

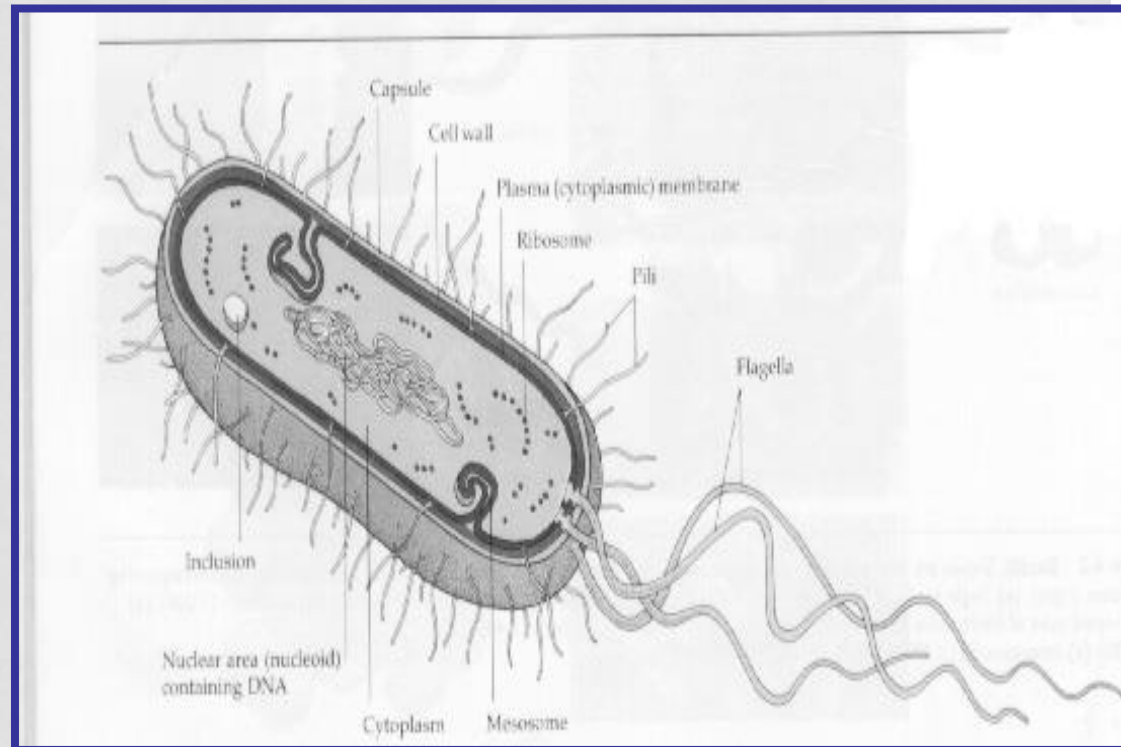
BAKTERID

Algidee Anne Laius
Toimetanud Ülle Irdt

Bakteri ehitus

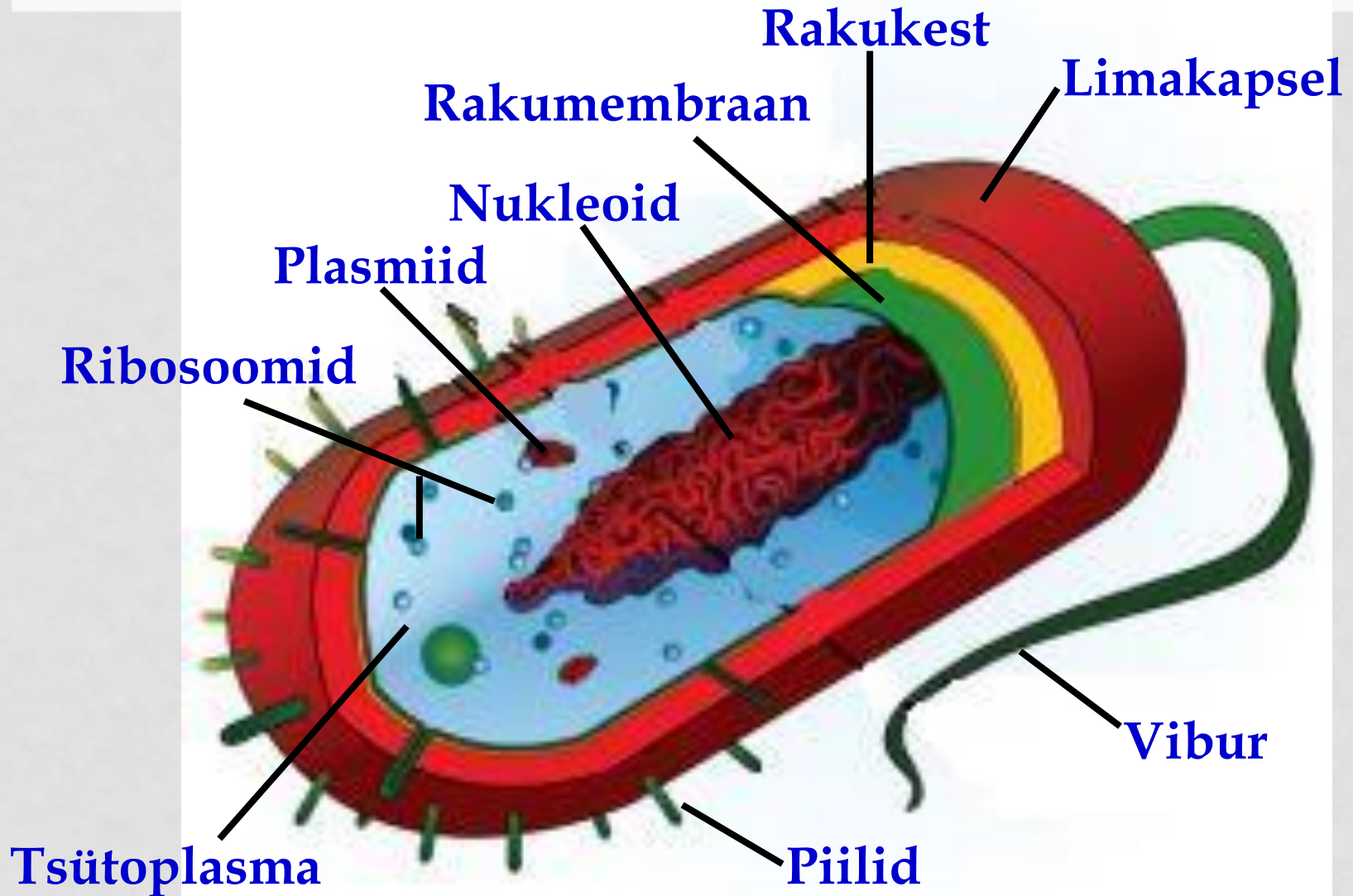
Eeltuumsed e prokarüoodid:

- Puudub tuum
- Puuduvad teised membraansed organellid
- Inimesel 10^{12} rakku ja 10x rohkem baktereid!



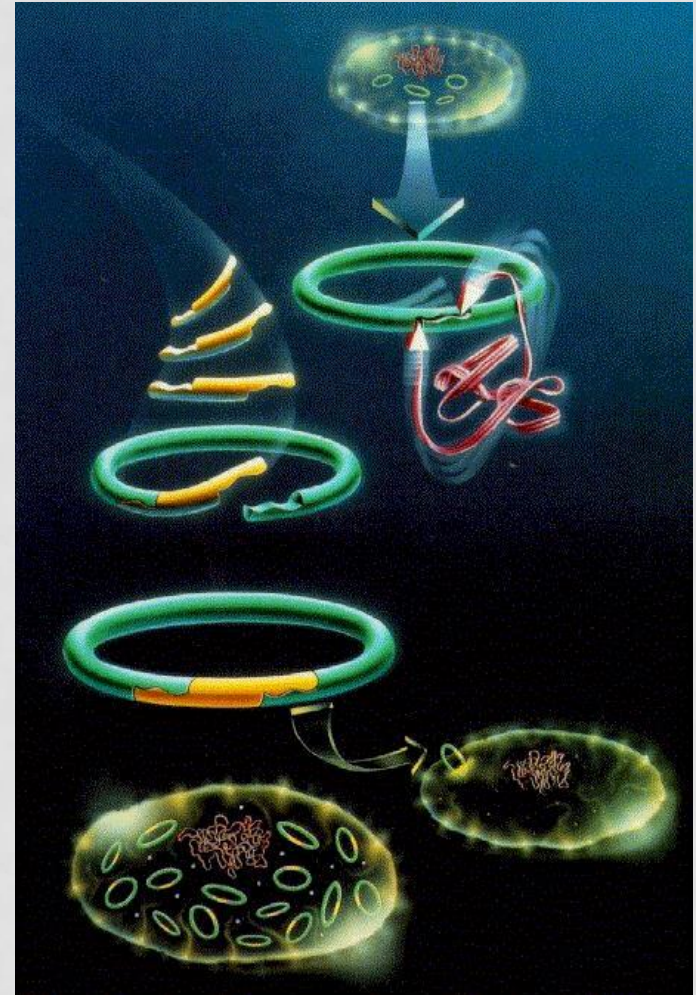
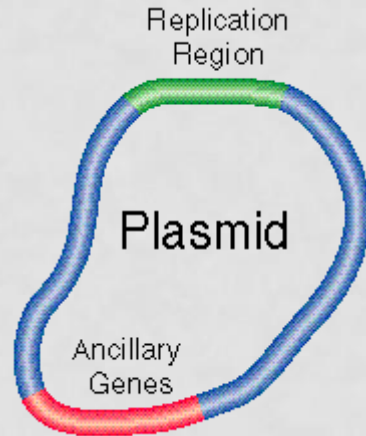
<http://www.youtube.com/watch?v=6-chXVgu8Z0>

BAKTERIRAKU EHITUS



Bakteri plasmiidid

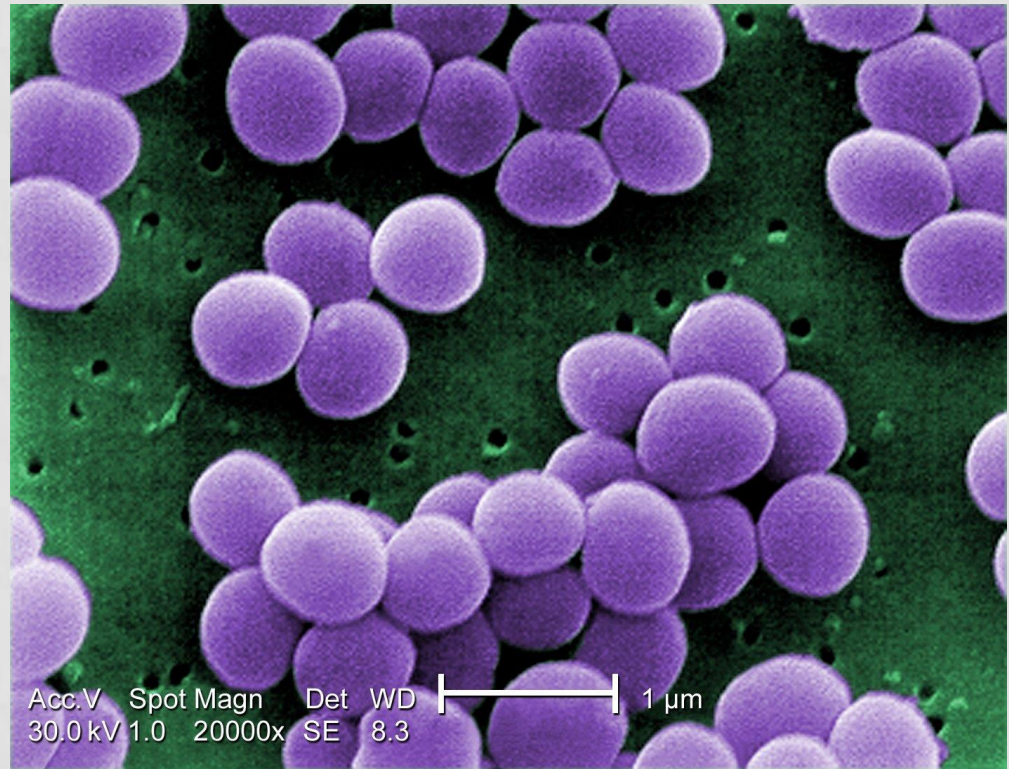
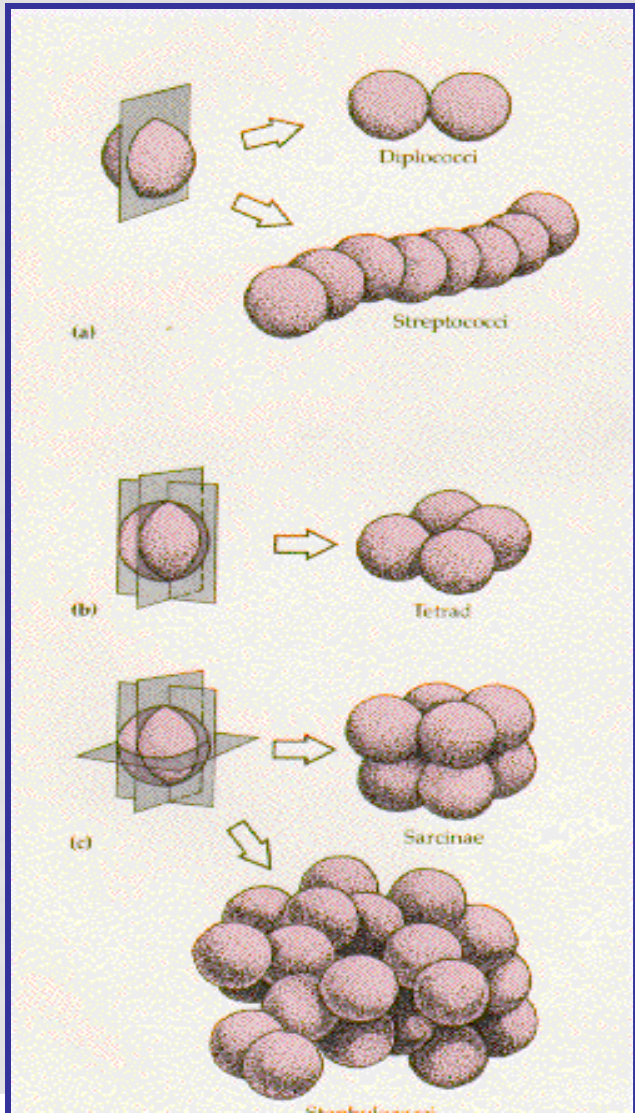
„Abikromosoomid“
ebasoodsate
tingimuste
üleelamiseks



Plasmiidide kloonimine

Bakterite kuju

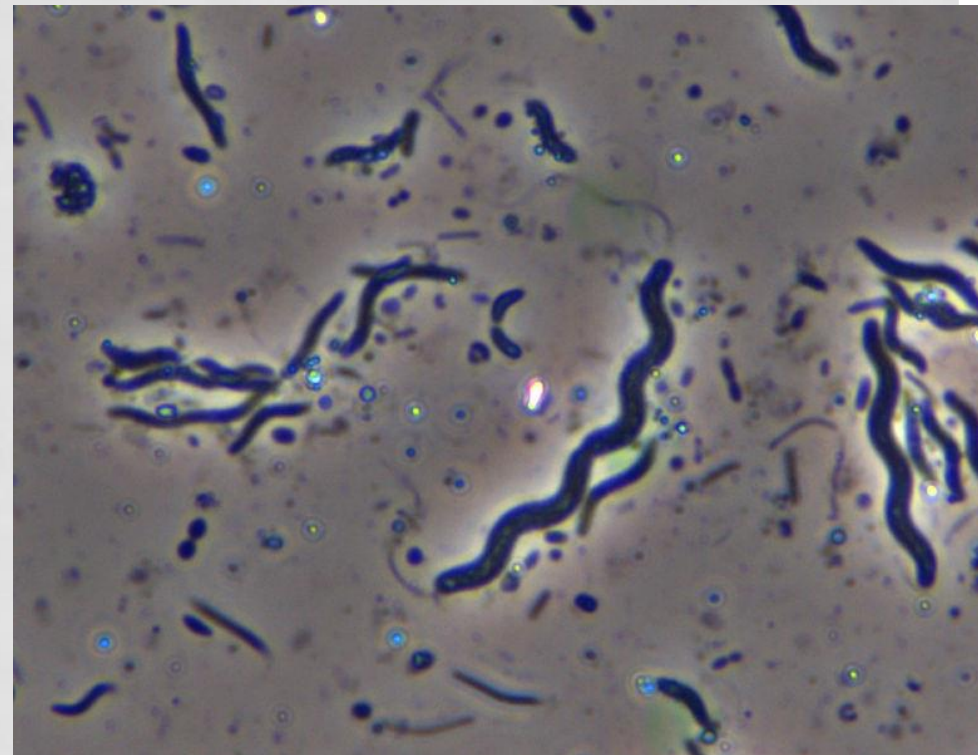
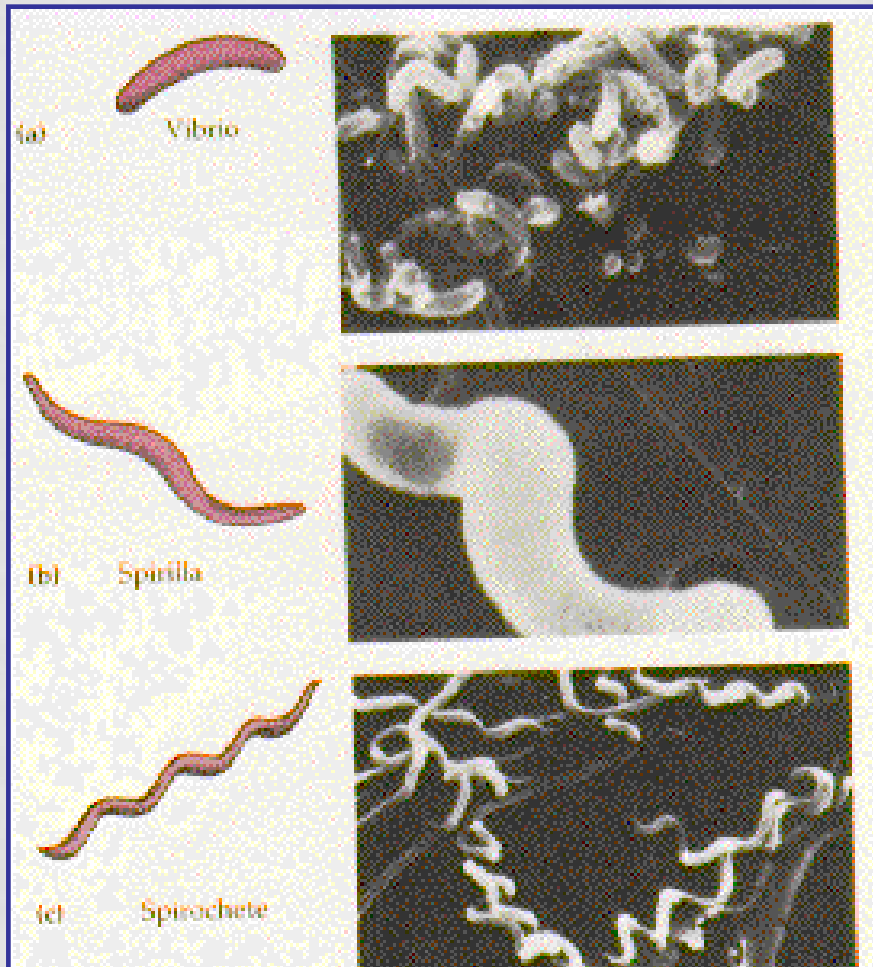
Kerabakterid ehk kokid



https://tl.wikipedia.org/wiki/Talaksan:Staphylococcus_aureus_VISA_2.jpg

Bakterite kuju

Spiraalsed bakterid ehk spirillid



[https://de.m.wikipedia.org/wiki/Dat
ei:Spirillen.jpg](https://de.m.wikipedia.org/wiki/Dat
ei:Spirillen.jpg)

Bakterite kuju

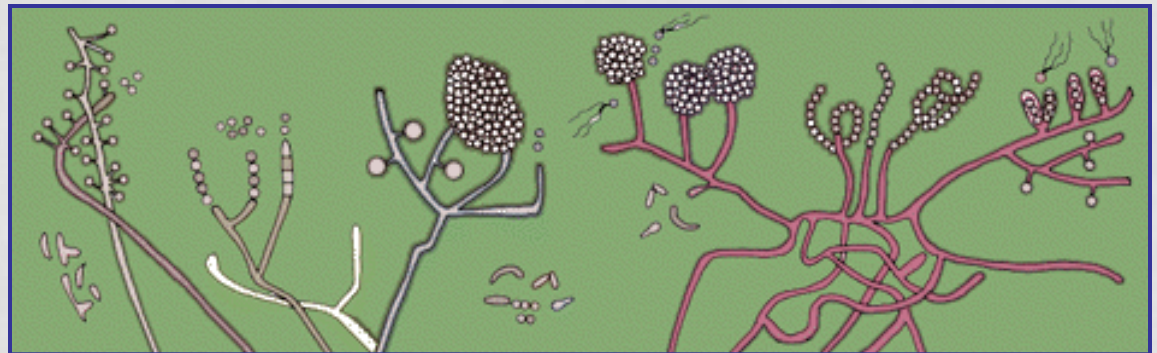
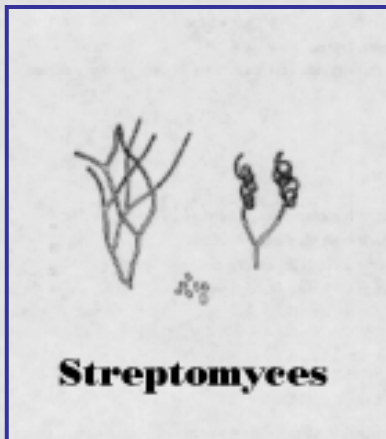
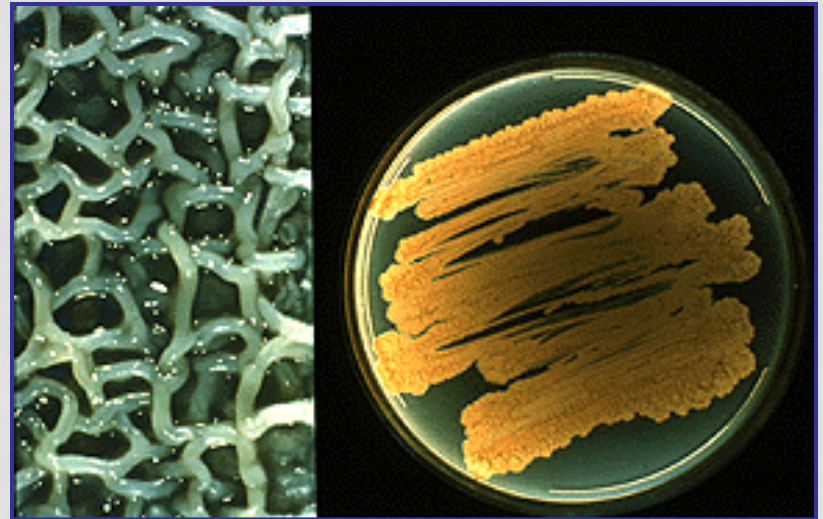
Keeritsbakterid ehk spiroheedid



<http://www.medicalgraphics.de/en/free-pictures/diseases/lyme-disease-bacterium.html>

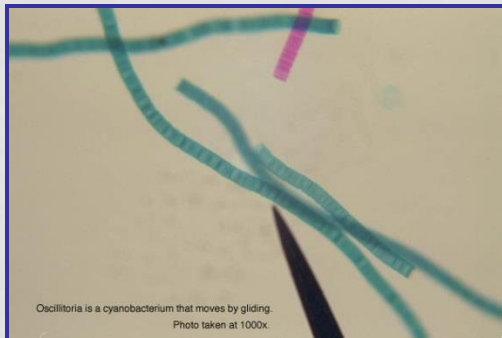
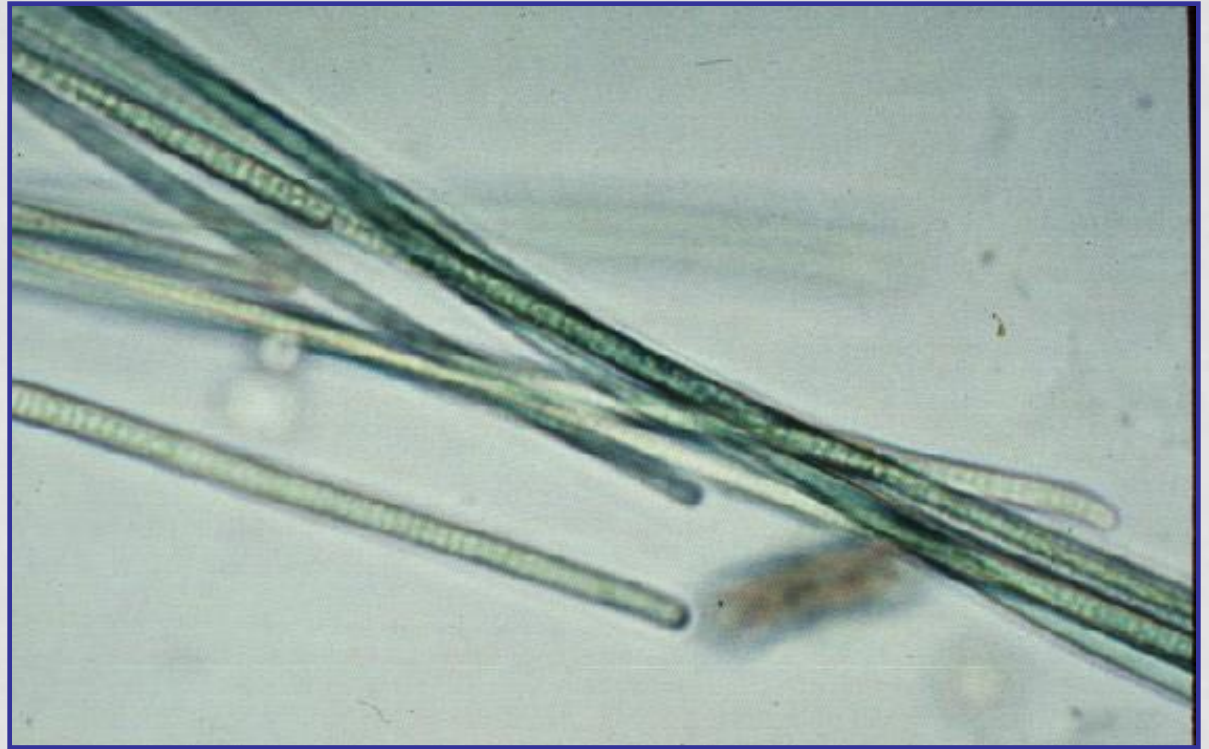
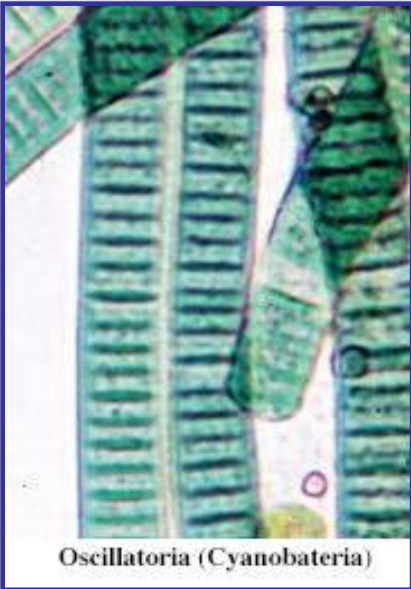
Bakterite kuju

Punguvad ja jätketega bakterid



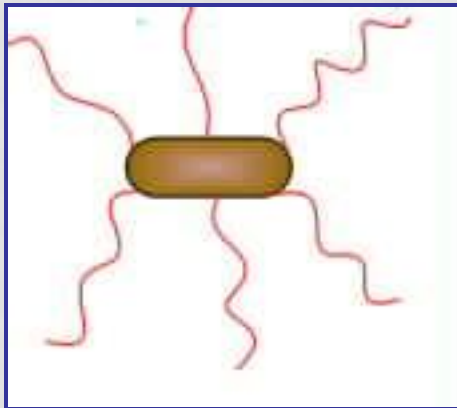
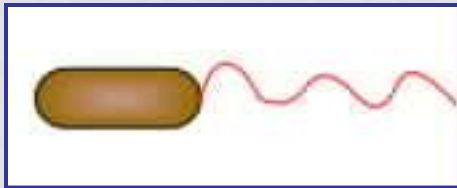
Bakterite kuju

Niitjad bakterid



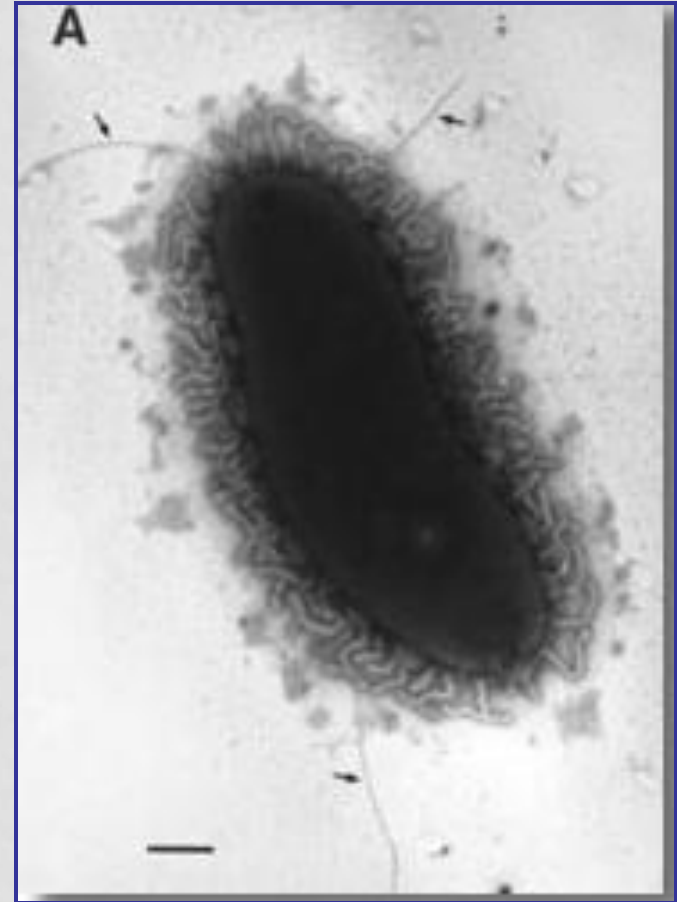
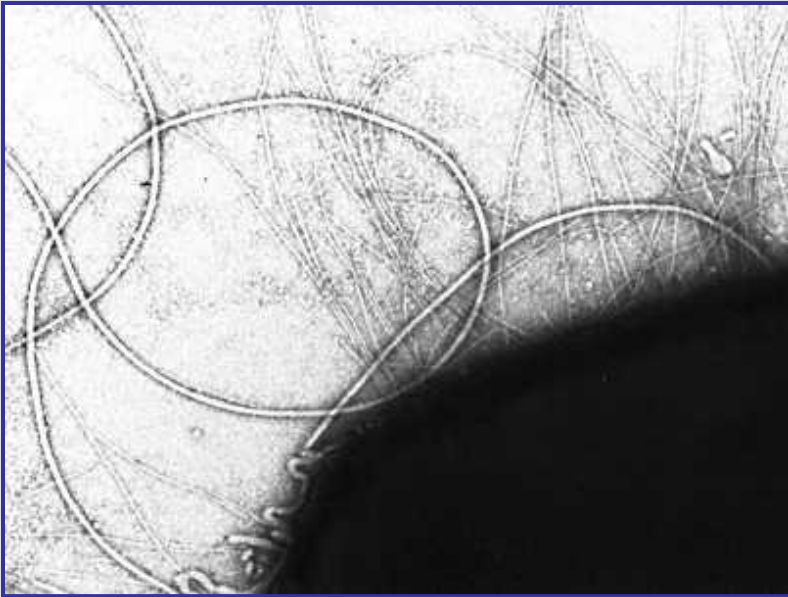
Oscillatoria sp.

Viburid



<http://www.medicalgraphics.de/en/free-pictures/diseases/salmonella-bacteria.html>

Piliid

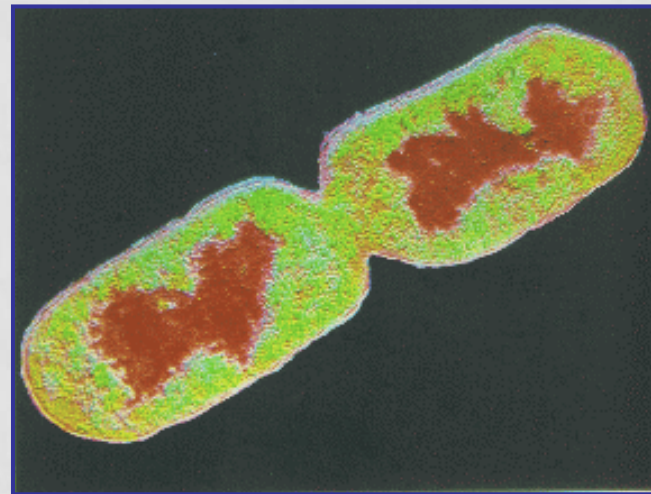
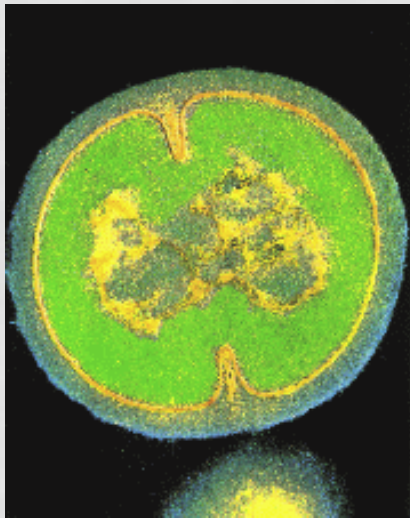


Bakterite paljunemine

Pooldumine

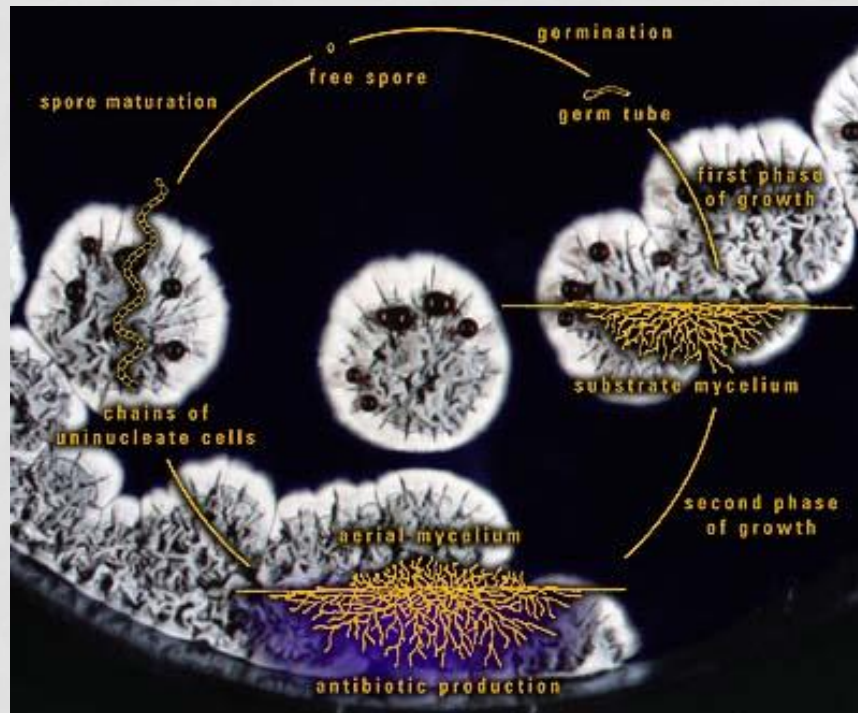
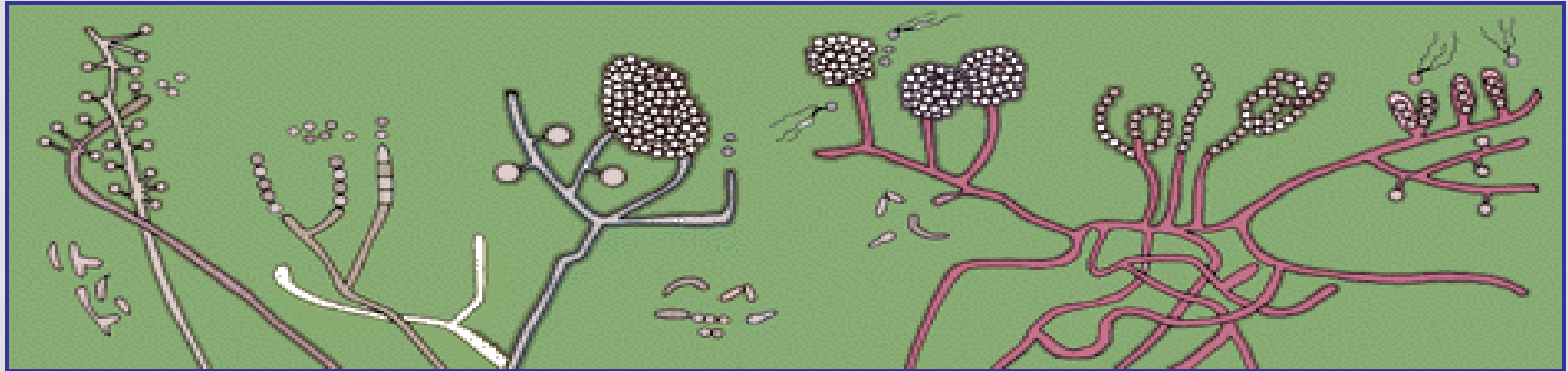


Generatsiooniaeg: Bakterite arvu kahekordistumiseks kuluv aeg



<http://www.youtube.com/watch?v=gEwzDydcIWc>

Bakterite paljunemine



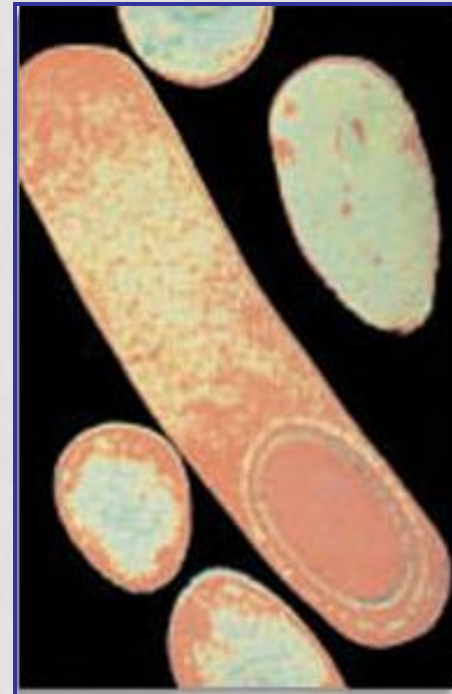
**Lülieoste ehk
koniidide abil —
aktinomütseedid**

Bakterite paljunemine

Pungumine

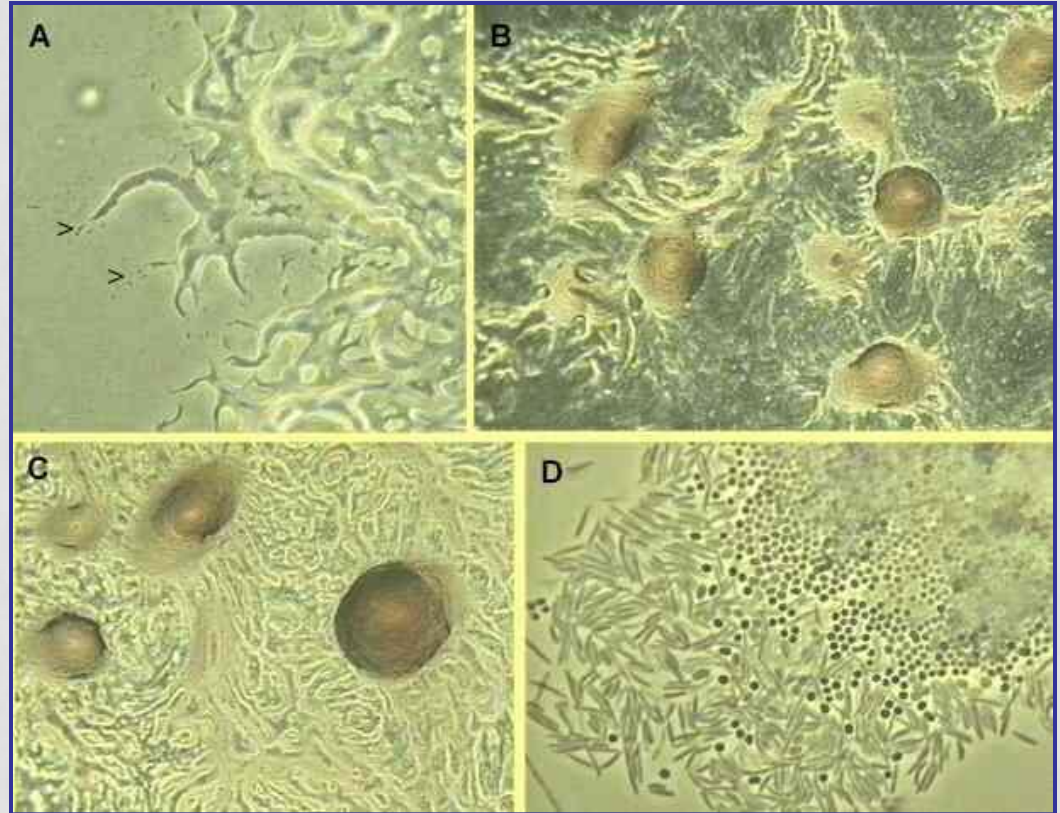
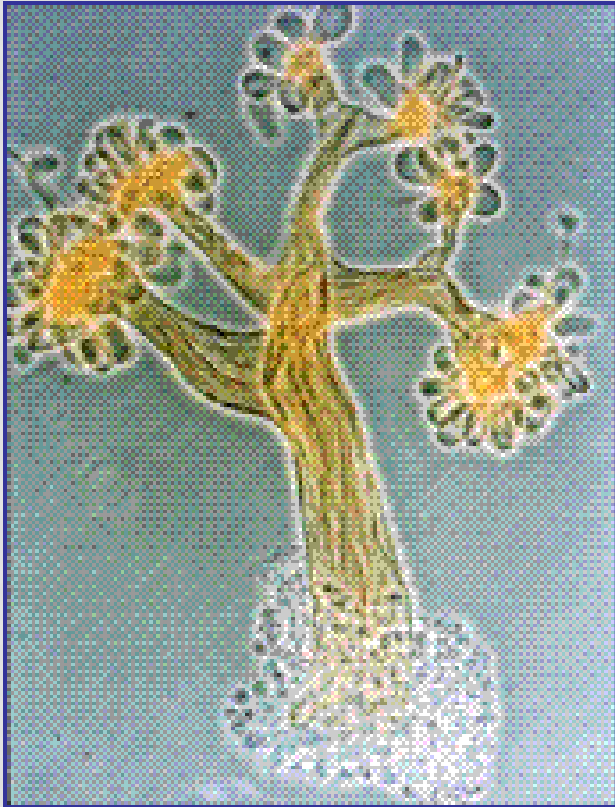


Bakterite sporuleerumine



***Endosporid* — ebasoodsate tingimuste üleelamiseks**

Bakterite viljakehad

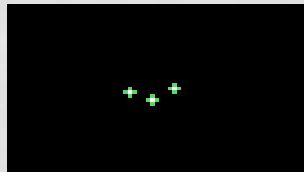


Müksobakterite müksosporid — ebasoodsate tingimuste üleelamiseks

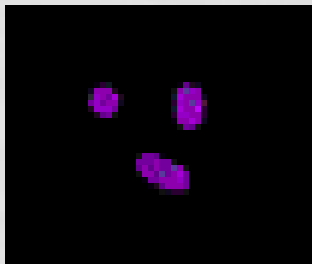
Bakterite suurus



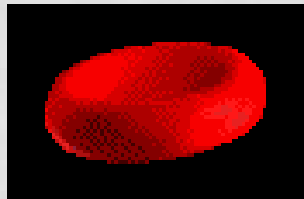
10 mikronit (0,01 mm)



Viirus — 0,05-0,1 mikronit



Bakter — 0,5-1,5 mikronit

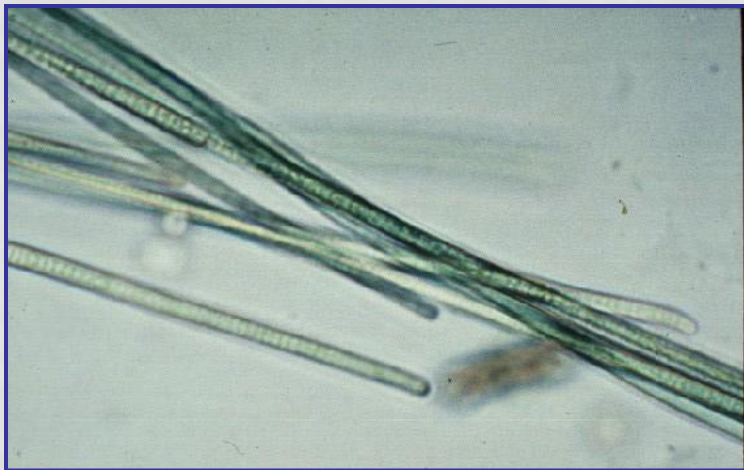


Erütrotsüüt — 5 mikronit

Bakterite suurus



Thiomargarita sp. — 750 x
suurem



Oscillatoria sp. — kuni 12 mm

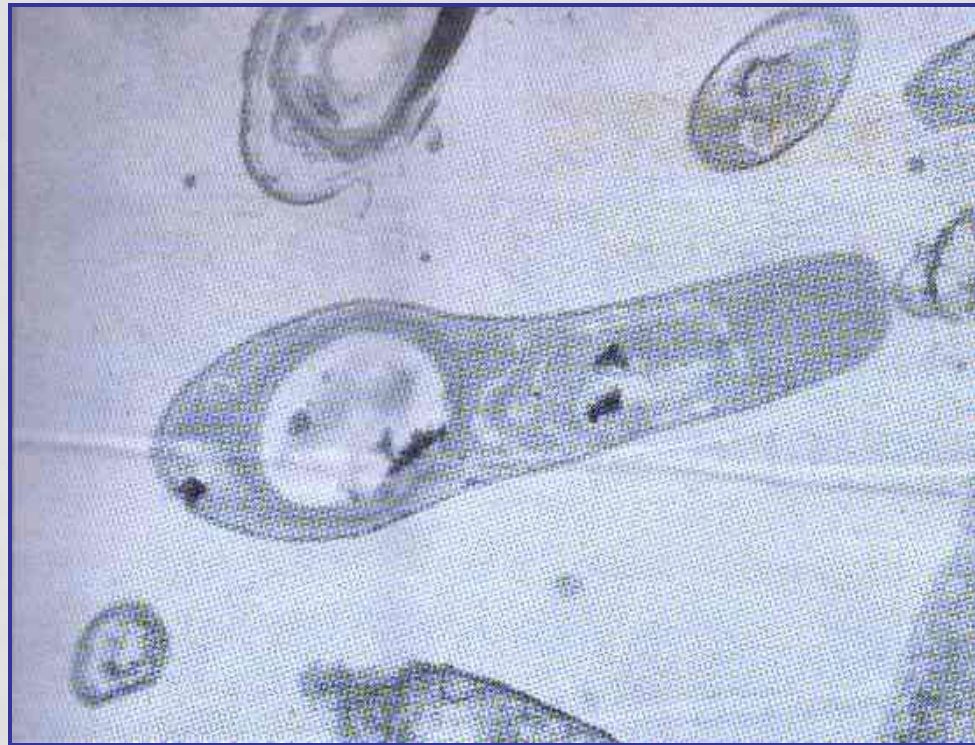
Bakterite vanus



image courtesy AMBERGENE CORPORATION

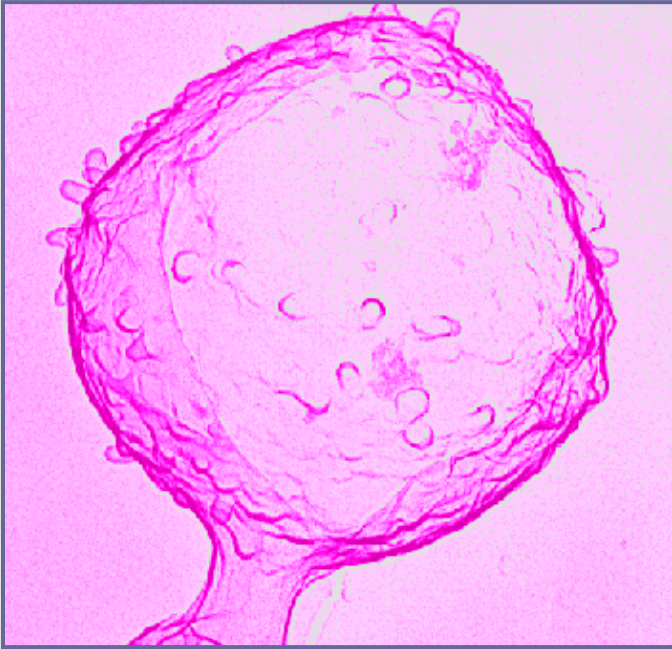
***Coccus* sp. — merevaigus mesilase soolestikust
25 milj. aastat**

Bakterite vanus



***Bacillus permians* — soolakristallis
250 milj. aastat**

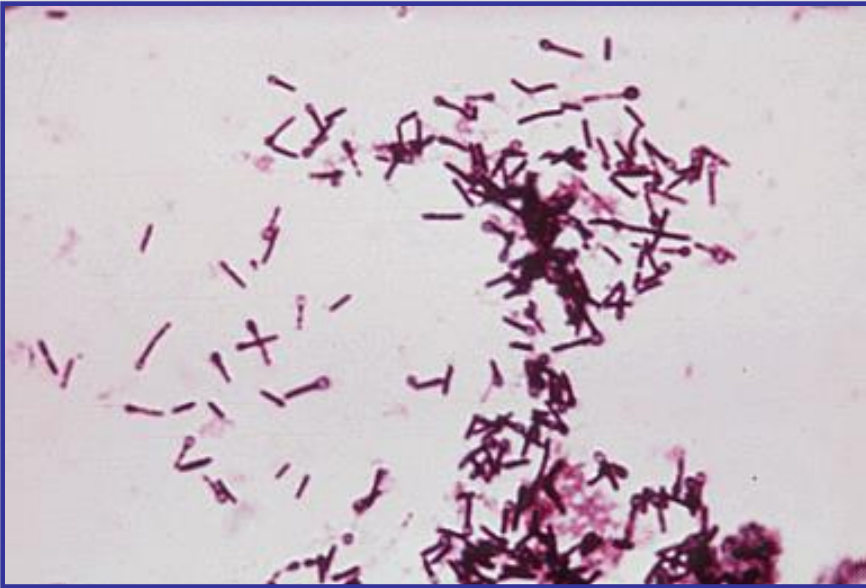
Patogeensed bakterid



***Streptococcus pyogenes* —
lihasööja bakter**

***Streptococcus pneumoniae* —
kopsupõletiku tekitaja**

Patogeensed bakterid



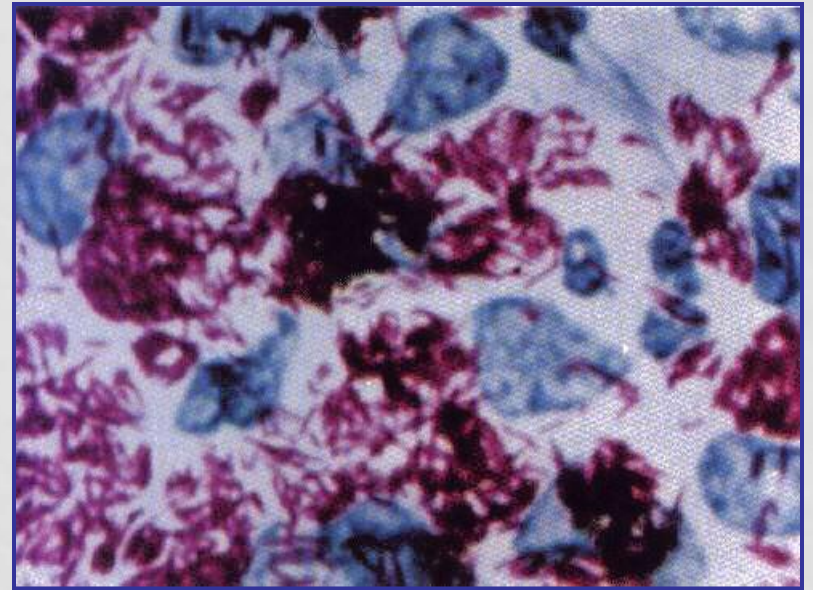
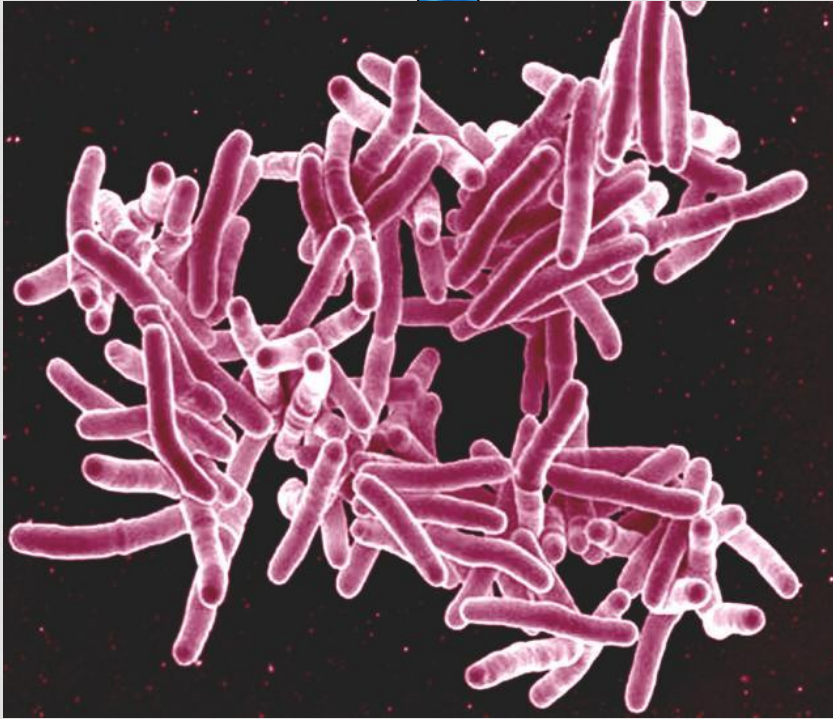
***Clostridium tetani* —
teetanus**



***Clostridium botulinum* —
botulism**

<https://www.flickr.com/photos/sanofi-pasteur/9397238291>

Patogeensed bakterid



***Mycobacterium tuberculosis* —
tuberkuloos**

***Mycobacterium leprae* —
lepra**

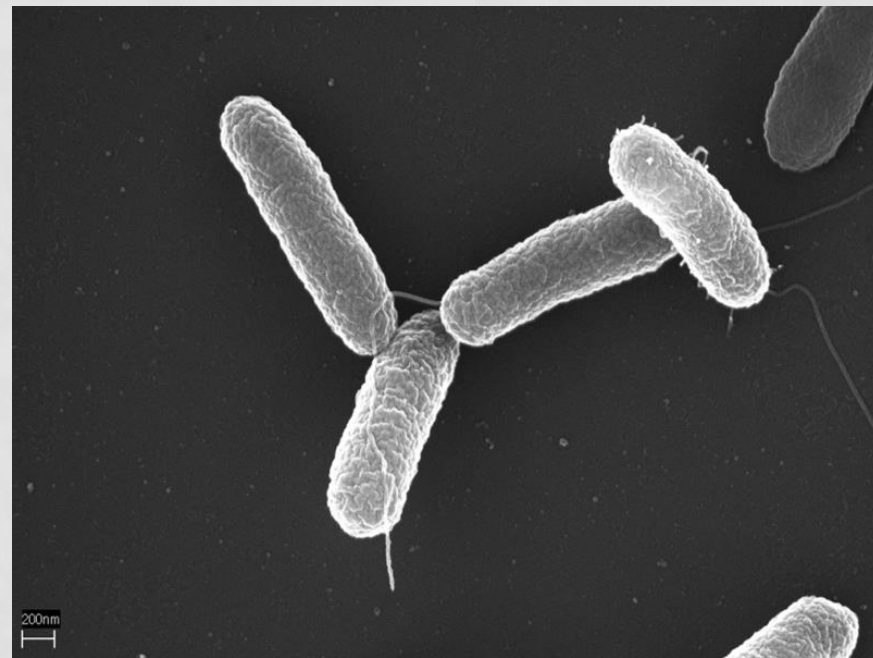
<https://www.flickr.com/photos/niaid/5149398656>

Patogeensed bakterid



***Vibrio cholerae* —
koolera**

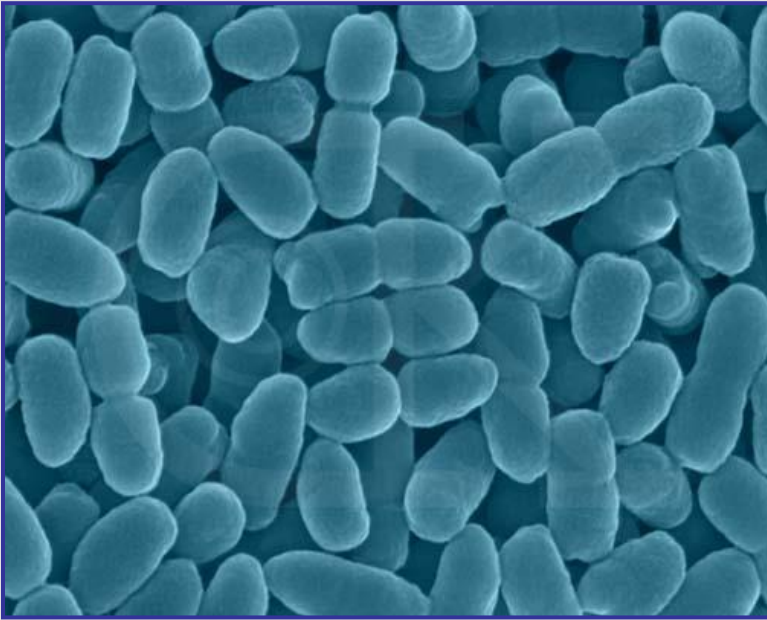
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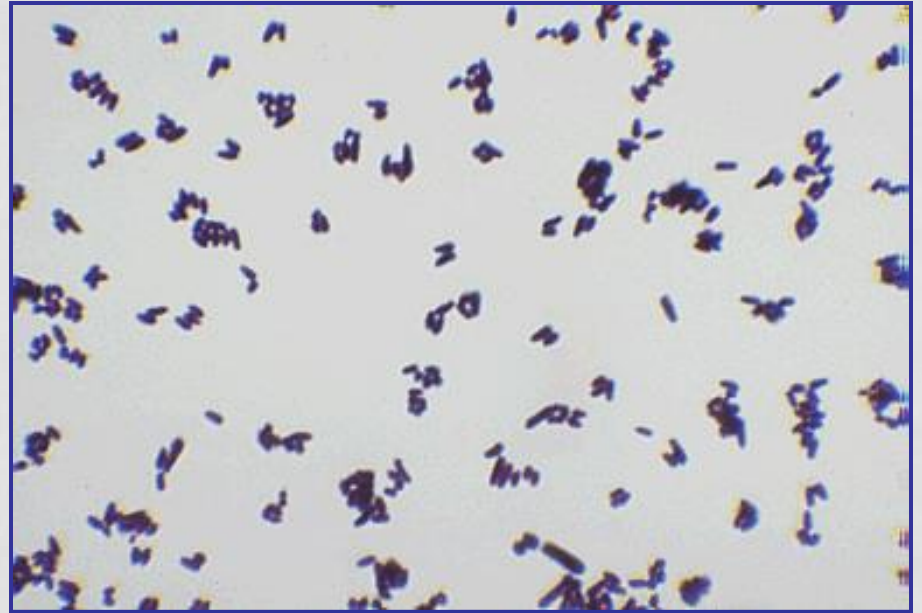
***Salmonella typhi* —
tüüfus**

https://commons.wikimedia.org/wiki/File:Salmonella_typhimurium.png

Patogeensed bakterid

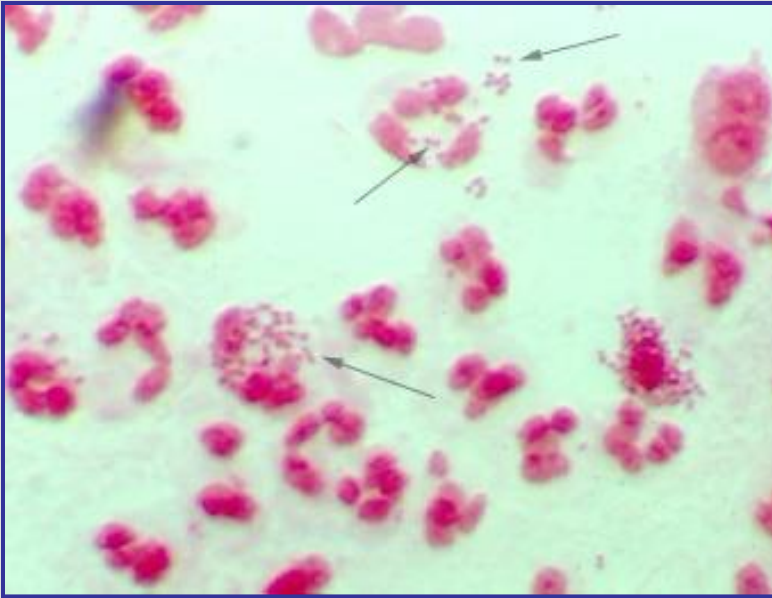


Bordetella pertussis —
läkaköha

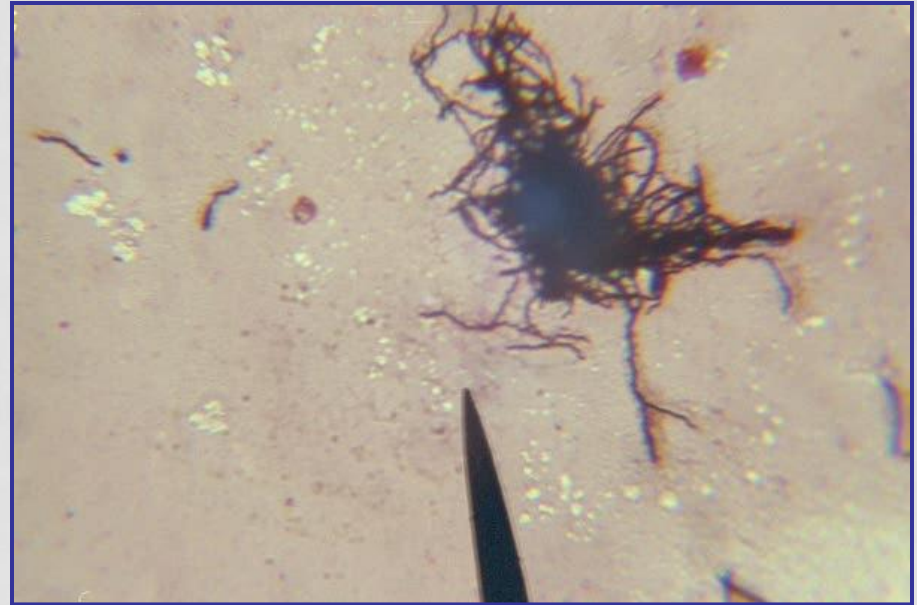


Corynebacterium diphtheriae —
difteeria

Patogeensed bakterid

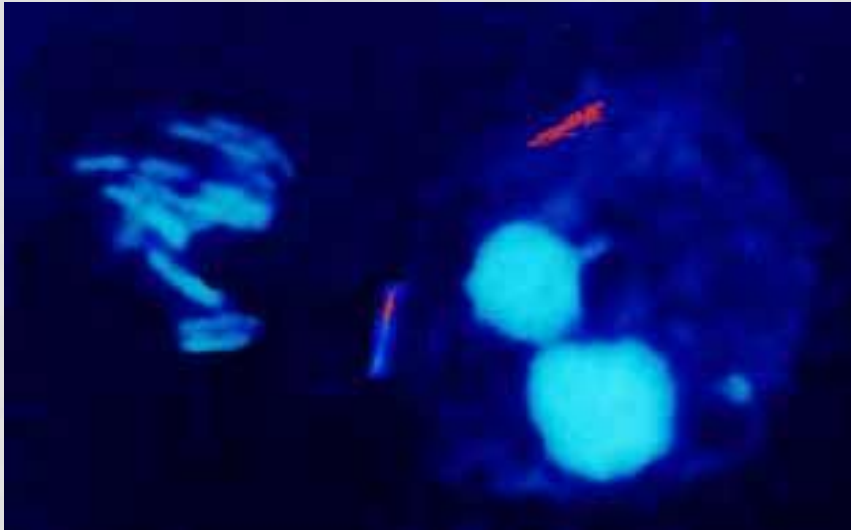


Neisseria gonorrhoeae —
gonorröa



Treponema pallidum —
süüfilis

Patogeensed bakterid

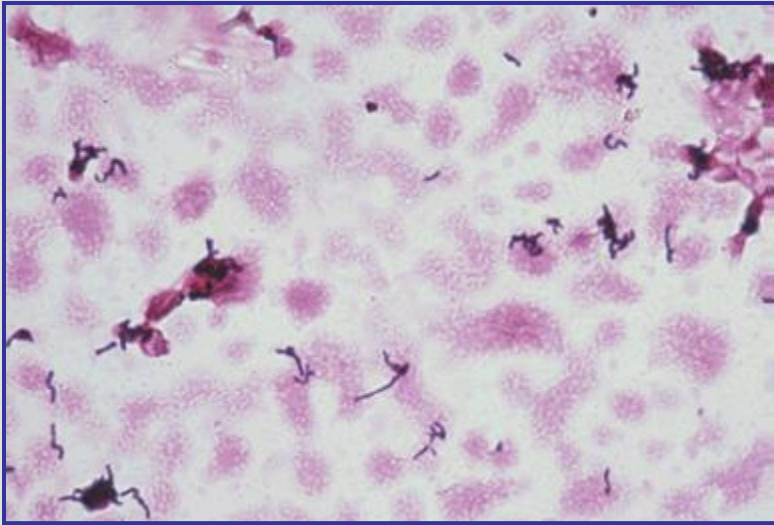


Yersinia pestis —
katk

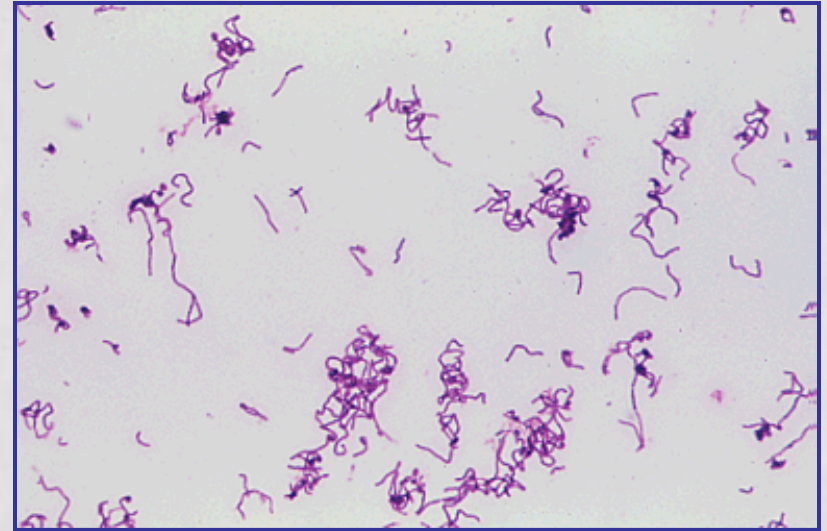


Borrelia burgdorferi —
puukborrelioos

Patogeensed bakterid

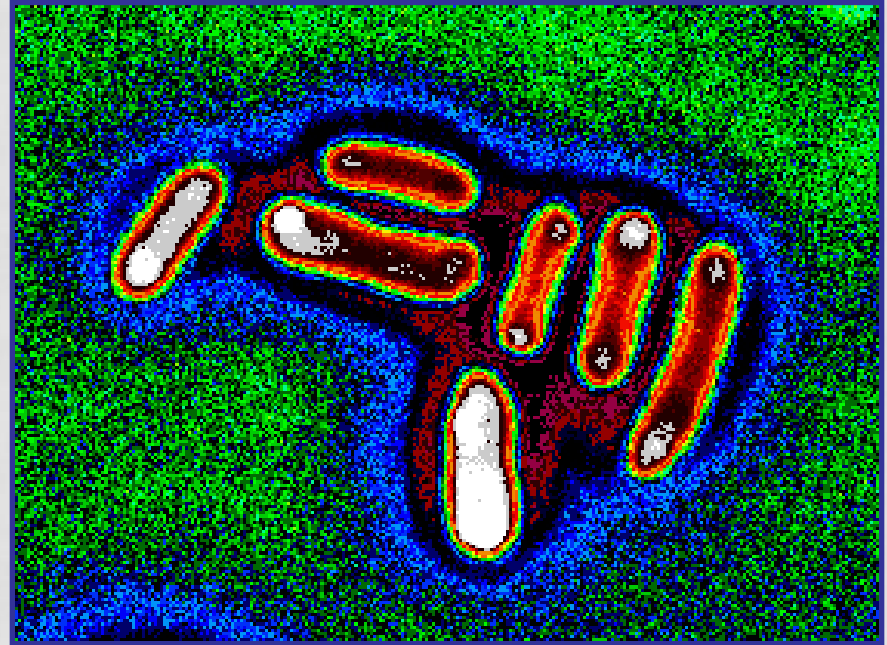


***Propionibacterium acnes* —
akne**



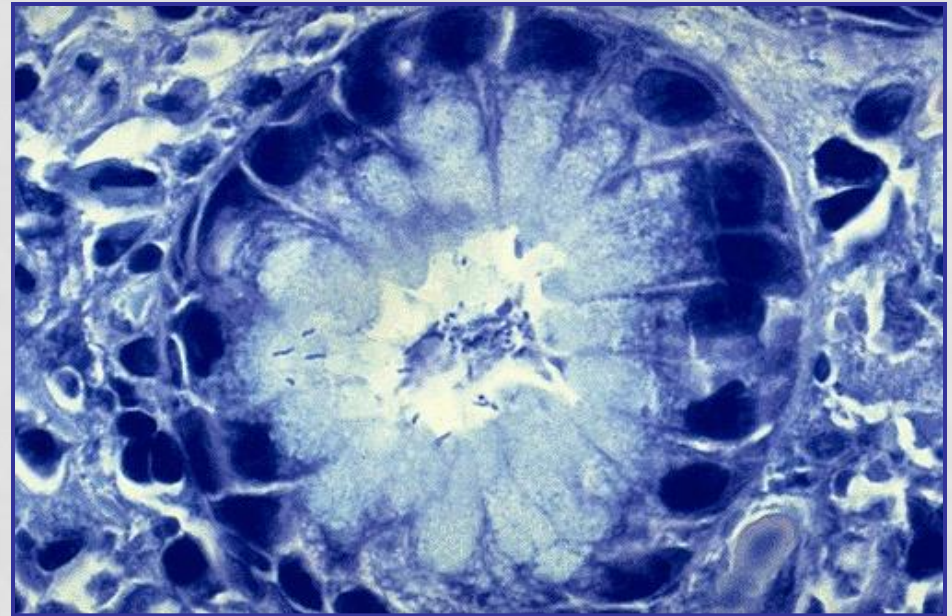
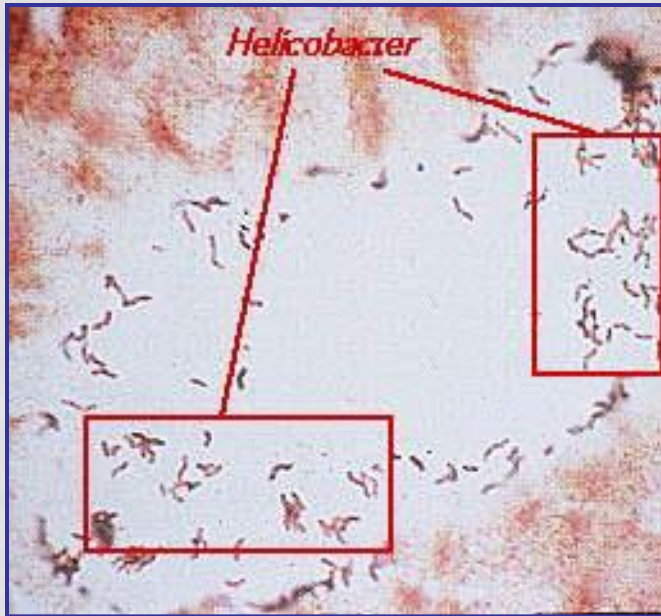
***Lactobacillus sp.* —
piimhapestbakterid**

Patogeensed bakterid



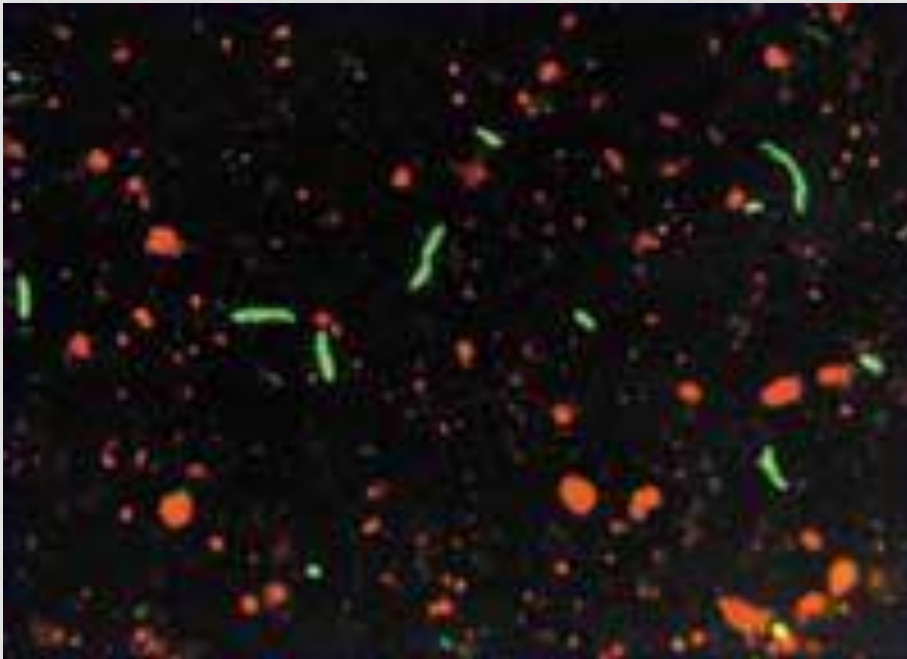
Escherichia coli — soolekepike

Patogeensed bakterid

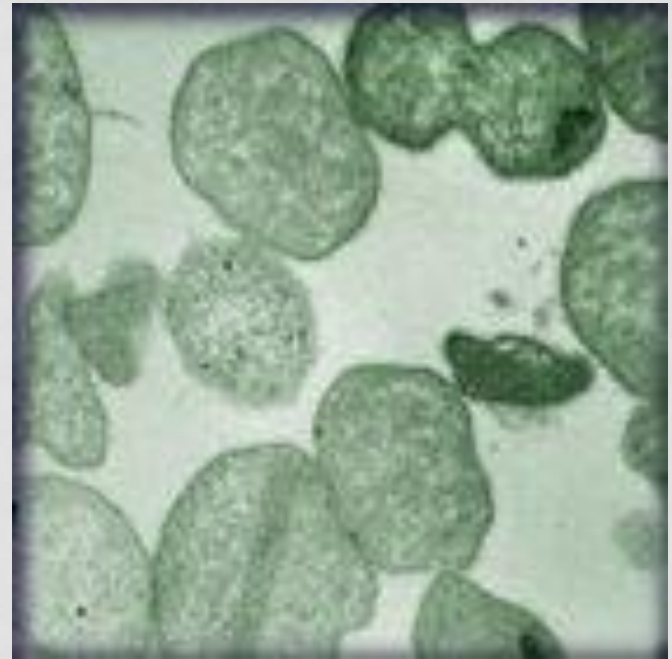


***Helicobacter pylori* — gastriit, maohaavandid**

Kemotroofsed bakterid



Rauabakterid

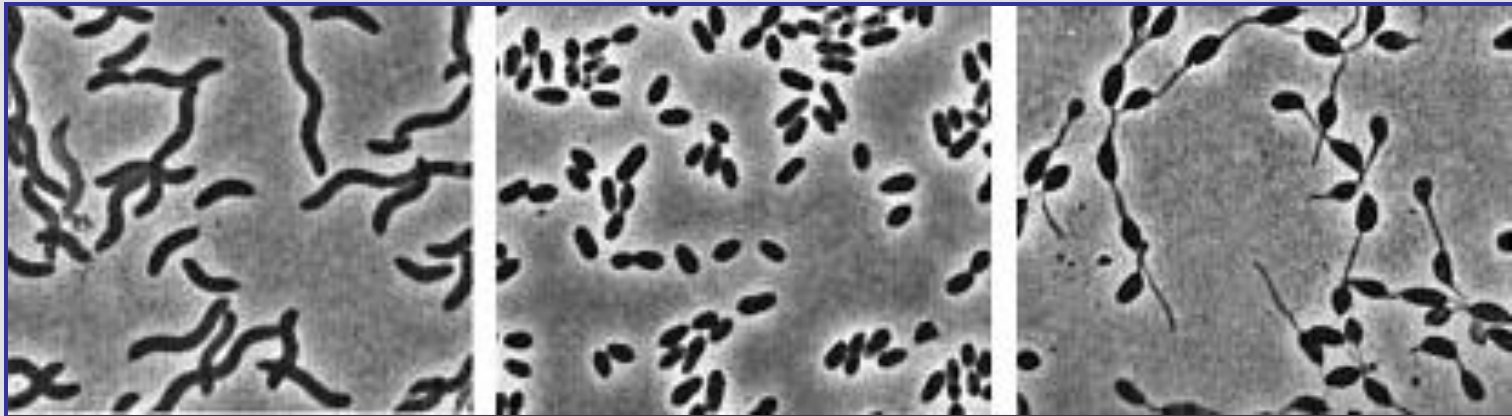


Metanogeenid

Kemotroofsed bakterid

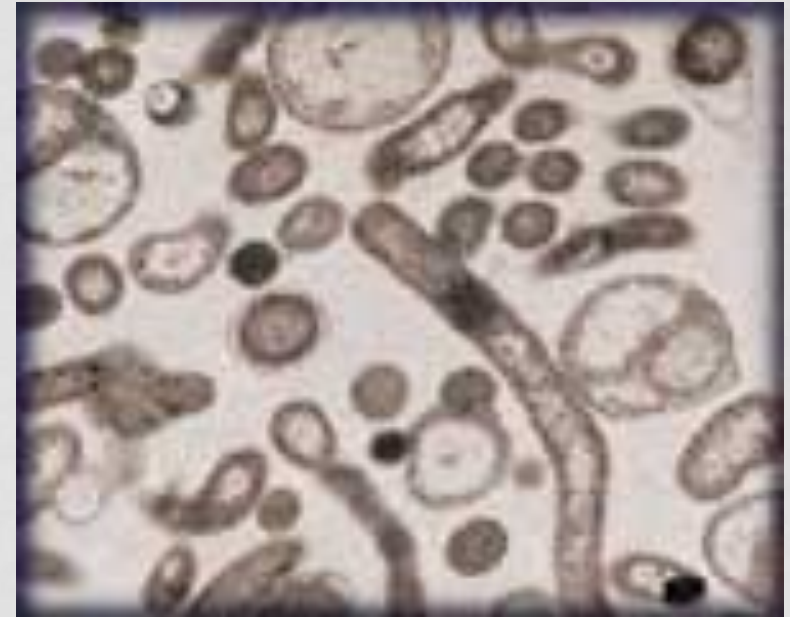
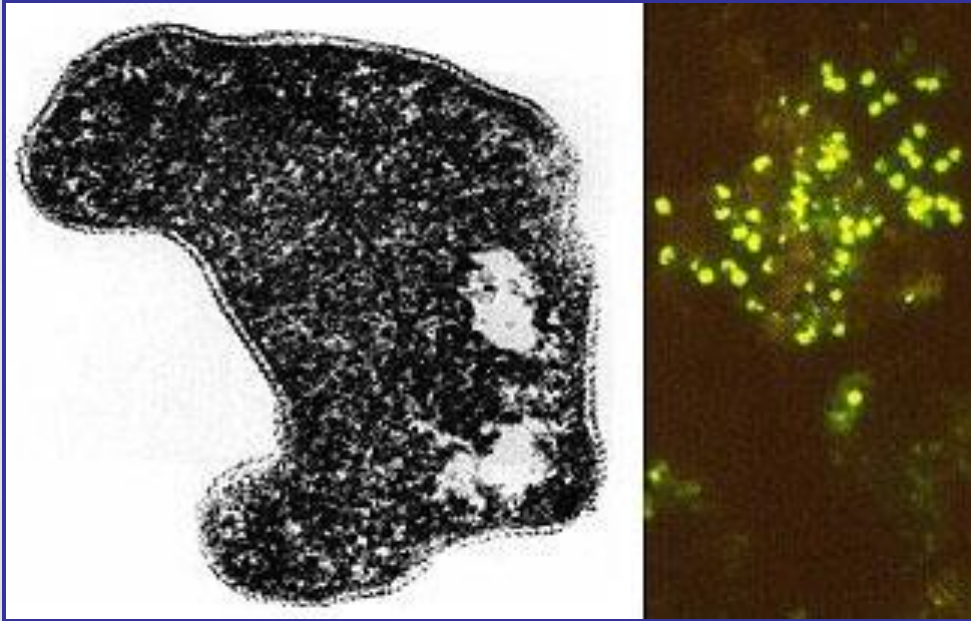


Purpurväävlibakterid



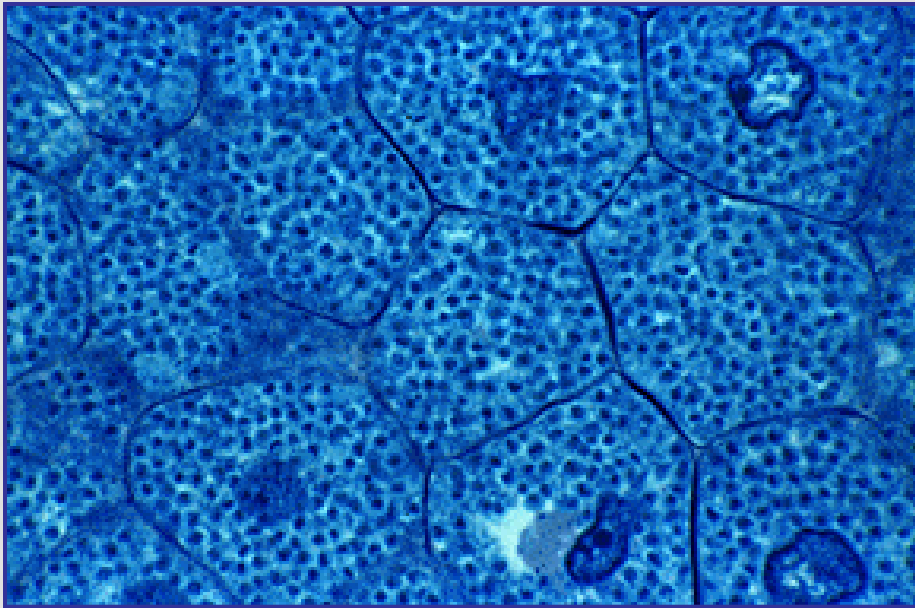
Purpurbakterid

Kemotroofsed bakterid

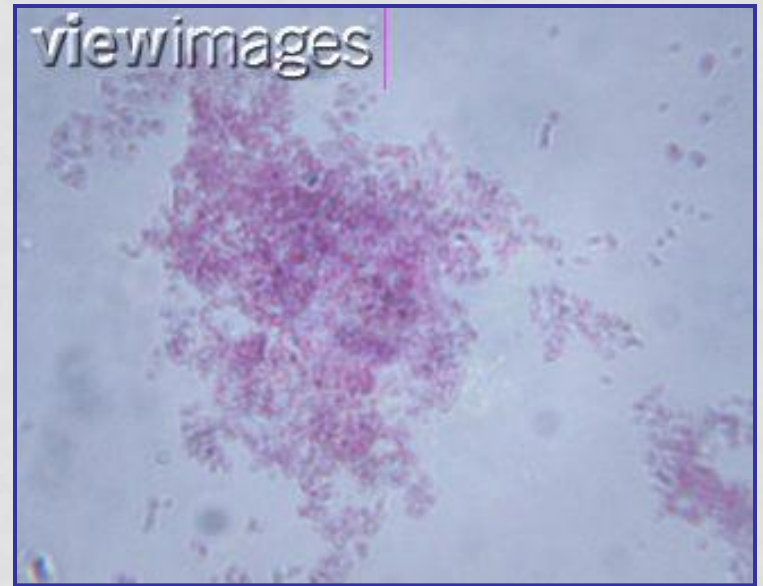


Väevlibakterid

Kemotroofsed bakterid



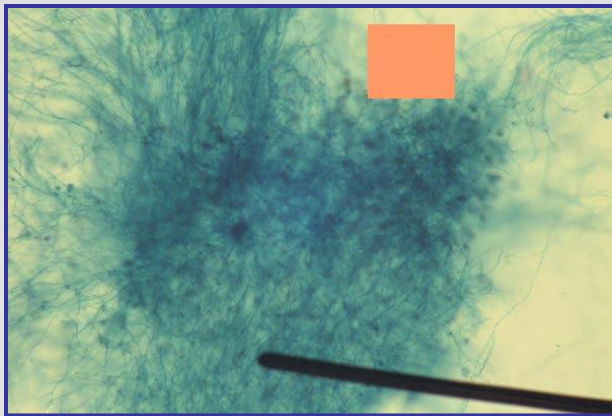
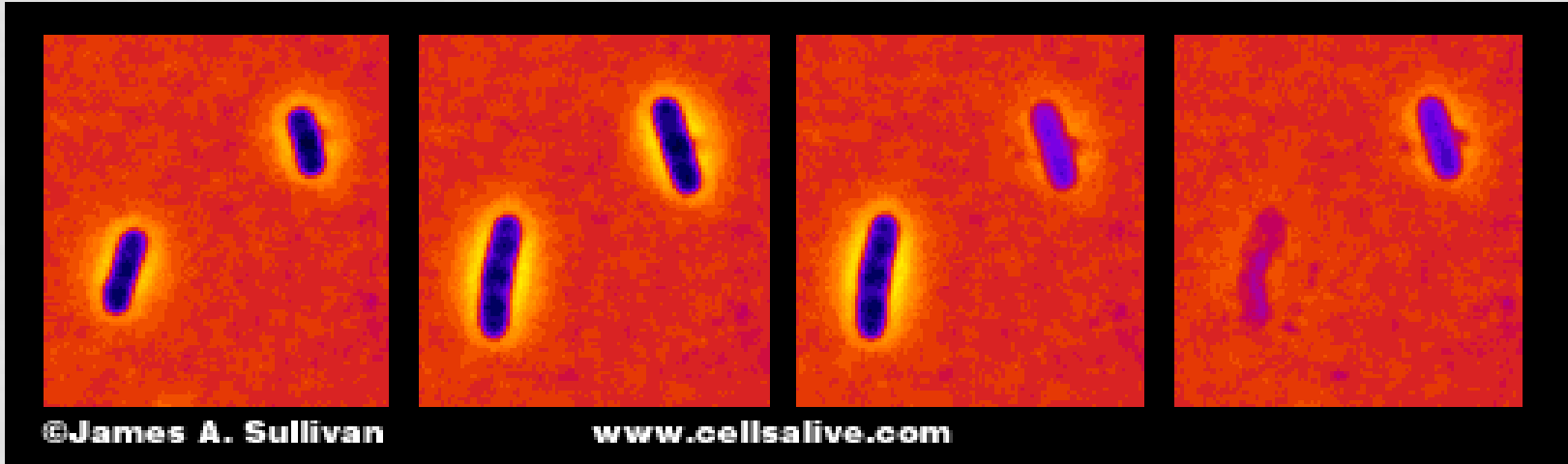
Rhizobium sp.



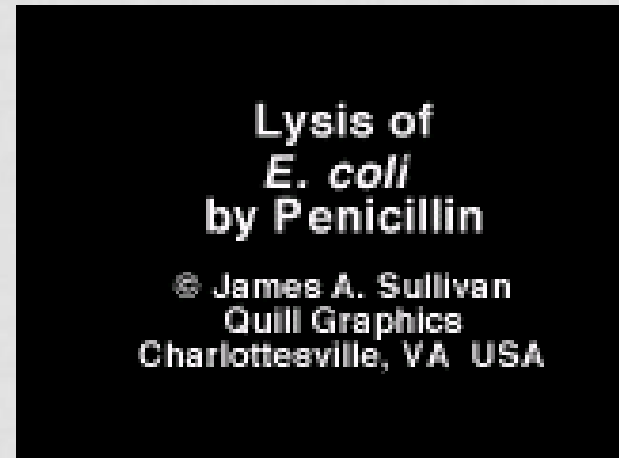
Azotobacterium sp.

— nitrifitseerivad bakterid

Antibiootikumid

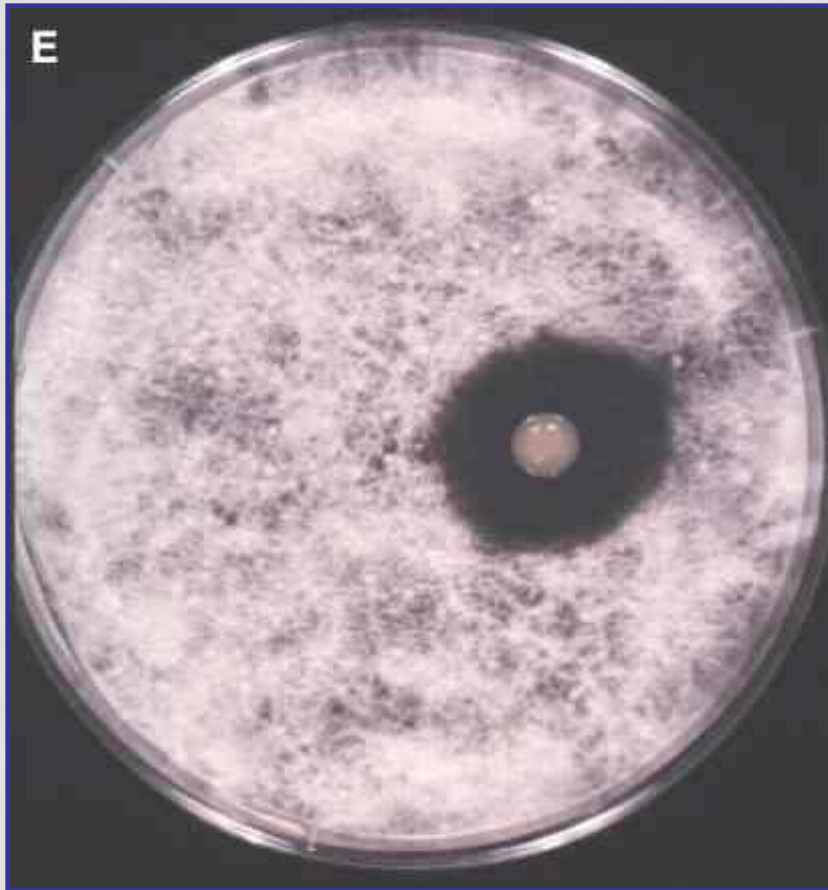


Penicillium sp.



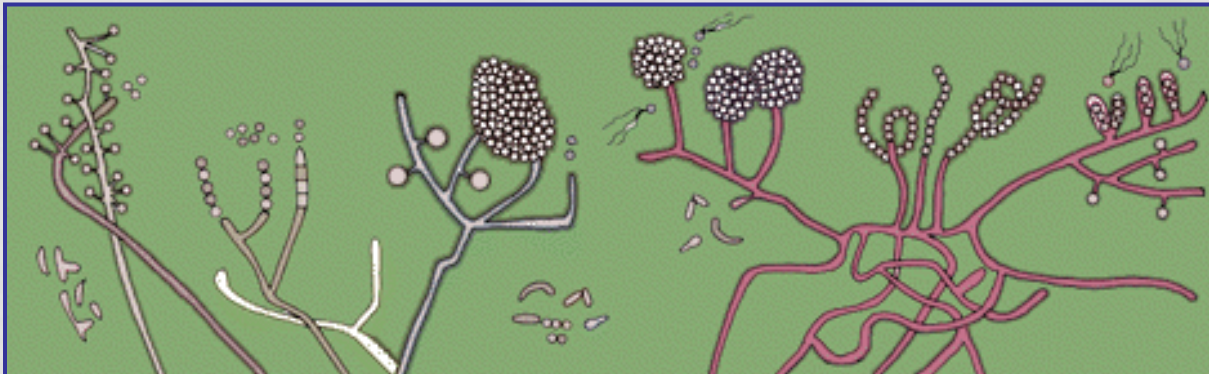
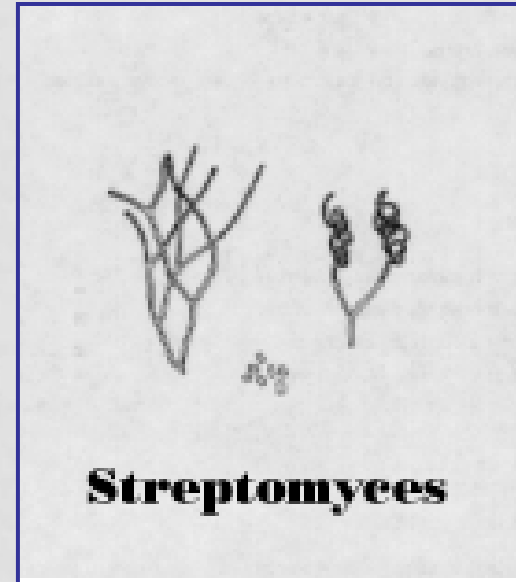
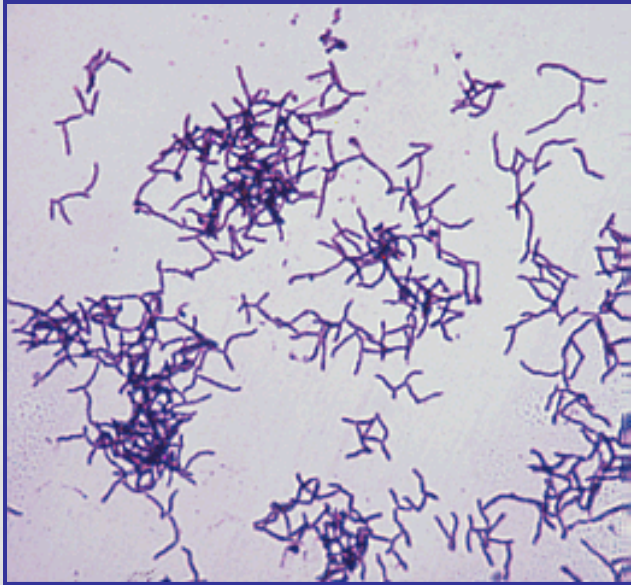
Klõpsa!

Antibiootikumid

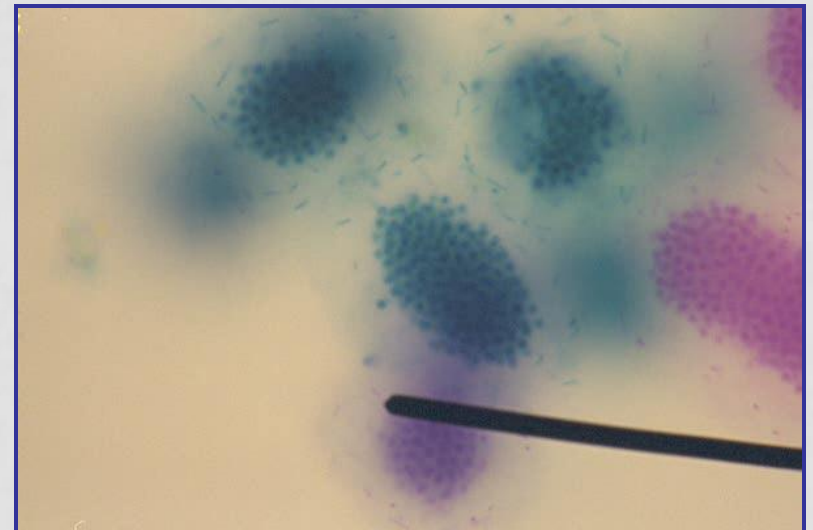
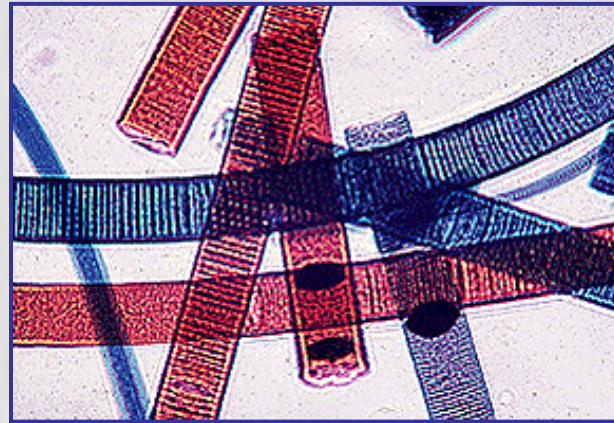
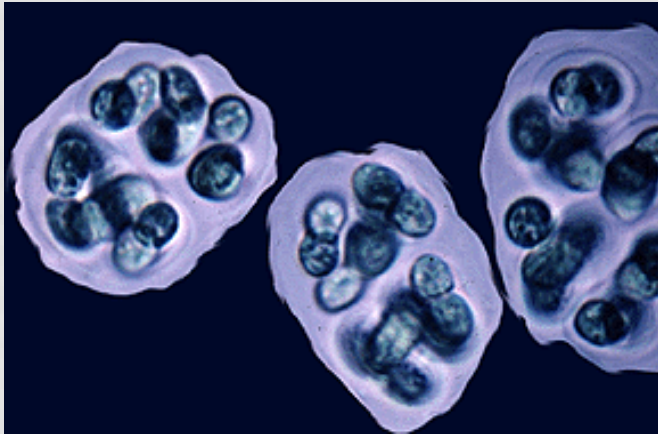


Bacilluse antibiotikum
tapab seeni

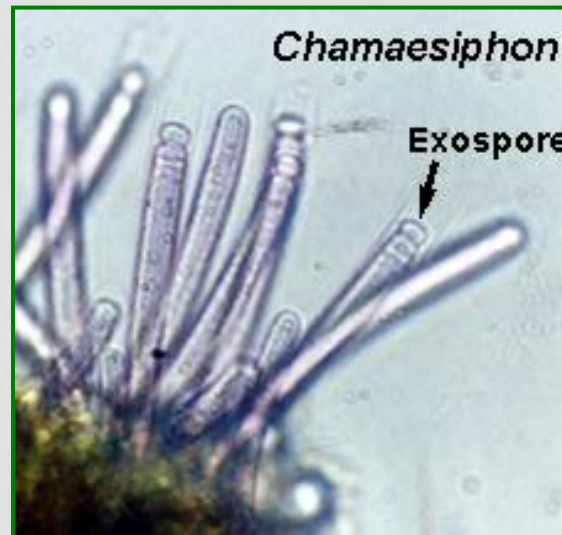
Aktinomütseedid

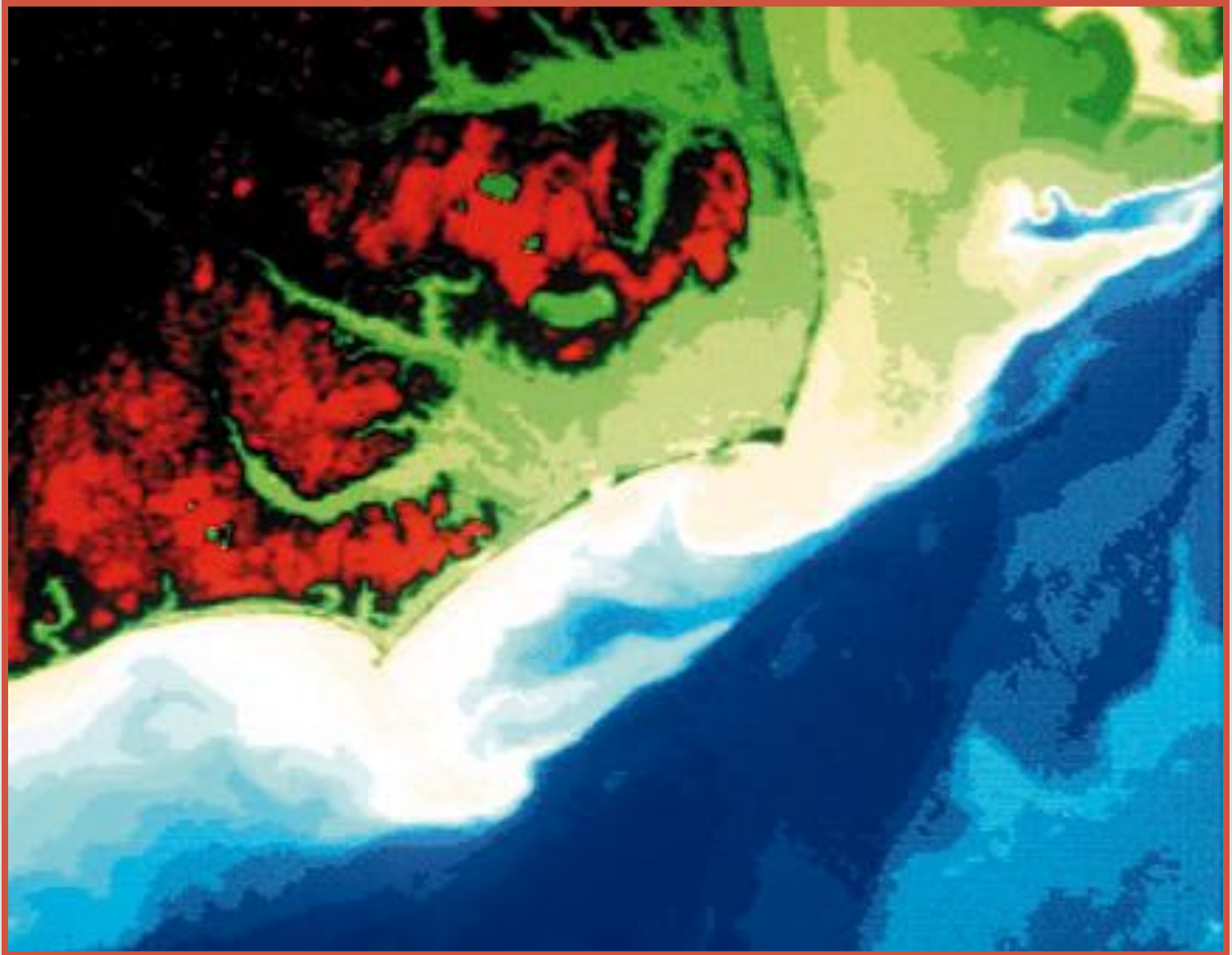


Tsüanobakterid



Tsüanobakterid





Veeõitseng satellidifotol

KASUTATUD KIRJANDUS

- https://tl.wikipedia.org/wiki/Talaksan:Staphylococcus_aureus_VISA_2.jpg
- <http://www.medicalgraphics.de/en/free-pictures/diseases/lyme-disease-bacterium.html>
- <http://www.medicalgraphics.de/en/free-pictures/diseases/salmonella-bacteria.html>
- <http://pngimg.com/download/43410>
- <https://www.flickr.com/photos/niaid/5149398656>
- <https://de.m.wikipedia.org/wiki/Datei:Spirillen.jpg>
- <https://www.flickr.com/photos/niaid/5149398656>
- <https://www.flickr.com/photos/sanofi-pasteur/9397238291>
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- https://commons.wikimedia.org/wiki/File:Salmonella_typhimurium.png