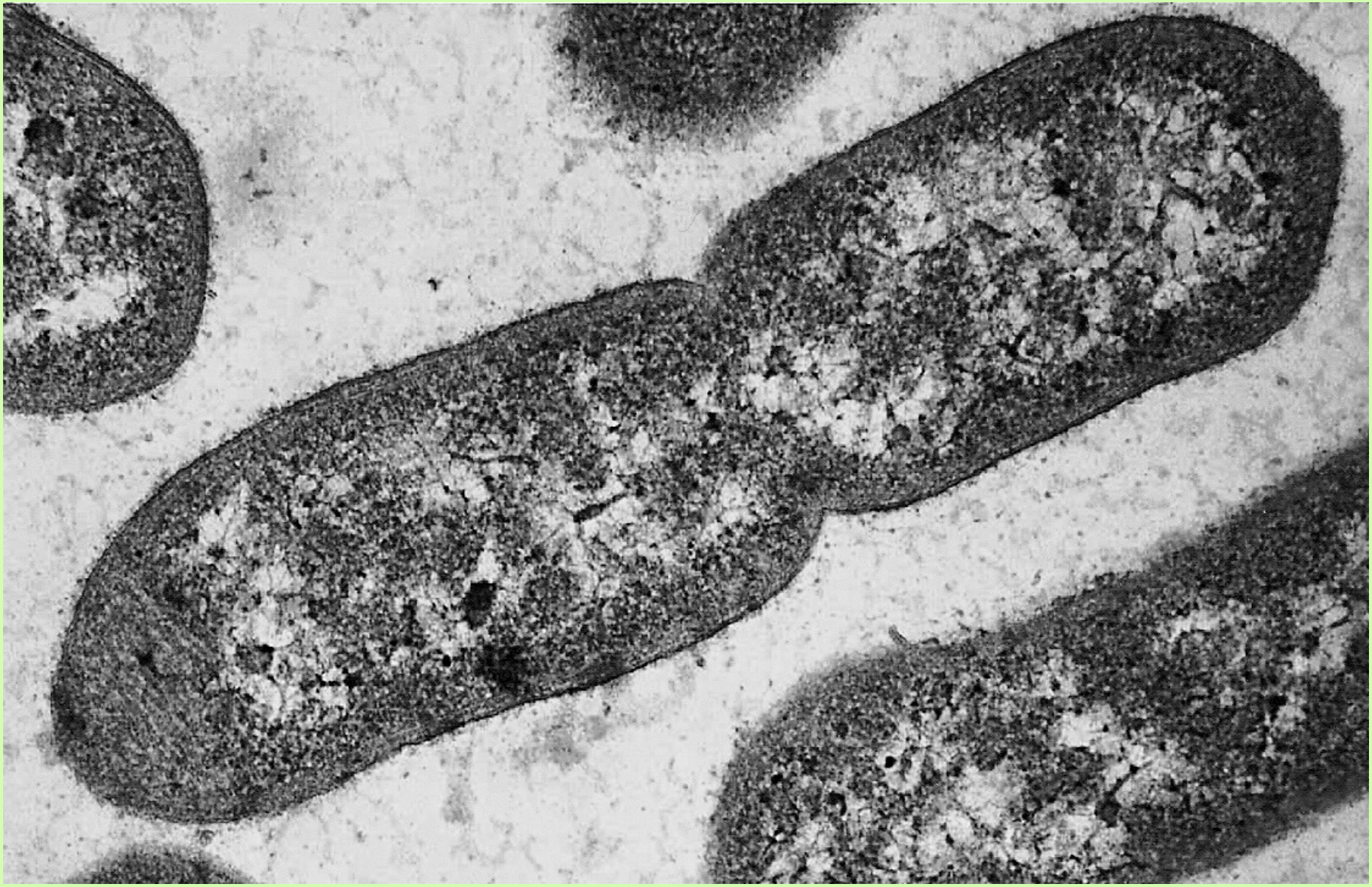
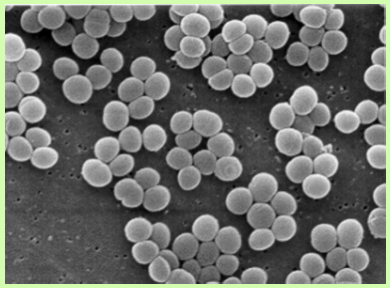
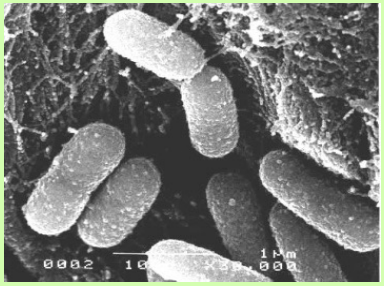
# BACTERIOLOGÍA

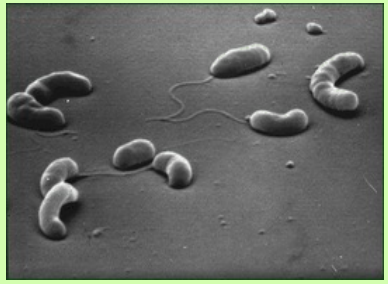


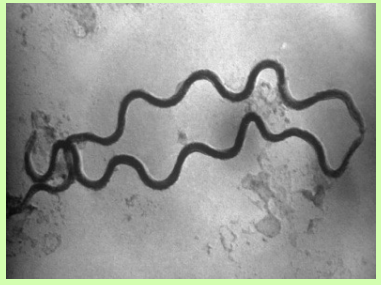
# LAS BACTERIAS

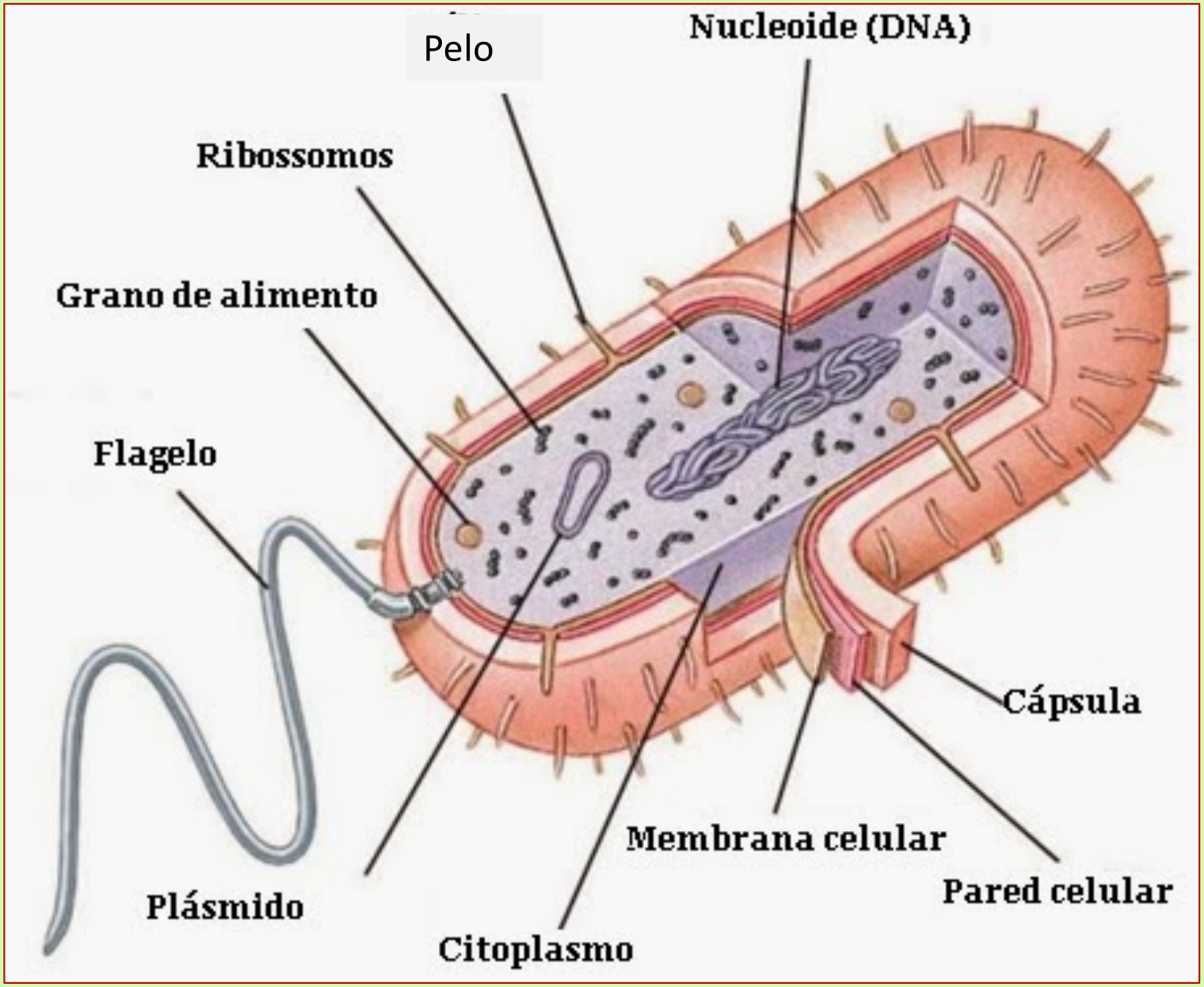
Un reino (Moneras) y dos dominios (Bacterias y Arqueobacterias)



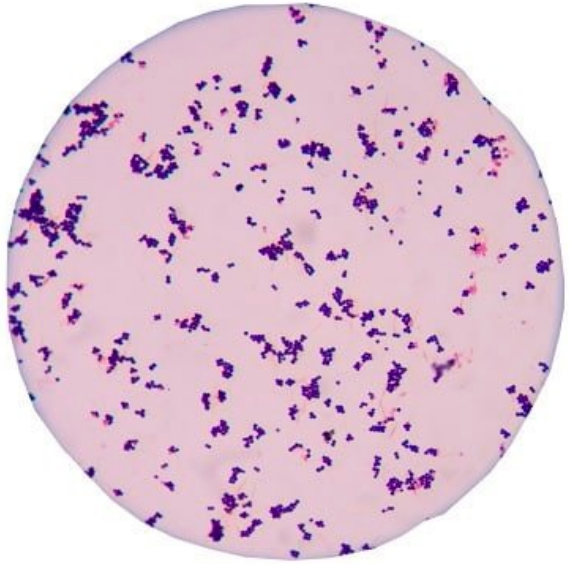








# PARED BACTERIANA

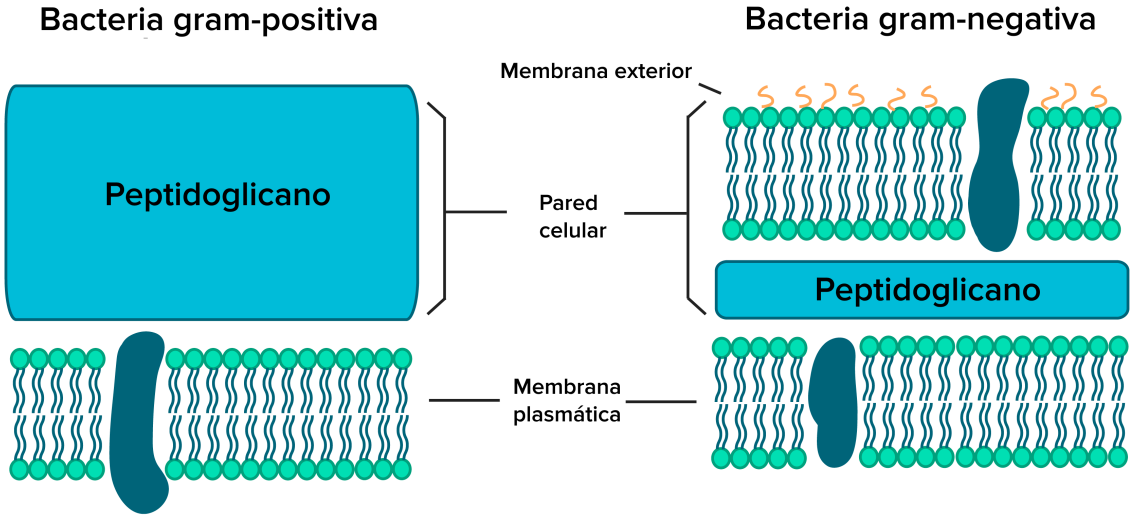


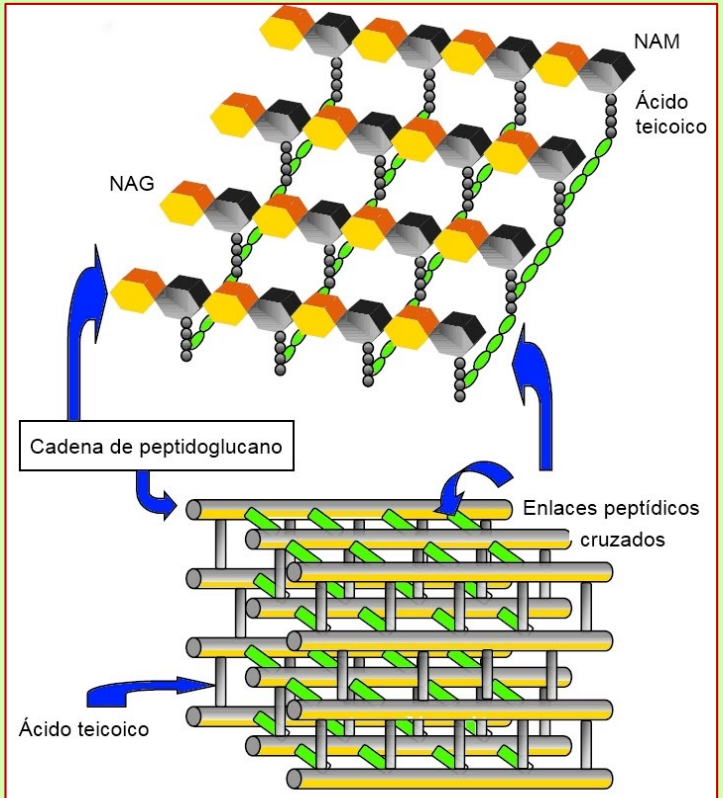
Bacterias Gram Positivas

Bacterias Gram Negativas

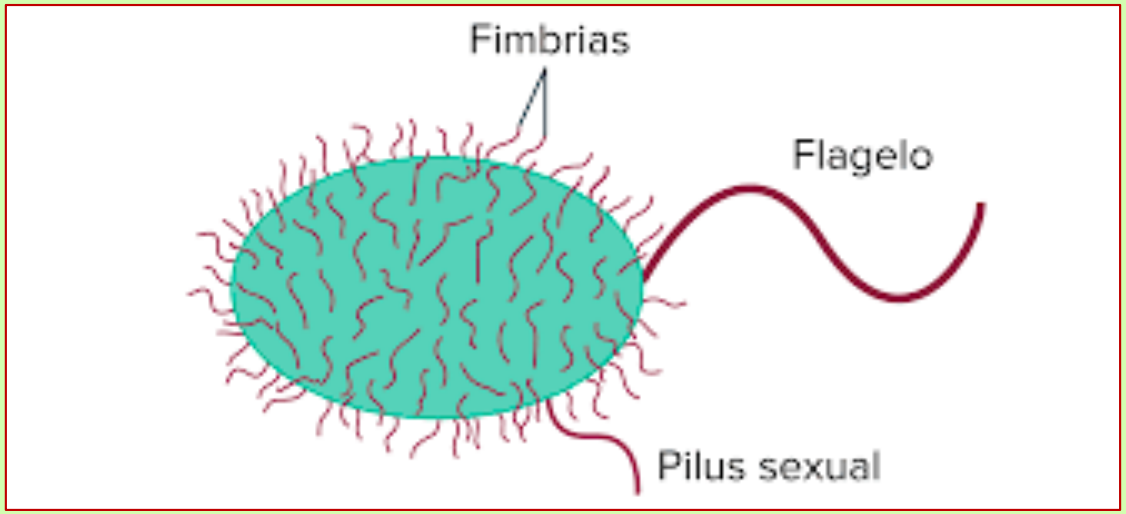
## TINCIÓN DE GRAM:

- Añadir azul violeta y después lugol.
- Agregar mezcla de alcohol y acetona.
- Añadir safranina o fucsina (colorante de contraste).

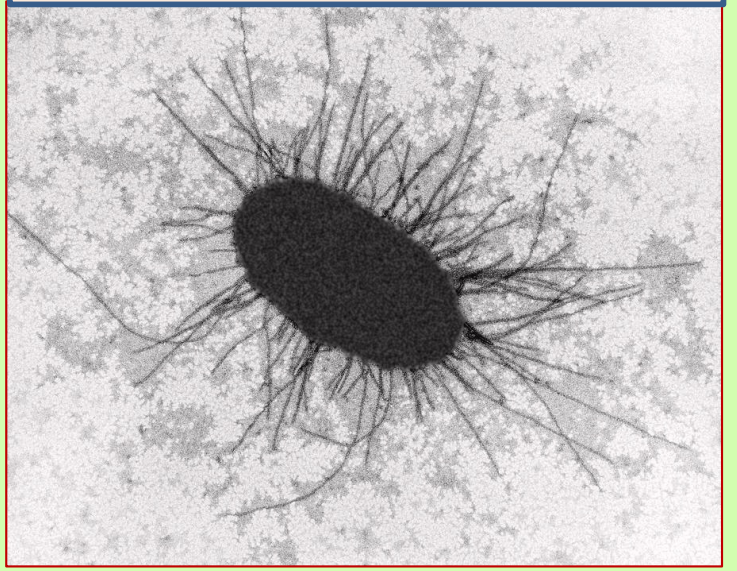


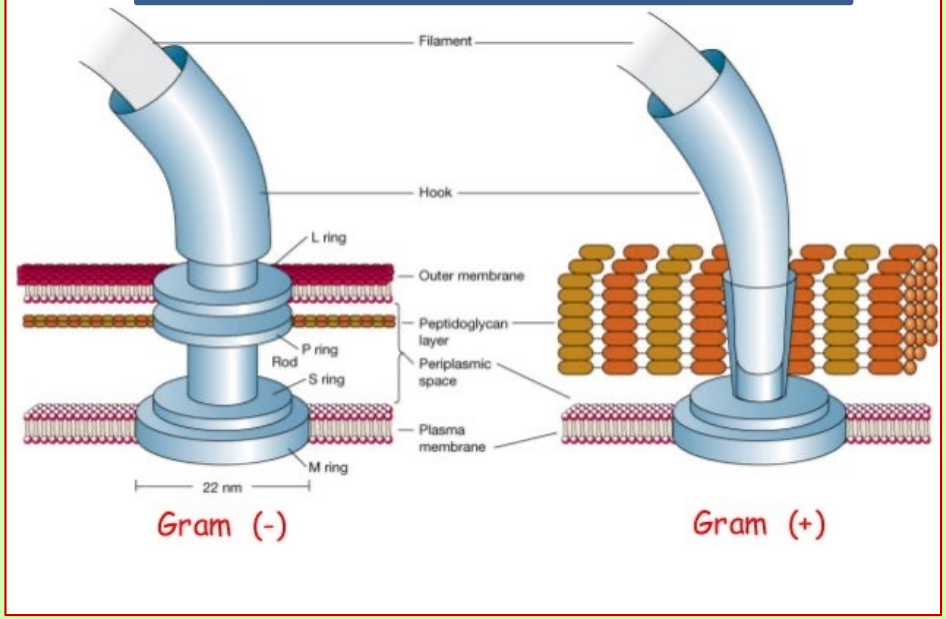
# APÉNDICES BACTERIANOS



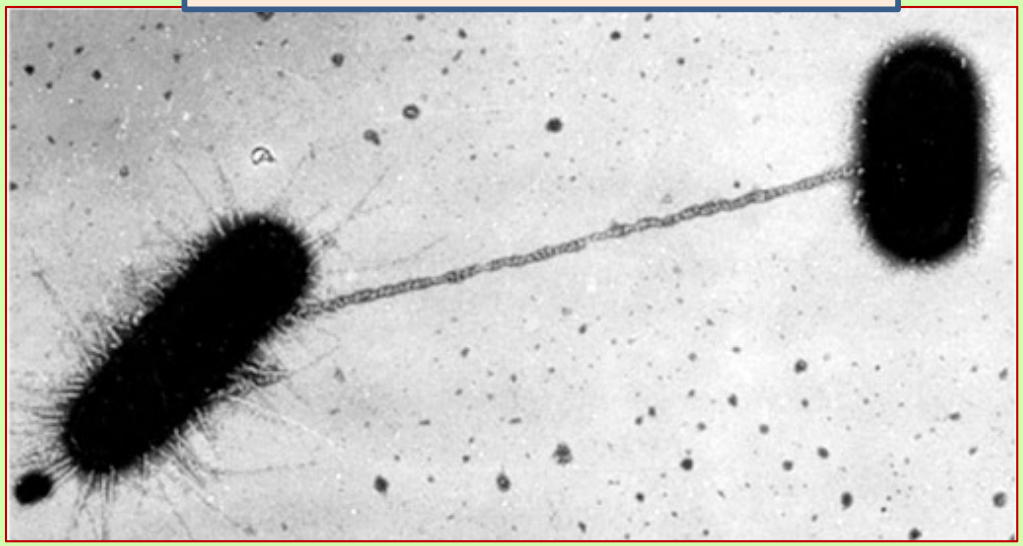

## FIMBRIAS



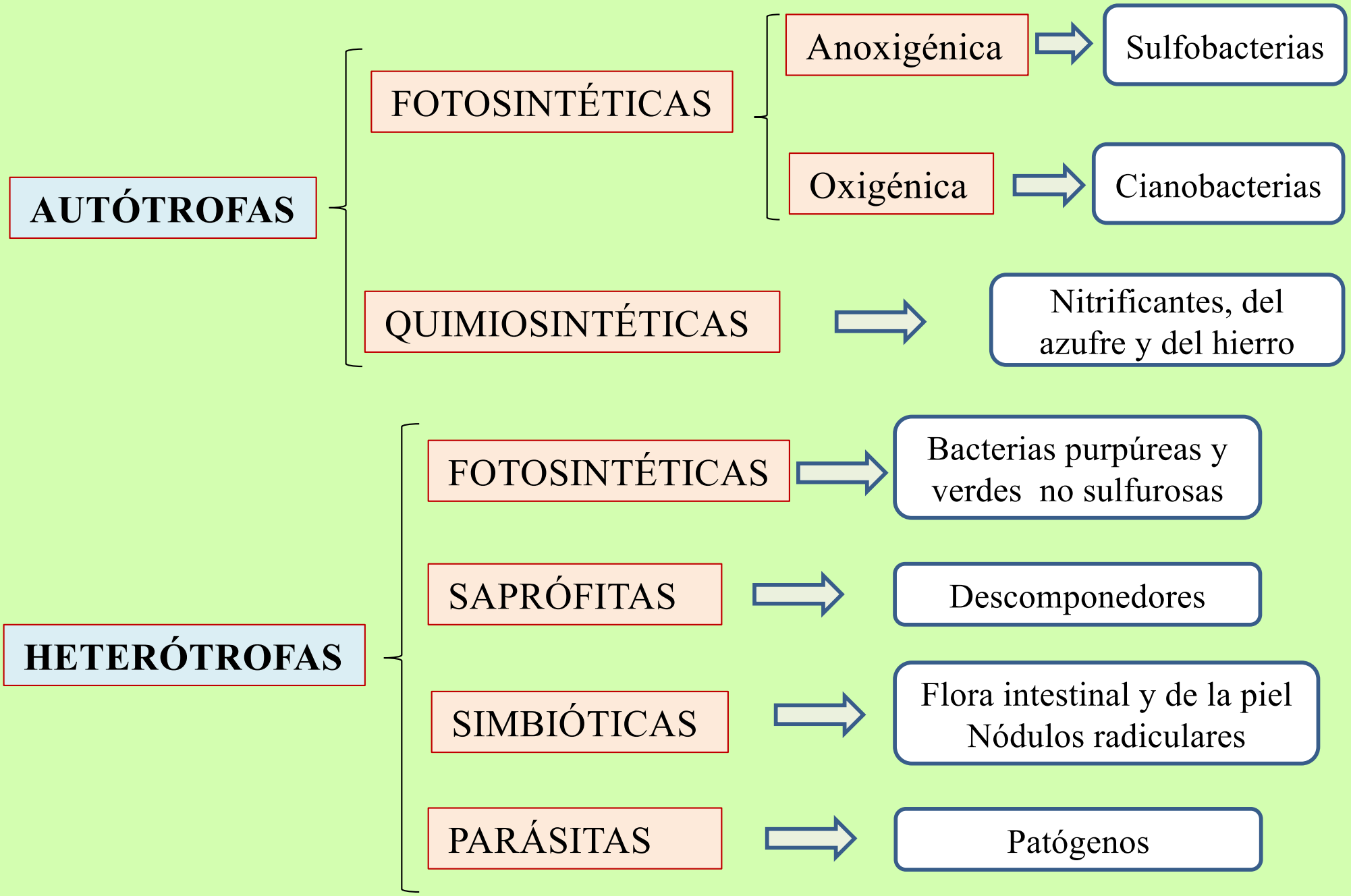
## FLAGELO BACTERIANO




## PELO SEXUAL



# NUTRICIÓN EN LAS BACTERIAS



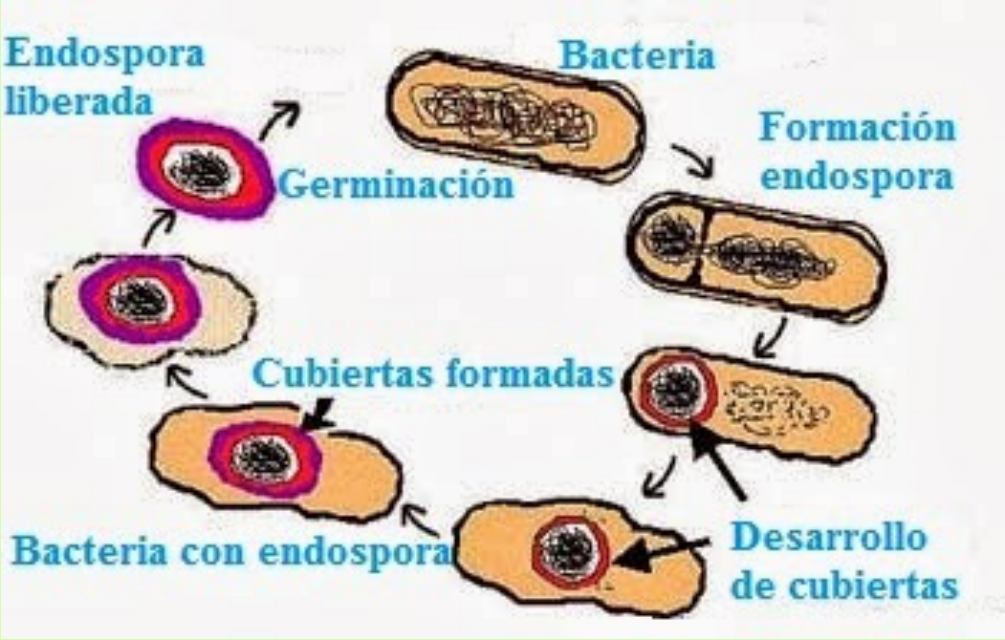
# RELACIÓN EN LAS BACTERIAS

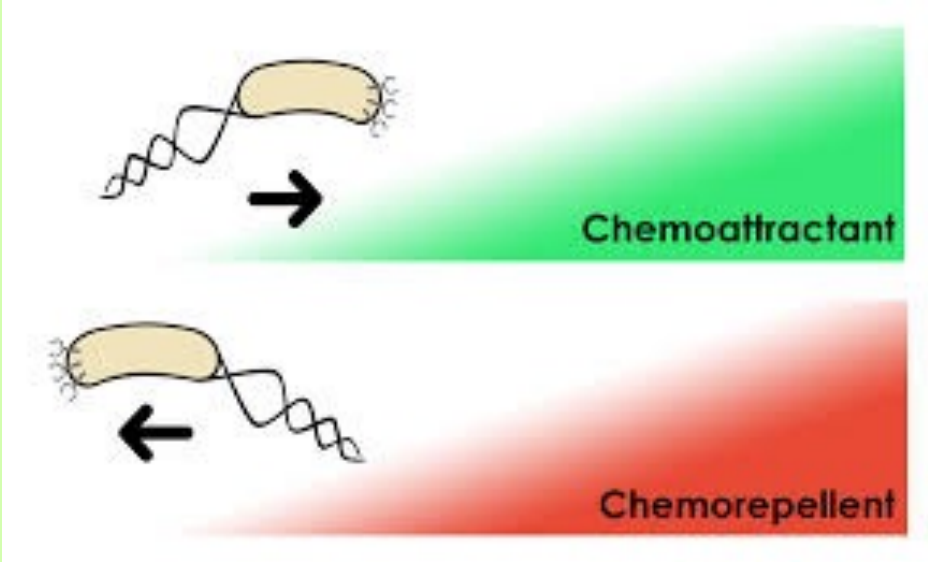
## ESTÍMULOS

- Cambios de pH, temperatura o salinidad.
- Presencia de luz, nutrientes, $O_2$

## RESPUESTAS

- Quimiotactismos y fototactismos.
- Formación de esporas de resistencia (endosporas).



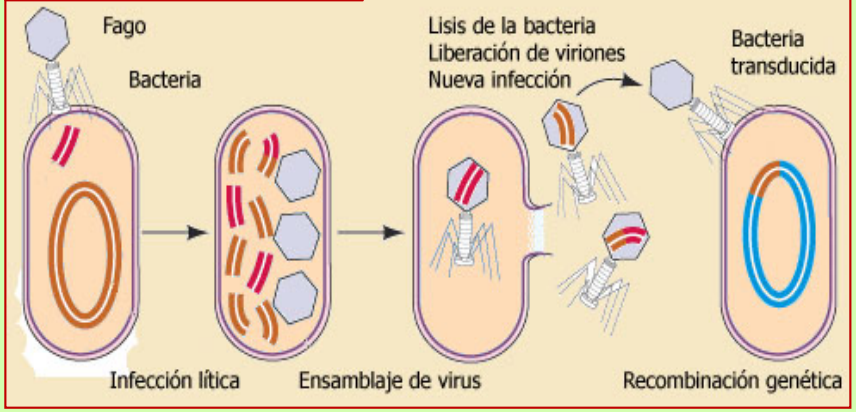



# REPRODUCCIÓN ASEXUAL DE LAS BACTERIAS

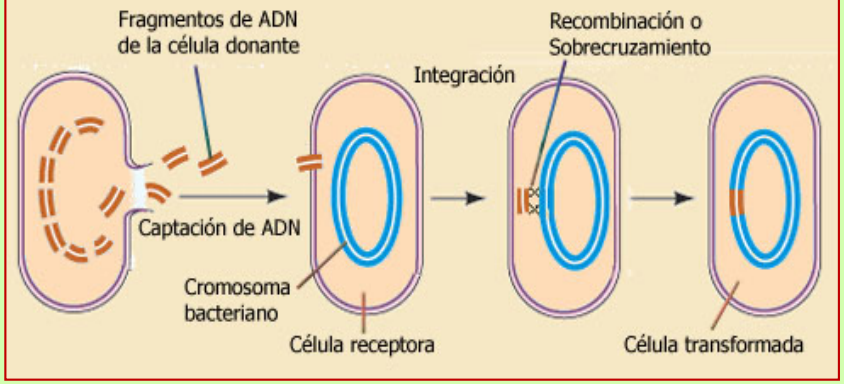
**BIPARTICIÓN O FISIÓN BINARIA**

# MECANISMOS PARASEXUALES EN LAS BACTERIAS

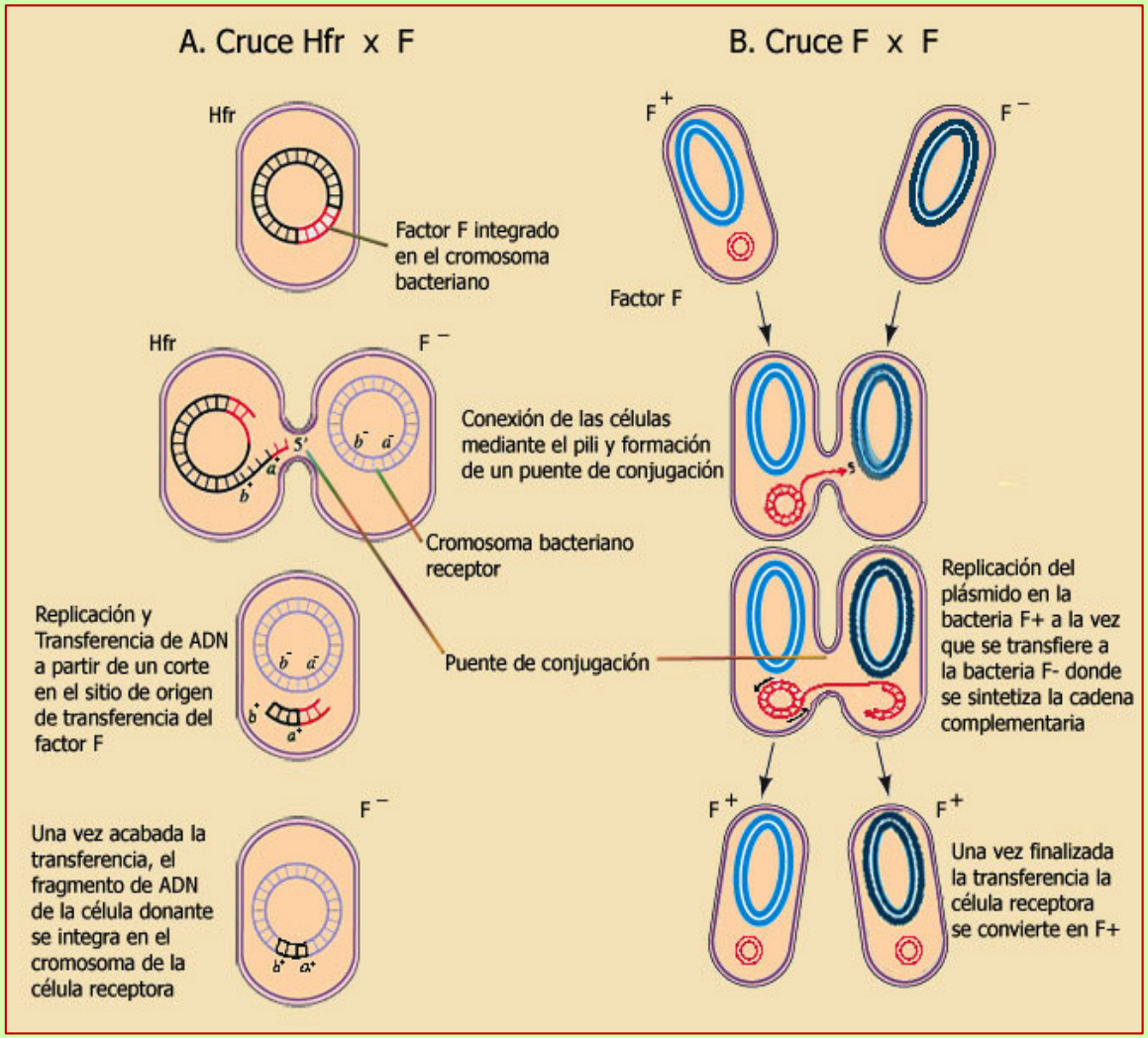
## Transducción




## Transformación

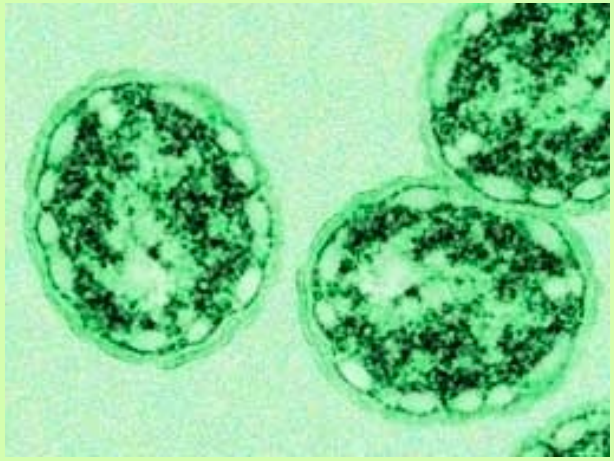



## Conjugación

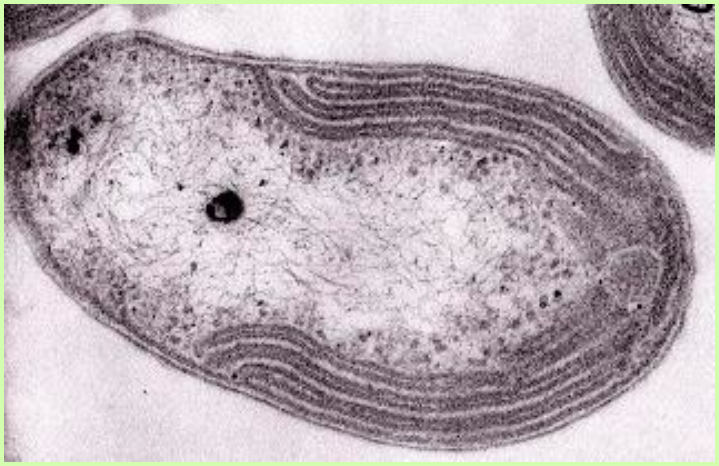


# CLASIFICACIÓN DE LAS EUBACTERIAS

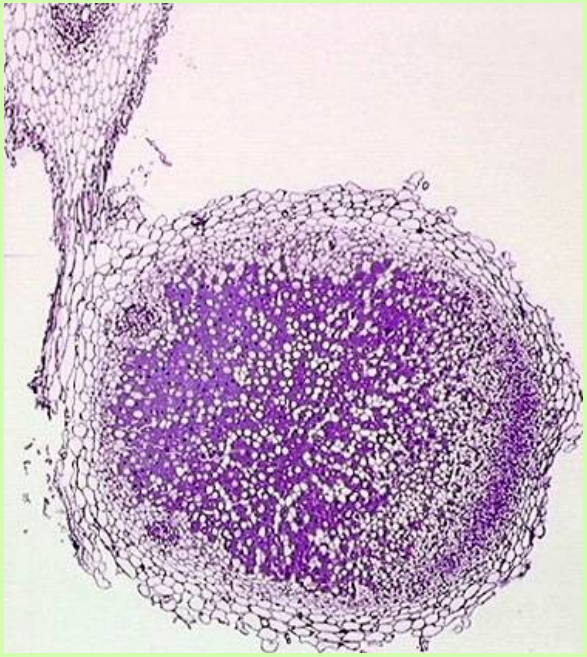
Cianobacterias



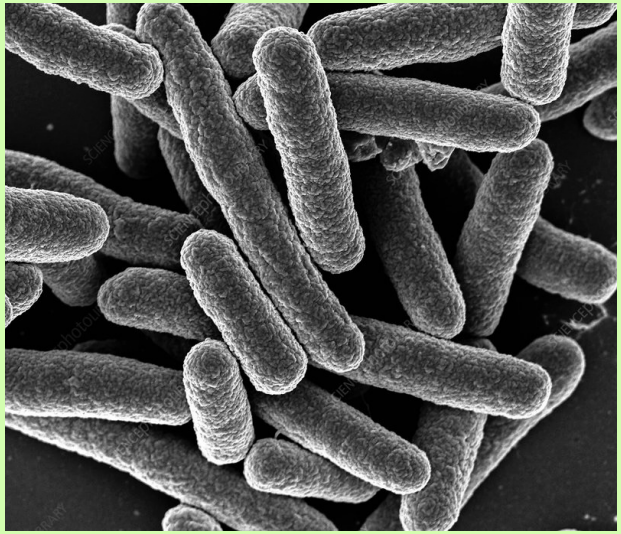
Sulfobacterias verdes



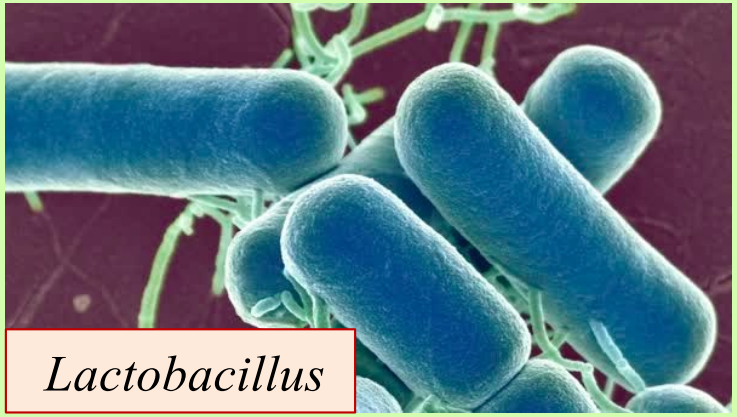
Bacterias nitrificantes (*Nitrobacter)*



Bacterias fijadoras del $N_2$ (*Rhyzobium*)

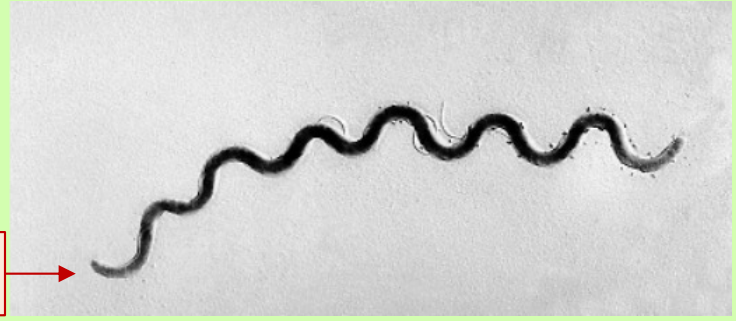


Bacterias entéricas (*Escherichia coli*)



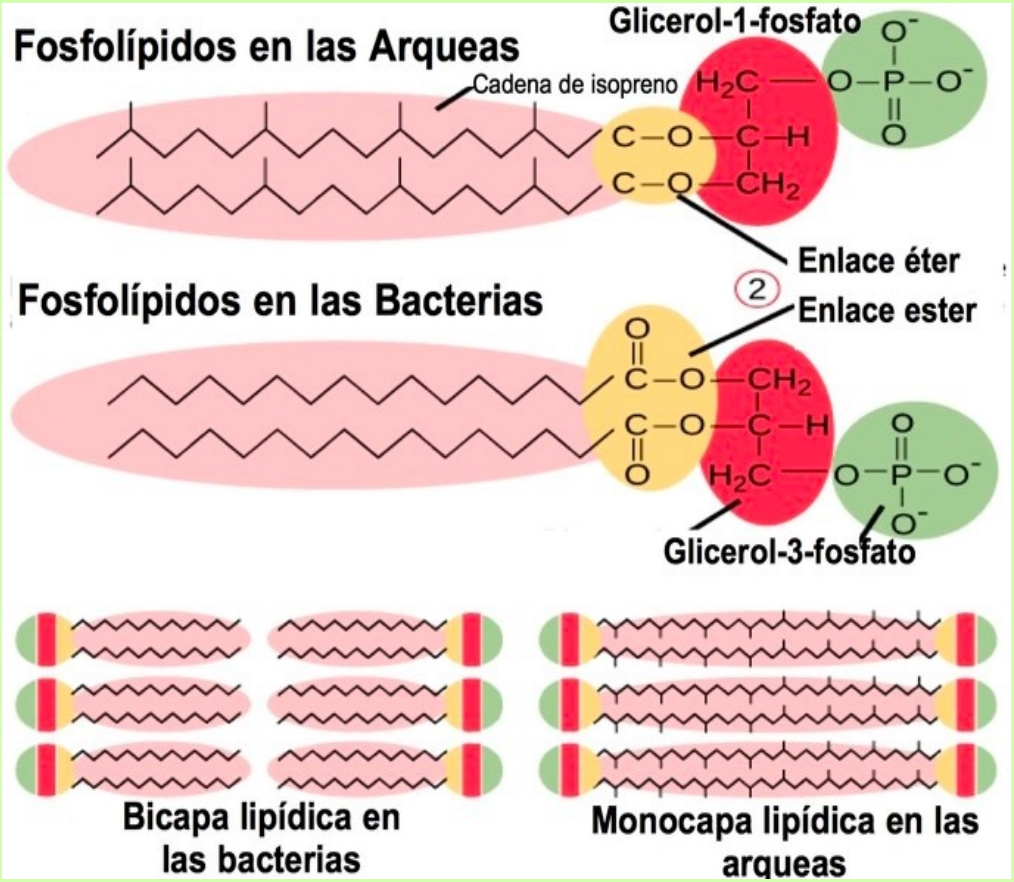
*Lactobacillus*

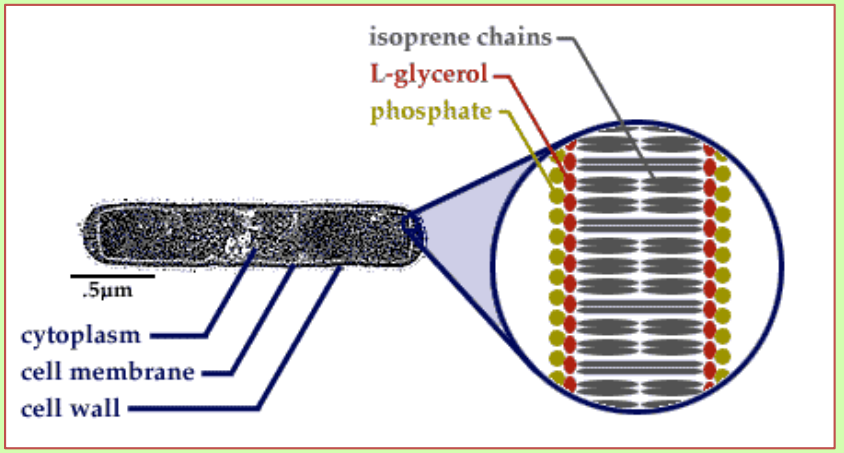
Espiroquetas (*Treponema*)



# LAS ARQUEOBACTERIAS

1. Membrana plasmática sin AG.



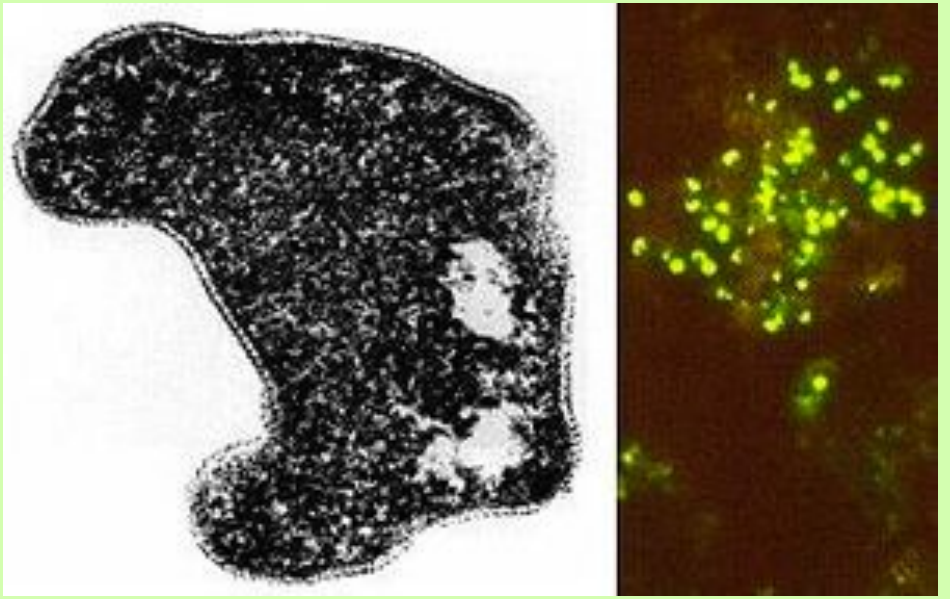




2. Pared de polisacáridos con proteínas.
3. Secuencias únicas en el ARNr

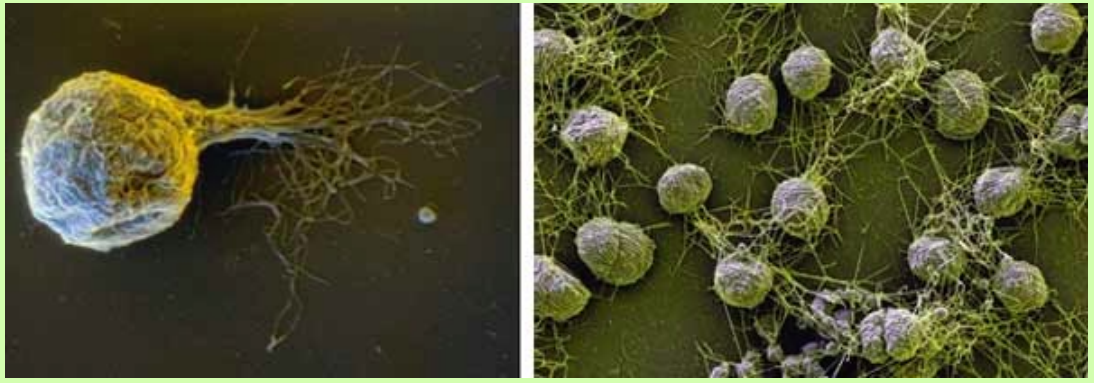
# DIVERSIDAD DE ARQUEOBACTERIAS

- Extremófilos
- Presentes también en suelos y océanos.

Halófilas *Halobacterium salinarium*

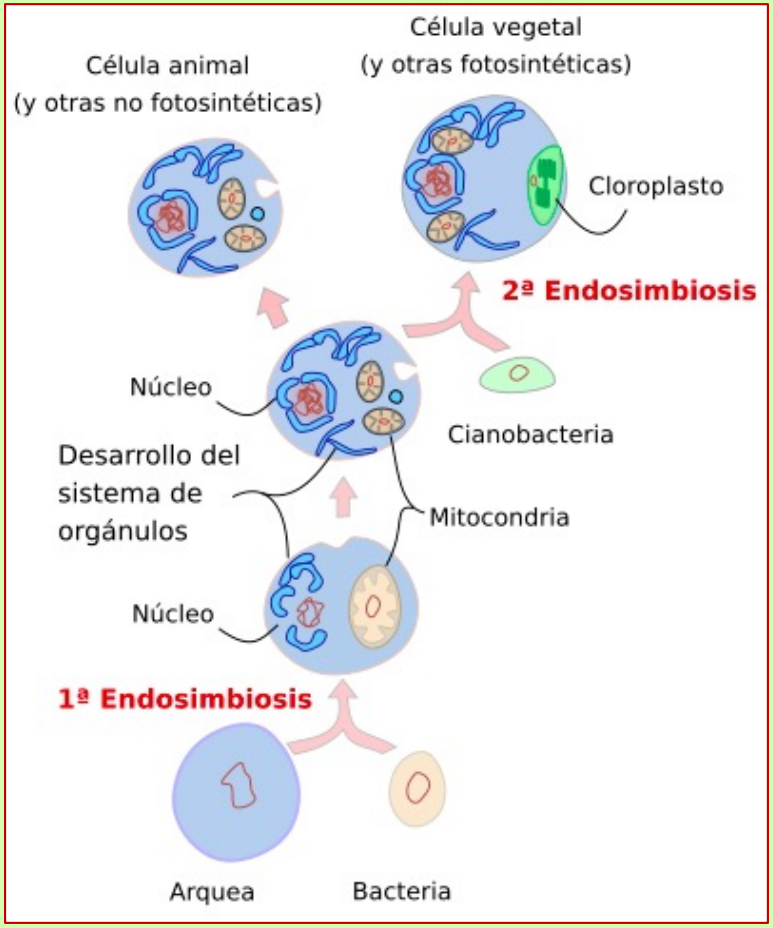


Termófilas: *Sulfolobus acidocaldarius*

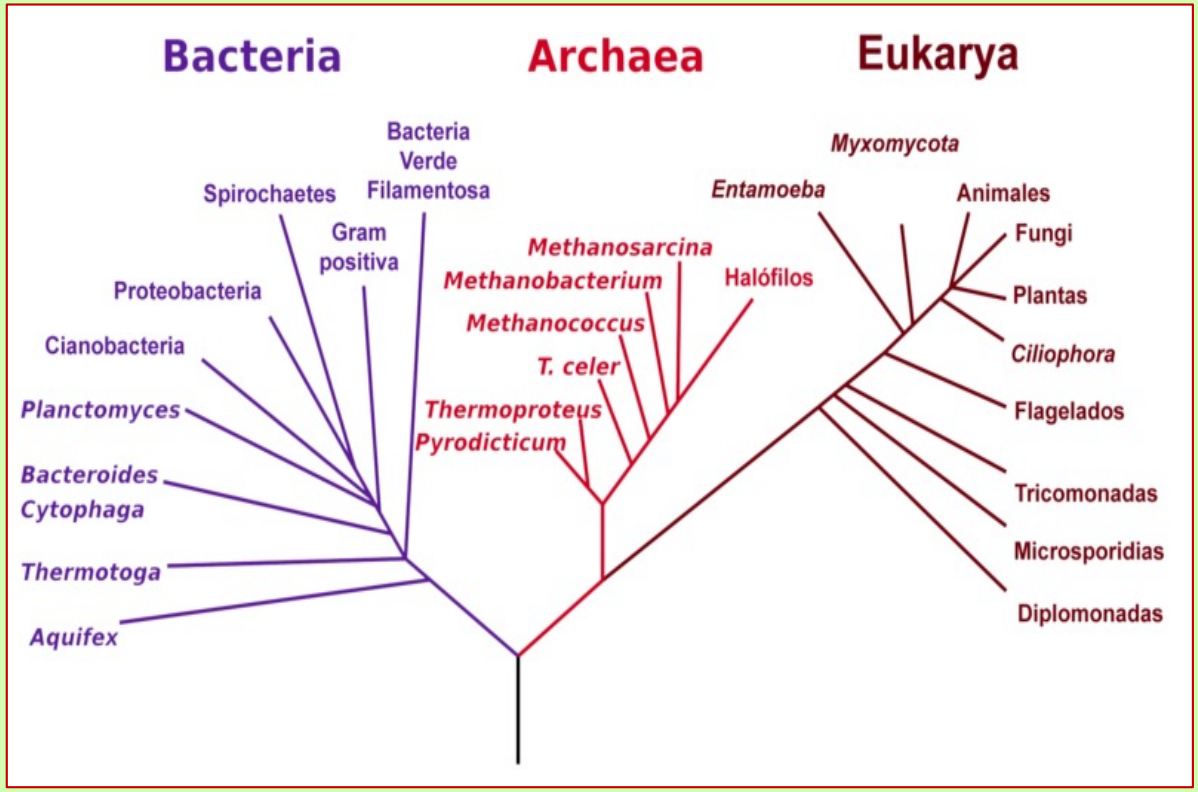


Metanógenas: *Methanocaldococcus villosus*

# ARQUEOBACTERIAS Y EUCARIOTAS




Teoría endosimbiótica




Filogenia basada en el ARNr