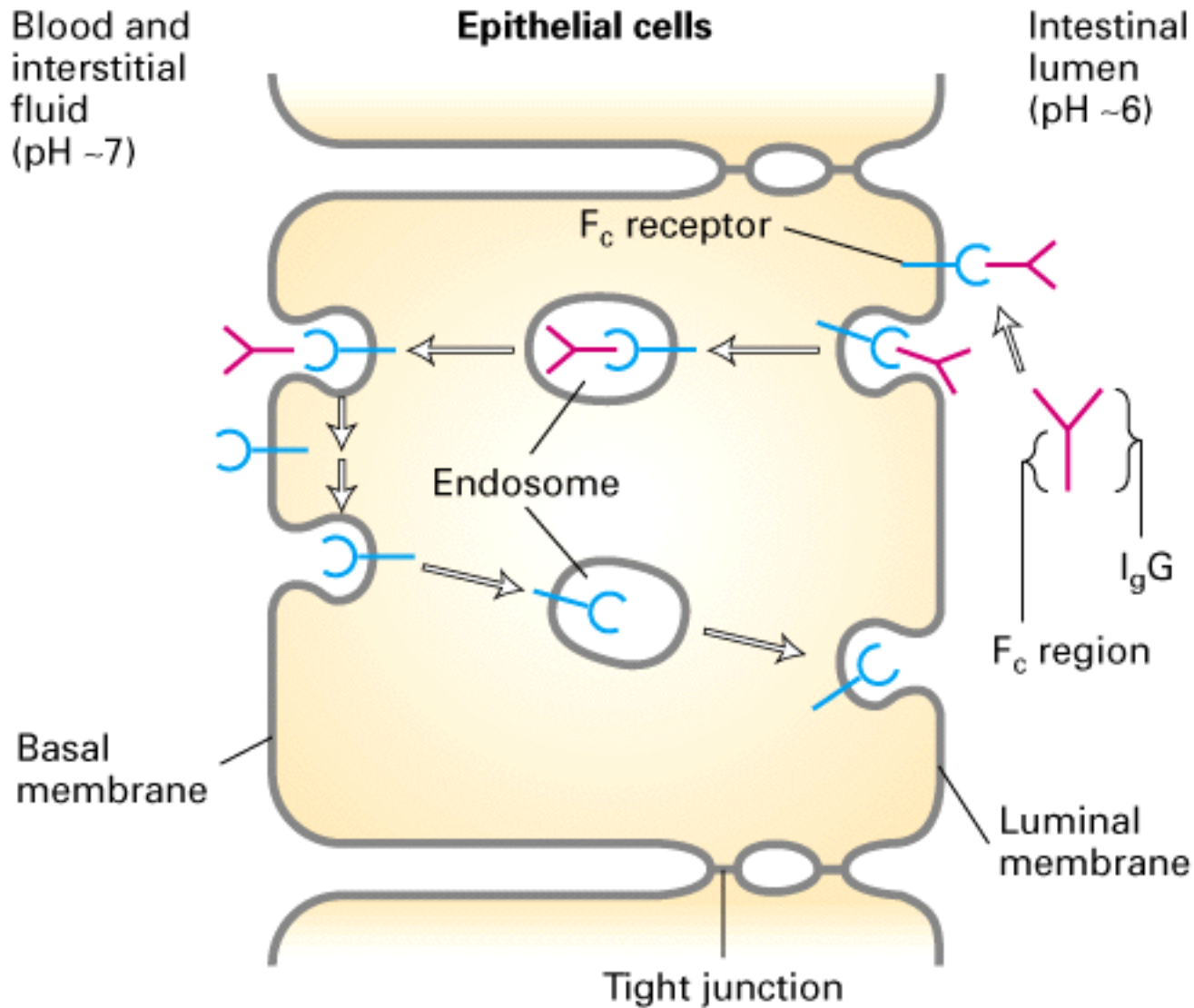
④

# L'ENDOCITOSI DELL'EGF SI REALIZZA TRAMITE IL SUO RECETTORE

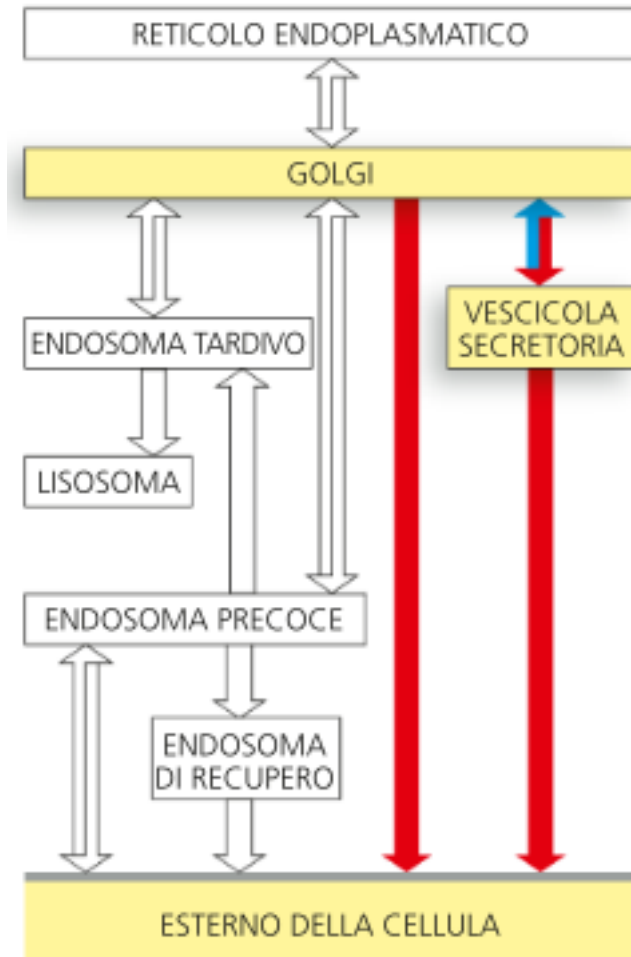


⑤

Le IgG materne attraversano le cellule epiteliali dell'intestino di topi neonati mediante transitosi

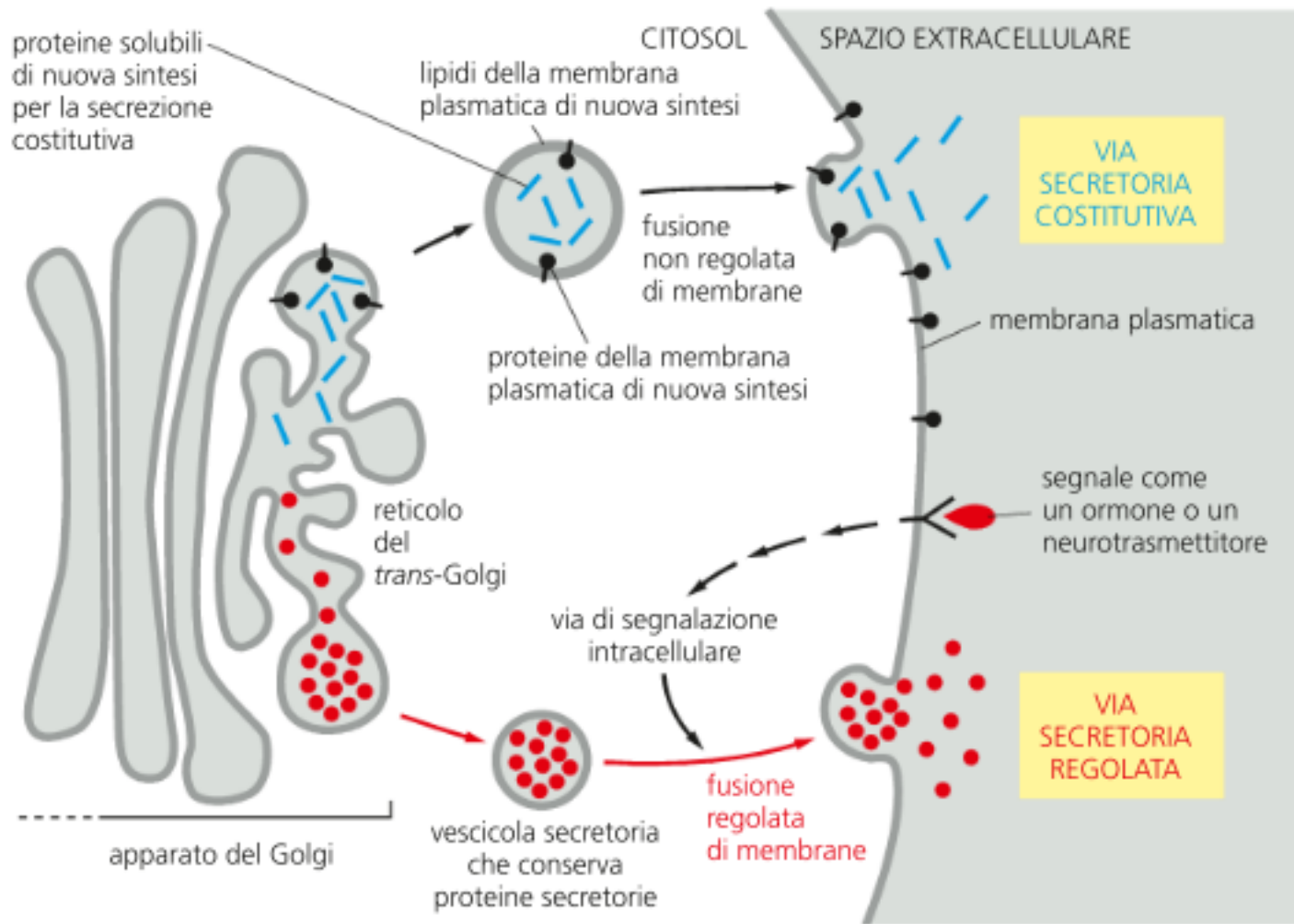


# ESOCITOSI



- **VIA SECRETORIA COSTITUTIVA**
- **VIA SECRETORIA REGOLATA**

# LE DUE VIE DI SECREZIONE



# **Endocytosis and Exocytosis**

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