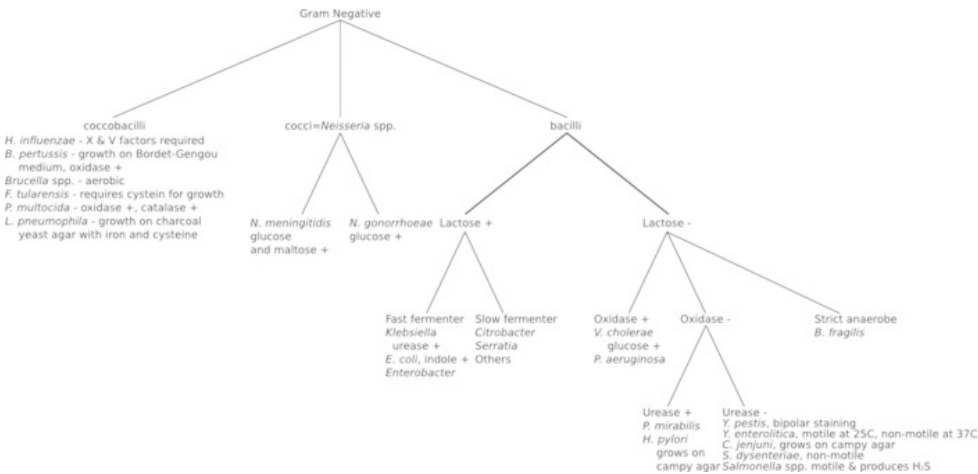


Overview of Bacteria

Text intended for repetition for microbiology exam.

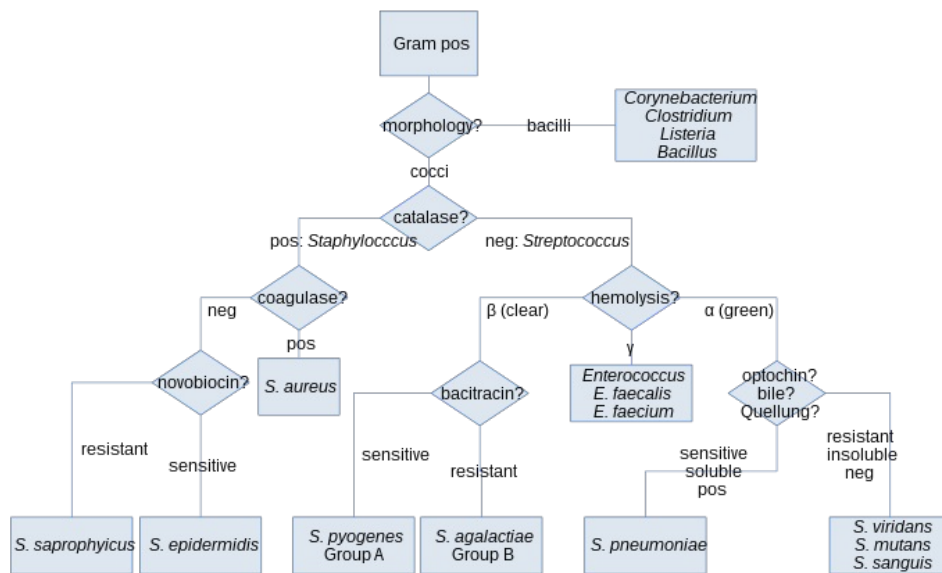
Gram-negative Bacteria

Genus	Species	Properties	Culture agar	Pathogenicity	Transmission	Disease	Diagnostics	Therapy
Helicobacter	pylori	microoxyphilic, mobile, G-, rods, ferments AMK, not carbohydrates	chocolate agar, Thayer-Martin (3-7days)	adhesins, flagella, urease	fecally-orally	acute gastritis, chronic gastritis	microscopy (HE, Gram, Warthin-Starry), cultivation, urease test, breath test, serology	AMO + KLA H ⁺ pump inhibitor / AMO + MET + bismuth
Legionella	spp., pneumophila	mobile, aerobic, G-, slender rods, pleomorphic, two flagella, catalase positive	BCYE (buffered charcoal yeast extract) - 2,3-dihydroxy fatty acids, week, CO ₂ , 25-43 °C	hemolysin, cytotoxin, endotoxin, DNase	inhalation, not from humans, reservoir standing water	pneumonia, pontic fever, legionary fever		ERY + RIFAMPI / CIPROFLOX / OFLOX, not β-lactam
Bordetella	pertussis	G-, immobile ovoid short rods, obligate aerobe, ferments amino acids, not carbohydrates , requires NAD, virulent strains hemolyzes, bipolar metachromatic granule (toluidine blue)	Bordet-Gengou (penicillin present)	filamentous haemagglutinin, pertussis toxin, haemolysin,...	droplets, reservoir human	whooping cough (last stage in the absence of bacteria)	direct fluorescence (nasopharyngeal aspirate), PCR, Ig-ELISA (control only, positive in later stages), culture insensitive (point of care inoculation), non-specific microscopy	supportive treatment of respiratory epithelial damage, bacteria are no longer present in the late stages (ATB unnecessary)
Haemophilus	spp.	small immobile non-sporulating pleomorphic rods, facultatively aerobic, capnophilic, G-	chocolate agar, Levin's agar (Staphylococcus aureus; satellite growth), needs NAD (P) and hemin (factors X and V)			meningitis, epiglottitis, arthritis, sinusitis, otitis, pneumonia, conjunctivitis, Brazil purple fever, chancroid		in the Czech Republic β-lactam (foreign strains tend to be resistant), amoxicillin, cotrimoxazole



G- Bacteria Overview

Gram-positive Bacteria



G+ Bacteria Overview

Links

References

- MUDR. ADÁMKOVÁ, . *Gram-negative non-fermenting sticks and cocci* [lecture for subject microbiology, specialization general medicine, 1.LF UK]. Prague. 15-10-2010.