Familia Mycoplasmataceae

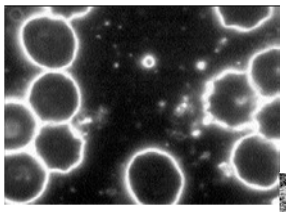
MYCOPLASMA

UREAPLASMA

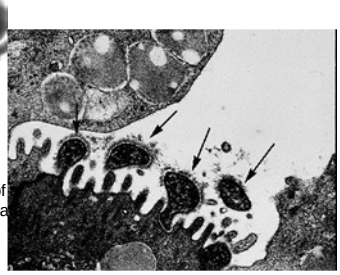
- sursa de energie utilizată
  - Mycoplasma – glucoza
  - Ureaplasma – ureea
- habitat
  - microbiota orală:
    - Mycoplasma orale,
    - Mycoplasma salivarium
  - arbore respirator ca patogen
    - Mycoplasma pneumoniae
  - căile genitale
    - Ureaplasma urealyticum
    - Mycoplasma genitalium
    - Mycoplasma hominis
    - Mycoplasma fermentans

caractere morfotinctoriale

- foarte mici, 300 nm
- nu se văd la microscop optic
- nu au perete bacterian
  - mare plasticitate
  - polimorfism – forme filamentoase, bacilare, cocoide
- au
  - membrană citoplasmatică trilaminată
  - citoplasma
  - genom
  - ribozomi

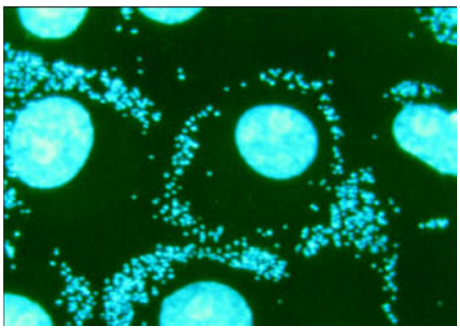


Mycoplasma seen using darkfield microscopy (1000x). Courtesy of Michael Coyle and Christine Baillie.



Photomicrograph of the nasal cavity of desert tortoise. Multiple *Mycoplasma* a attached to the cell surface.
From the University of Florida.

http://microbewiki.kenyon.edu/index.php/Mycoplasma



DNA Fluorochrome (Hoechst) staining assay binds to and reveals the large nuclei of cells in culture as well as the small mycoplasma surrounding the cells. Courtesy of Bionique Testing Laboratories.

www.labmanager.com/articles.asp?pid=92

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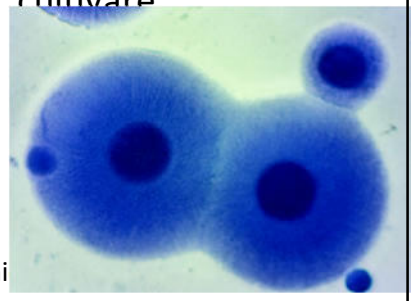
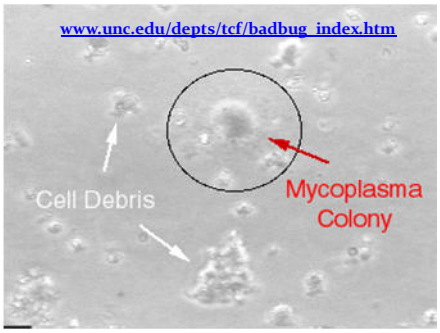
cultivare

- dificilă
- creşte lent
- microaerofil
- medii bogate
- colonii foarte mi
  - "ou prăjit"



Direct culture method of mycoplasma colonies on agar.
Courtesy of Bionique Testing Laboratories.



Mycoplasmas cannot be detected by the naked eye or even by typical light microscopy. Therefore, mycoplasma contamination must be detected by alternative testing methods. The image provided here is of a mycoplasma "colony" after being propagated on special agar. The colony has a typical "fried egg" appearance.

caractere biochimice

- diferenţiere Mycoplasma – Ureaplasma prin:
  - fermentarea glucozei
  - hidroliza ureei
  - hidroliza argininei

rezistenţa

- sensibili în mediul extern
  - variaţii de temperatură
  - variaţii de pH
  - variaţii de oresiune osmotică
- rezistenţi faţă de beta-lactamine

structura antigenică

- antigene specifice de grup
- antigene specifice de specie
- antigene comune cu structuri:
  - muşchi
  - creier
  - plămâni
  - limfocite
  - hematii

răspuns imun

- IgA secretorii
- tranzitorie
- reifecţii posibile

patogenitate

- virulenţă
  - proteina P1 – adezină
  - inhibitorul catalazei – acumulare de peroxid de hidrogen – distrugerea celulei

afecţiuni

- Mycoplasma pneumoniae
  - pneumonie atipică (Eaton)
    - copil, adult tânăr
- mycoplasme, ureaplasme genitale
  - adesea comensale
  - bărbat – uretrite, prostatite, epididimite
  - femei – vaginite, cervicite, salpingite, infecţii urinare
  - nou-născut – infecţie neonatală pulmonară cronică, meningită