

Cum 'împachetăm', în farmacie, antibioticul dintr-o prescripție?

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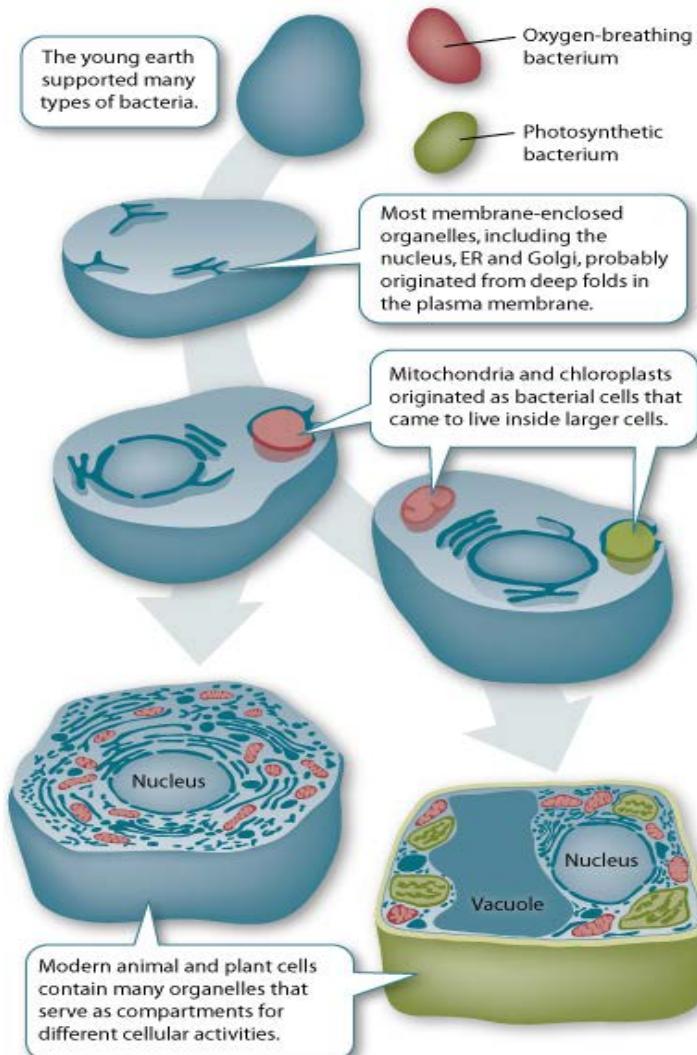
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...initial...despachetăm:
să existe prescripția!



OMUL= "multinațională" eucariote/procarioote



~3.8-3.5 miliarde de ani
formarea proto bacteriilor

↓ ~2.8-2.7 miliarde ani

apare O₂ (cianobacterii)

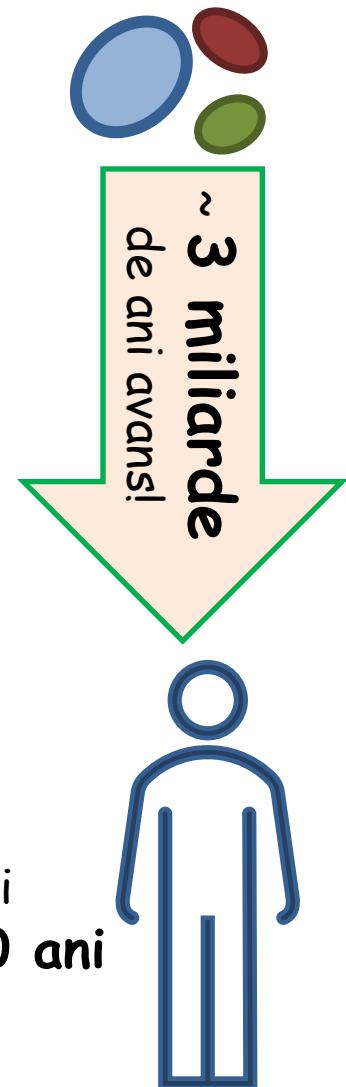
→ 2.45 miliarde ani: suficient O₂
pt susținerea formelor complexe



~acum 1.5 miliarde de ani
apar primele eucariote,
prin inglobări (simbioze)
succesive

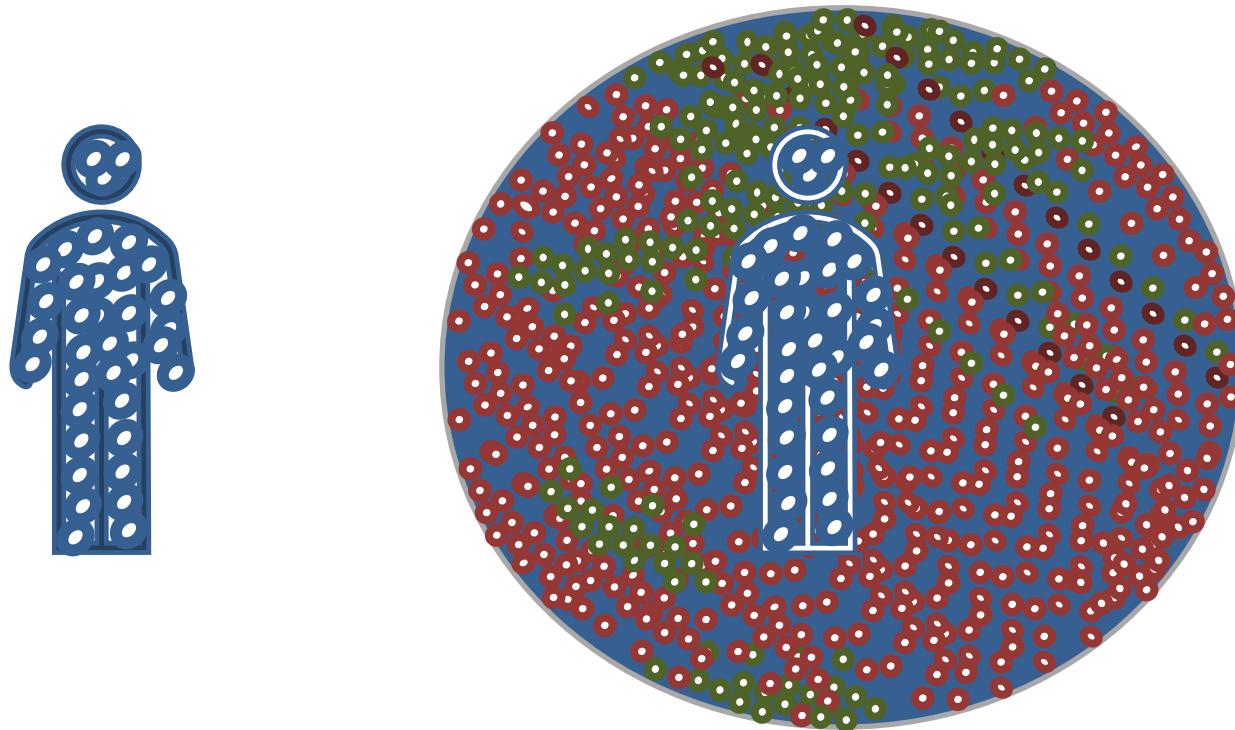


~acum 8-9 milioane: primii
hominini, apoi, acum ~250.000 ani
Homo Sapiens



OMUL=

“multinațională” eucariote/prokariote



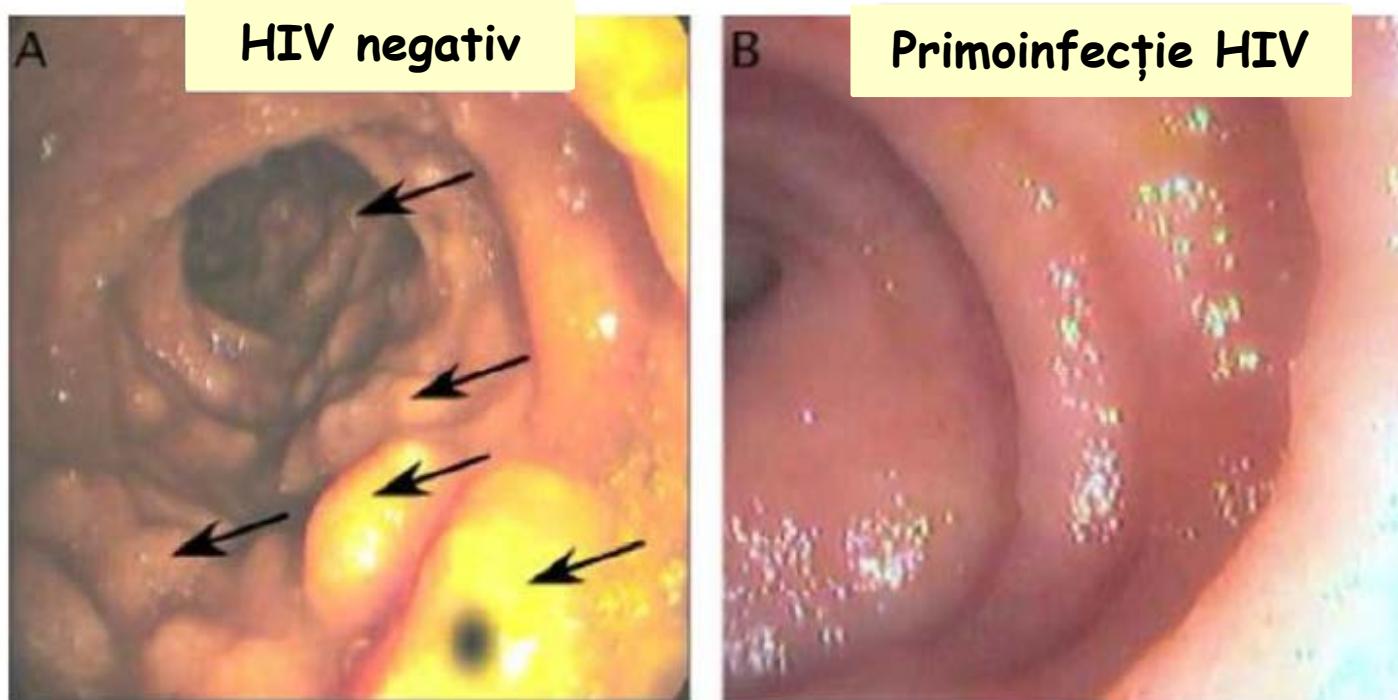
10% celule eucariote versus 90% celule bacteriene

Microbiom ~ Microbiota = ansamblul microorganismelor care populează cvasistabil un anumit areal

Microbiom/microbiotă

10^{12} germeni/g materie fecală ~ 10^{14} germeni în tubul digestiv
~ 1.2-1.5 kg = **organ bacterian**

Suprafața ~ 400mp = cea mai mare suprafață expusă exteriorului:
necesită cea mai puternică apărare: >60-80% din totalul LfT



Kingdom **Plylum** Class **Order** Family **Genus** Species

Firmicutes 35-65%

- Lactobacillales → *Lactobacillus* spp
- *Streptococcus* spp, Ente
- Clostridiales → *Clostridium* spp (cluster I)
 - SFB (segmented filamentous bacteria)
- Selenomonadales → *Veillonella* spp

Digestie (zaharuri complexe)

Sinteza vitamine B K

Barieră pt microorganisme invadatoare!

Bacteroidetes 25-55% *Bacteroides* spp (

Training imunitar

Actinobacteria 8-55% *Bifidobacterium* :

Proteobacteria 2%

Enterobacteriales - Enterobacteriaceae

Pseudomonadales → *Pseudomonas* spp

Campylobacteriales → *Helicobacter* spp

Verucomicrobia 0-5%

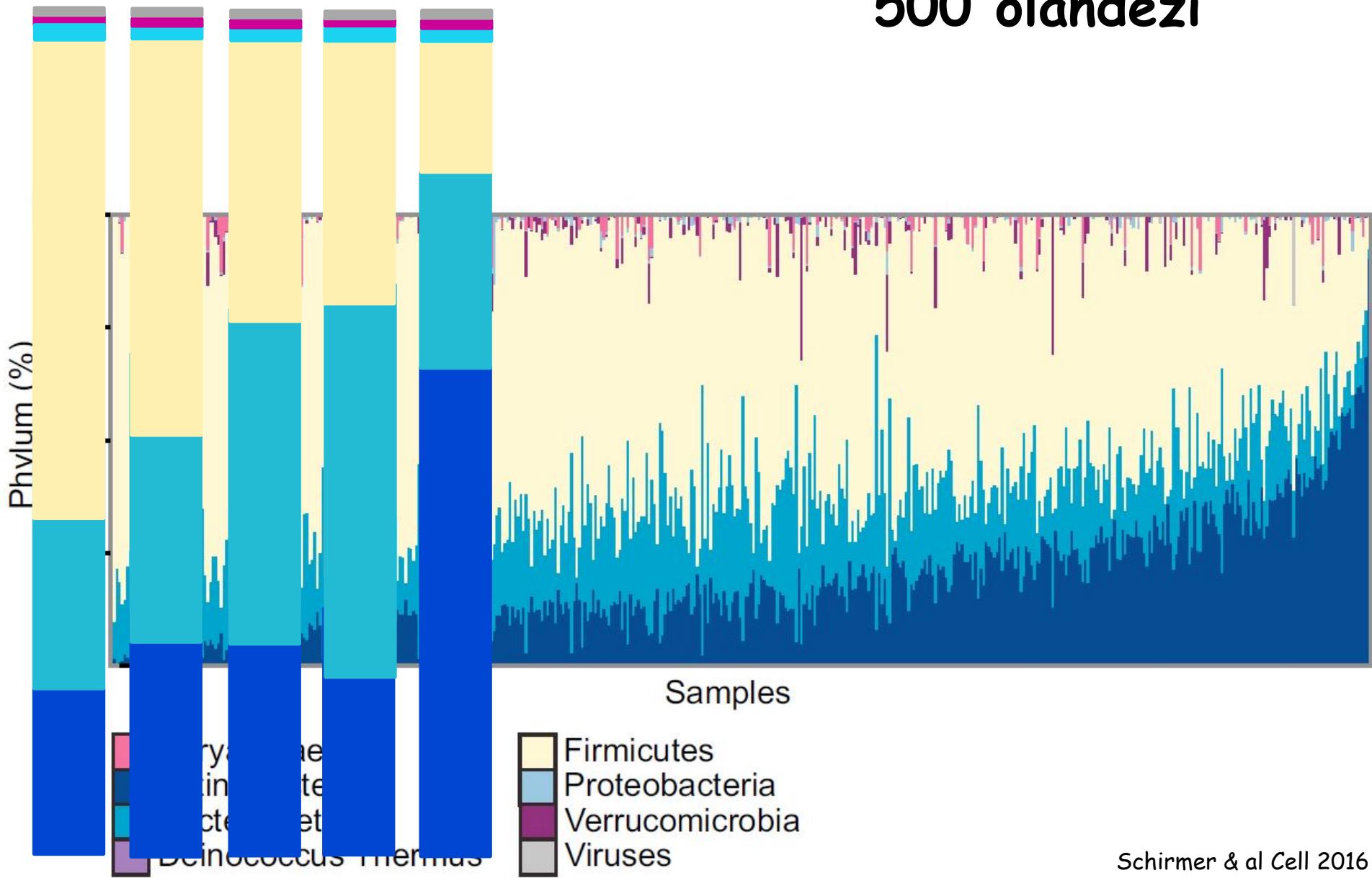
Verrucomicrobiales → *Akkermansia muciniphila*

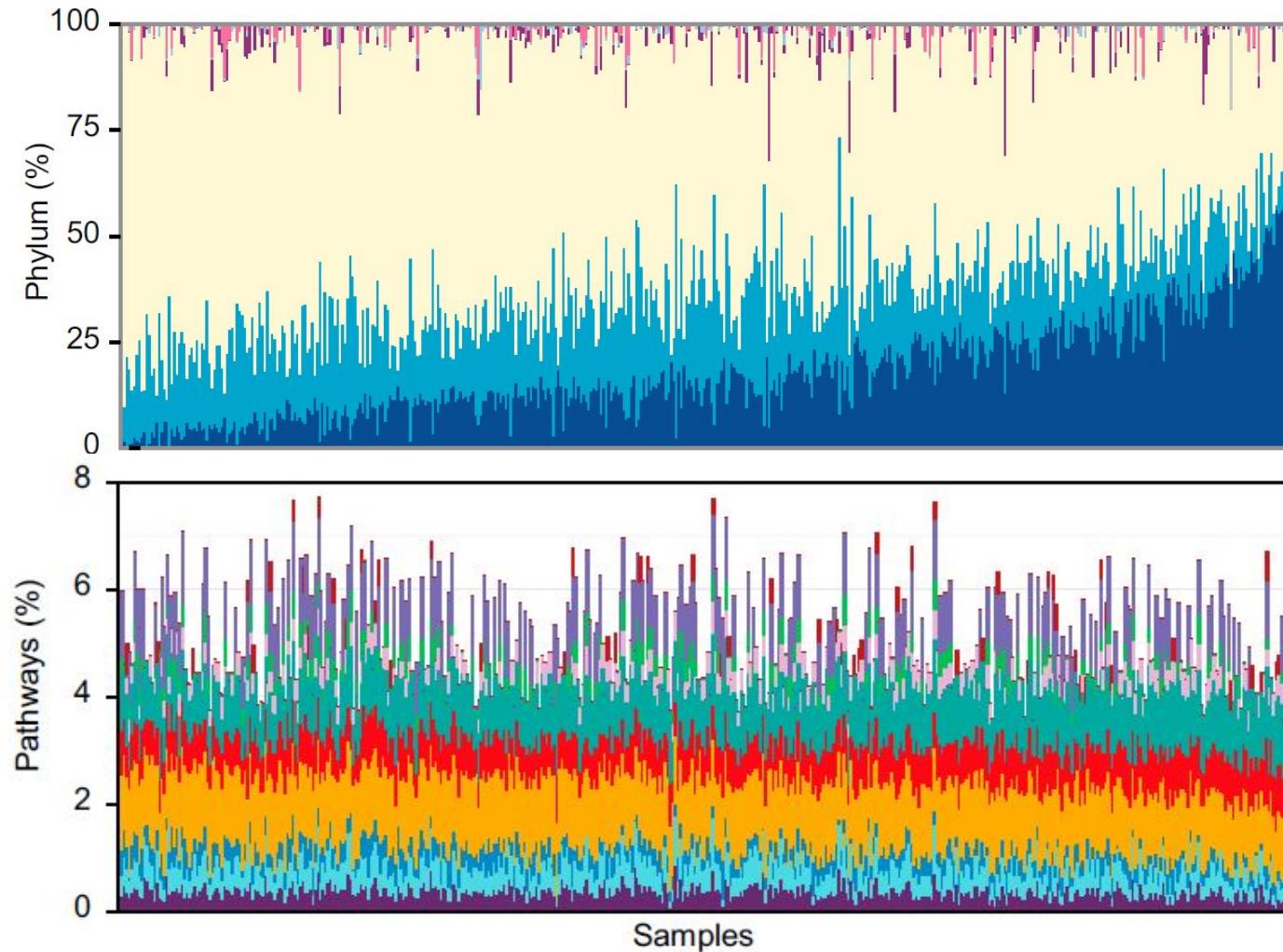
Aging,
inflammaging,
obezitate, 

Chimia cu partenerii

Neuropsihic

HPGP (Human Functional Genomics Project) 500 olandezi



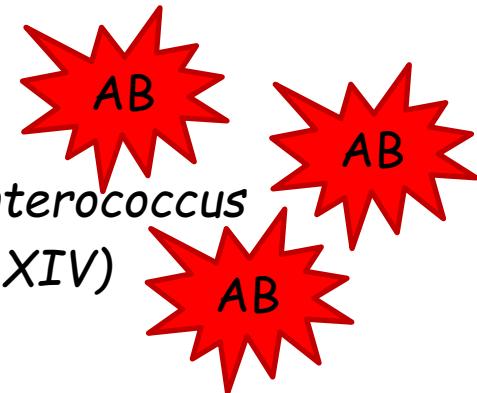


- Superpathway of GDP-mannose derived O-antigen building blocks biosynthesis
- GDP-mannose biosynthesis
- Superpathway of sulfur oxidation Acidianus ambivalens
- Glycolysis IV plant cytosol
- Sucrose degradation III sucrose invertase
- Peptidoglycan maturation meso diaminopimelate containing
- 6-hydroxymethyl-dihydropterin diphosphate biosynthesis III
- Colanic acid building blocks biosynthesis
- Glycogen biosynthesis I from ADP D Glucose
- Fatty acid beta oxidation II peroxisome

Antibioticele: dezechilibre!!

Firmicutes 35-65%

- Lactobacillales → *Lactobacillus* spp
- *Streptococcus*, *Enterococcus*
- Clostridiales → *Clostridium* spp (IV, XIV)
- *SFB*
- Selenomonadales → *Veillonella* spp



Bacteroidetes 25-55% → *Bacteroides* spp (*B fragilis*) AB

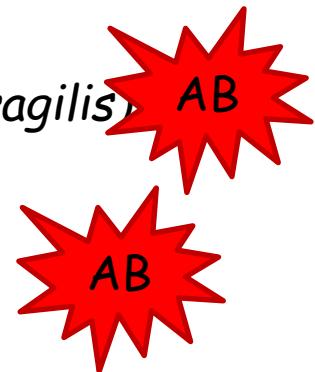
Actinobacteria 8-55% → *Bifidobacterium* spp

Proteobacteria 2%

Enterobacteriales - Enterobacteriaceae

Pseudomonadales → *Pseudomonas* spp

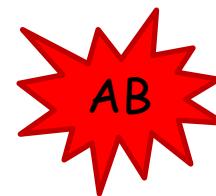
Campylobacterales → *Helicobacter* spp



Verucomicrobia 0-5%

Verrucomicrobiales → *Akkermansia*

Candida spp

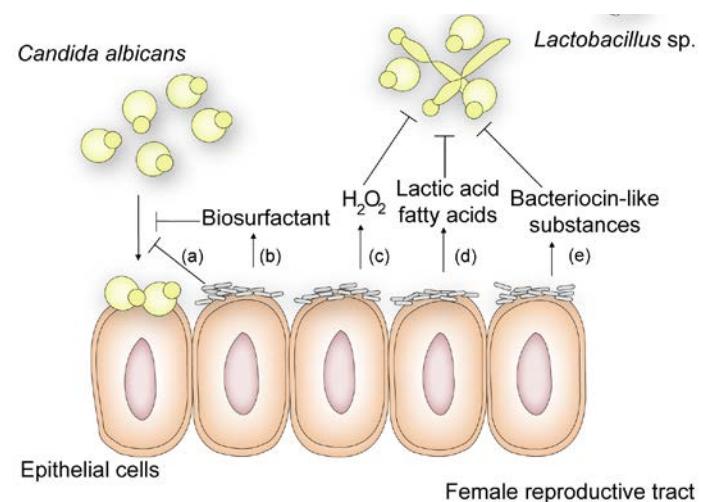
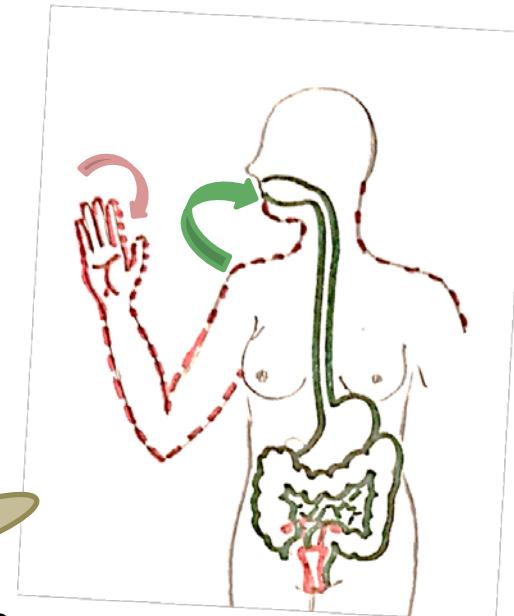
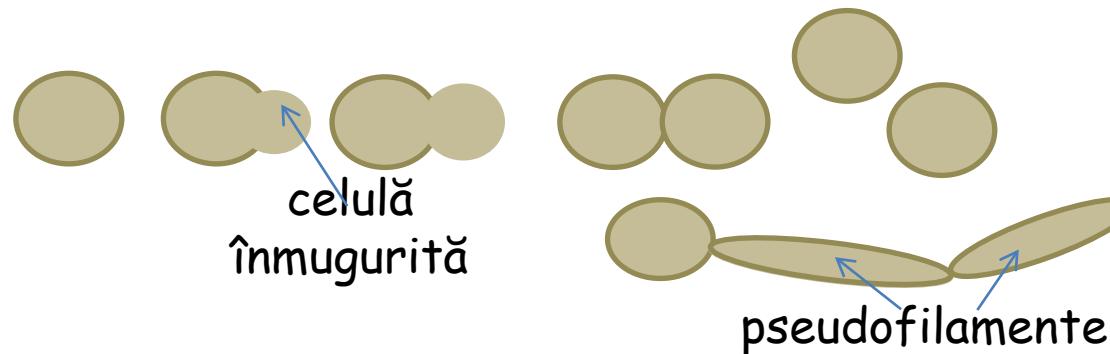




Candidoză superficială

Candida spp

Levură = drojdie: **unicelulară**, rotund/ovalară,
multiplicare prin înmugurire (burjeonare):

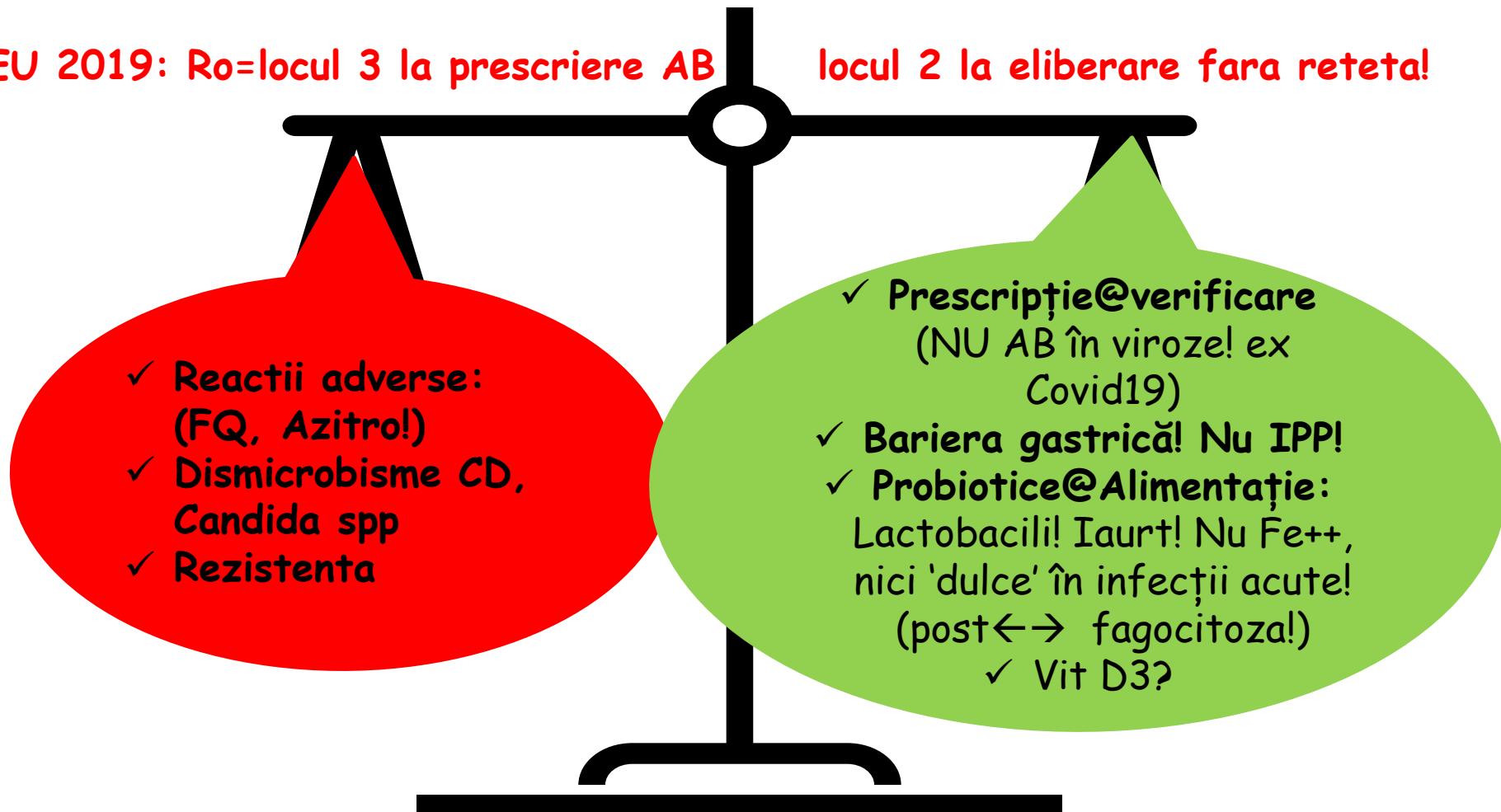


**Antibioticele: inventate de microorganisme!
...omul doar le-a descoperit: geniul lui Fleming!**

Salvează vieți! ☺

EU 2019: Ro=locul 3 la prescriere AB

locul 2 la eliberare fără rețetă!



...la final...reîmpachetăm:
cu sfaturi, @alimente, probiotice

