**BAKTERIJE**

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|  | **AEROBNE** | **ANAEROBNE** |
|  | **Staphylococcus spp.** aureus, epidermis in drugi | **Peptococcus spp.** |
| G + koki | **Streptococcus spp.** pyogenes, agalactiae, pneumoniae | **Peptostreptococcus spp.** |
|  | **Enterococcus spp.** |  |
| G - koki | **Neisseria spp.** meningitidis, gonorrhoeae | Veillonella spp. |
|  | **Moraxella catarhhalis** |  |
| G - bacili | **Enterobacteriaceae:** E. coli Salmonella spp. Shigella spp. Klabsiella spp. Proteus spp. Enterobacter spp. | **Skupina Bacteroides fragilis:** B.fragilis |
|  | **Nefermentativni bacili** Pseudomonas spp. Acinetobacter spp. Flavobacterium spp. | **Prevotella spp.** melaninogenica, nigrescens |
|  | **Bordetella spp.** pertussis | **Porphyromonas spp.** gingivitis, gracillis |
|  | **Haemophilus spp.** influenzae | **Bacteroides spp.** oralis |
|  | **Brucella spp.** | **Fusobacterium spp.** necrophorum |
|  | **Francisella tularensis** | **Leptotrichia buccalis** |
|  | **Legionella spp.** pneumophila | **Capnocytophaga gingivitis** |
| G – zaviti bacili | **Vibri spp.** cholerae, parahaemolyticus | **Mobiluncus spp.** |
|  |  | **Selenomonas spp.** |
|  | **Campylobacter spp.** fetus \*, coli \* | **Campylobacter spp.** concisus |
| G – spiralni bacili (mikroaereofilni\*) | **Helicobacter pylori \*** | **Treponema spp.** pallidum |
|  | **Leptospira spp.** | **Borrelia spp.** recurrentis, burgdorferi |
| G + bacili | **Corynebacterium spp.** diphteriae | **Eubacterium spp.** |
|  | **Listeria monocytogenes** | **Bifidobacterium spp.** |
|  |  | **Lactobacillus spp.** |
| G + sporogeni bacili | **Bacillus spp.** anthracis cereus subtilis | **Clostridium spp.** perfringens tetani botullinum difficile |
| G + razvejani bacili (po Ziehl-Neelsonu) | **Nocordia spp.** | **Actinomyces spp.** |
|  | **Mycibacterium spp.** tuberculosis | **Propionibacterium spp.** |
| Obligatni znotrajcelični bacili | **Rickettsiae spp.** prowazakii rickettsii cononi | **Chlamidiae: trachomatis psittaci pneumniae** |
|  | **Coxiella burnettii** | **Mycoplasmae:** pneumniae hominis |
|  | **Ehrlichia spp.** | **Ureaplasma urealyticum** |

**TESTIRANJE ANTIBIOTIKOV IN ANTIMIKOTIKOV**

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| **Stafilokoki** | **Streptokoki** | **Enterobakterije** | **Pseudomonas aeruginosa, Actinobacter spp.** |
| penicilin | penicilin | ampicilin | gentamicin |
| meticilin | cefotaksim | cefazolin | amikacin |
| eritromicin | eritromicin | trimetoprim + | piperacilin |
| vankomicin | vankomicin | sulfametoksazol | imipenem |
| klindamicin | klindamicin | cefuroksim | ceftazidim |
| trimetoprim + |  | cefotaksim | ciprofloksacin |
| sulfametoksazol |  | gentamicin |  |
|  |  | ciprofloksacin |  |

ANTIMIKOTIKI:  
- amfotericin B  
- nistatin  
- azoli (ketokonazol, flukonazol …)  
- grizeofulvin

**BAKTERIJE**

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| **AEROBNE** | **FAKULTATIVNI ANAEROBI** | **ANAEROBNE** |
| **Enterococcus spp.** | **Staphylococcus spp.** aureus epidermis | **Peptococcus spp.** |
| **Neisseria spp.** meningitidis gonorrhoeae | **Streptococcus spp.** pyogenes agalactiae pneumoniae | **Peptostreptococcus spp.** |
| **Moraxella catarhhalis** |  | **Veillonella spp.** |
| **Enterobacteriaceae:** E. coli Salmonella spp. Shigella spp. Klabsiella spp. Proteus spp. Enterobacter spp. |  | **Skupina Bacteroides fragilis:** B.fragilis |
| **Nefermentativni bacili** Pseudomonas spp. Acinetobacter spp. Flavobacterium spp. |  | **Prevotella spp.** melaninogenica, nigrescens |
| **Bordetella spp.** pertussis |  | **Porphyromonas spp.** gingivitis, gracillis |
| **Haemophilus spp.** influenzae |  | **Bacteroides spp.** oralis |
| **Brucella spp.** |  | **Fusobacterium spp.** necrophorum |
| **Francisella tularensis** |  | **Leptotrichia buccalis** |
| **Legionella spp.** pneumophila |  | **Capnocytophaga gingivitis** |
| **Vibri spp.** cholerae parahaemolyticus |  | **Mobiluncus spp.** |
| **Campylobacter spp.** fetus \* coli \* |  | **Selenomonas spp.** |
| **Helicobacter pylori \*** |  | **Campylobacter spp.** concisus |
| **Leptospira spp.** |  | **Treponema spp.** pallidum |
| **Corynebacterium spp.** diphteriae |  | **Borrelia spp.** recurrentis, burgdorferi |
| **Listeria monocytogenes** |  | **Eubacterium spp.** |
| **Bacillus spp.** anthracis cereus subtilis |  | **Bifidobacterium spp.** |
| **Nocordia spp.** |  | **Lactobacillus spp.** |
| **Mycibacterium spp.** tuberculosis |  | **Clostridium spp.** perfringens tetani botullinum difficile |
| **Rickettsiae spp.** prowazakii rickettsii cononi |  | **Actinomyces spp.** |
| **Coxiella burnettii** |  | **Propionibacterium spp.** |
| **Ehrlichia spp.** |  | **Chlamidiae: trachomatis psittaci pneumniae** |
|  |  | **Mycoplasmae:** pneumniae hominis |
|  |  | **Ureaplasma urealyticum** |

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| **SPOROGENE** | **BAKTERIJE** |
| **AEROBNE** | **ANAEROBNE** |
| **Bacillus spp.** anthracis cereussubtilis | **Clostridium spp.** perfringens tetani botullinum difficile |

\* So mikroaereofili

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| **G +** | **G -** |
| **stafilokoki** (aureus, epidermis …) | **fusobacterije** (necroforum) |
| **streptokoki** (pyogenes, agalactiae, pneumoniae) | **kapnocitofagi** (gingivitis) |
| **enterokoki** | **mobilunkusi** |
| **korinebakterije** (diphteriae) | **leptotrihije** (buccalis) |
| **listerije**  (monocytogenes) | **selenomonasi** |
| **bacilusi** (anthracis, cereus, subtilis) | **kampilobaktri** (concisus) |
| **nokordije** | **treponeme** (pallidum) |
| **mikobakterije** (tuberculosis) | **borelije** (recurrentis, burgdorferi) |
| **bacilusi** (anthracis, cereus, subtilis) | **hemofilusi** (influenzae, ducreyi, parainfluenzae) |
| **klostridiji** (perfringens, tetani, botullinum, difficile) | **bordetele** (pertussis, parapertussis, bronhioseptica) |
| **laktobacili** | **brucele** (melitensis, suis, canis, abortus) |
| **mikoplazme** | **francisele** (tularensis) |
| **propionibakterije** (acne) | **pasteurele** (multocida) |
| **acetobakter** | **nejserije** (gonorrhoeae, meningitidis) |
| **geobacili** (stearothermophilus) | **salmonele** (typhi, paratyphi, enteriridis) |
|  | **ešerihije** (coli) |
|  | **šigele** (dysenteriae …) |
|  | **jersinije** (pestis, enterocolitica) |
|  | **klabsiele** (pneumonieae) |
|  | **enterobakter** (aerogenes) |
|  | **citrobakter** (freundii) |
|  | **proteus** (mirabili) |
|  | **serratia macescens** |
|  | **kampilobaktri** (jejuni, coli, lari, fetus) |
|  | **vibriji** (cholerae) |
|  | **helikobaktri**  (pylori) |
|  | **pseudomonasi** (aeruginosa) |
|  | **acinetobaktri** |

**ZNOTRAJCELIČNI PARAZITI**

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| **ZNOTRAJCELIČNI** | **PARAZITI (BAKTERIJE)** |
| **OBLIGATNI** | **FAKULTATIVNI** |
| (zunaj celice ne uspevajo, odvisni od celice) | (lahko živijo, se razmnožujejo tudi izven celice) |
| Chlamydia spp. | Francisella tularensis |
| Rickettsia | Listeria monocytogenes |
| Coxiella | Salmonella typhi |
| Mycobacterium leprae | Brucella spp. |
| rikecije | Legionella spp. |
| klamidije | Mycobacterium spp. |
| erlihije | Nocardia spp. |
|  | Rhodococcus equi |
|  | Yersinia spp. |
|  | Neisseria meningitidis |
| **VIRUSI** |  |
| vsi |  |
| **GLIVE** |  |
| Pneumocystis jirovecii | Histoplasma capsulatum |
|  | Cryptococcus neoformans |
| **PRAŽIVALI** |  |
| **Apicomplexa** Plasmodium spp. Toxoplama gondii Cryptosporidium parvum |  |
| **Trypanosomatid** Leishmania spp. Trypanosoma cruzi |  |
| **Microspora** |  |
| **Leishmania spp.** L. donavani, L. brasiliensis |  |

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| **EDINI GOSTITELJ JE ČLOVEK** |
| **BAKTERIJE** |
| Neisseria spp. (gonorrhoeae, meninigitidis) |
| meningokoki |
| Bordetella pertussis |
| salmonele (rezervoar) |
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| **Virusi** |
| virus črnih koz |
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| **GLIVE** |
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| **PARAZITI** |
| Trichomonas vaginalis |
| Schistosoma haematobium |
| filarije (končni gostitelj) |
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| **PARAZITI, KI TVORIJO CISTE** |
| Giardia duodenalis |
| Entamoeba histolytica |
| Acanthamoeba spp. |
| Toxoplasma gondii |
| Cryptosporidium spp. |
| Balantidium coli |
| Trichinella spiralis |
| Toxocara canis |
| vsi metljaji (sporociste) |
| vse trakulje |

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| **POTREBUJEJO TRANSPORTNO GOJIŠČE  (slabo obstojne)** |
| **klamidije** |
| **Bordetella pertussis** |
| **Clostridium perfringens (anaerob)** |
| **Clostridium tetani** |
| **Neisseria spp.** |
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| **NEVARNOST LABORATORIJSKE OKUŽBE** |
| **Brucella spp.** |
| **Francisella tularensis** |
| **Bacillus anthracis** |
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**BAKTERIJE S KAPSULO + virulentni dejavniki**

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| **Haemophilus influenzae** 6 serotipov – B! | pilusi, adhezijske molekule |
| **Francisella tularensis** | toksin, hitro razmnoževanje |
| **Bacillus anthracis** |  |
| **Staphylococcus aureus** | **toksini** (hemolizini (fosfolipaze), levkocidin, SE A-F (enterotoksini), TSS, EFT), **adhezini, encimi** (koagulaza, DNA-aza, hialuronidaza, lipaza, stafilokinaza) |
| **Streptococcus pyogenes** | beljakovina M (adhezin, protifagocit), encimi in toksini (streptolizin O in S (fosfolipaza), streptokinaza, hialuronidaza, DNA-aza, pirogeni eksotoksini (eritrogeni - škrlatinka)) |
| **Streptococcus pneumoniae** (80 tipov) | nevraminidaza, hialuronidaza, pnevmolizin (znotrajcelični hemolizin), IgA-proteaza |
| **Streptococcus agalactiae** | beta hemolizin |
| **Neisseria meningitidis** | pilusi, beljakovine, lipooligosaharidi (endotoksin), IgA-proteaza |
| **Neisseria gonorrhoeae** | beljakovine (pilin, Por, Opa), lipooligosaharidi, IgA-proteaza |
| **Enterobakterije - E. coli - Salmonella spp. - Shigella spp. - Yersinia enterocolitica** (raste počasi) | fimbrije, bički, enotoksin, znotrajcelično parazitiranje, hitra rast in razmnoževanje, odpornost proti antibiotikom |
| **Campylobacter** - jejuni, coli, lari, fetus | adhezini, toksini (enterotoksini, citotoksini) |
| **Vibrio choleraer** (serotip O139) | adhezini, toksin kolere (prenos ionov) |
| **Pseudomonas aeruginosa** (nekateri) | fibriji, encimi, toksini, pigment |
| **Mycobacterium tuberculosis** | celična stena (lipidi in mikolične kisline so toksični), kord faktor (mikozid trehaloza dimikolat) |
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**VIRUSI Z OVOJNICO/BREZ**

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| **Z OVOJNICO** |  | **BREZ** |  |
| **DNA** | **RNA** | **DNA** | **RNA** |
| Hepadnavirusi | Rubivirus | Adenovirusi | Pikornavirusi - enterovirus (poliomielitis = enterovirus C **1**, 2, 3),  - rhinovirus, hepatovirus, parechovirus, kobuvirus, apthovirus, cardiovirus |
| Herpesvirusi | Ortomiksovirusi - virus influence **A**, B, C | Papovavirusi - papilomavirusi - poliomavirusi | Hepatitis A, E |
| Poksvirusi | Virus HIV | Parvovirusi |  |
|  | Paramiksovirusi: - v. ošpic - v. mumpsa - v. parainfluence   1, 3, 2, 4 - v. Nipah in Hendra - RSV **A**, B - č. metapneumovirus |  |  |
|  | Hepatitis B, C, D |  |  |